

Mixed Indulgences: Consumer Perceptions, Evaluation and Choice

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June 2009

*Neela Saldanha is a doctoral candidate, Department of Marketing, The Wharton School, University of Pennsylvania. This paper is part of the author's dissertation and was funded in part by the Ackoff Fund of the Risk Management and Decision Processes Center, The Wharton School, University of Pennsylvania. The author would especially like to thank her advisor, Patti Williams, for her thoughtful guidance and wisdom at every stage of this paper. She would also like to thank Paul Rozin, who has been a source of encouragement and enthusiasm throughout this dissertation. Thanks are also due to Lauren Block, Americus Reed II and Gal Zauberman for their valuable insights as members of her committee, and to the staff at the Wharton Behavioral Lab for their assistance in data collection. Correspondence concerning this article should be addressed to Neela Saldanha, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA 19104. Tel: 215-898-3818; fax: 215-898-2534; email: saldan@wharton.upenn.edu

Abstract

Mixed indulgences are mixtures that claim to simultaneously satisfy consumers' hedonic *and* utilitarian goals. Current research considers hedonic and utilitarian as either/or options in which pleasure and guilt are positively correlated. In contrast, this research shows that consumers perceive hedonic and utilitarian as independent constructs, further, they can de-link pleasure and guilt. Pleasantness and sin form two separate and simultaneous dimensions of the hedonic construct. This de-linking has implications for mixed indulgences which may be perceived to be equally pleasant though less sinful than pure indulgences. Despite this perception, mixed indulgences are *less* likely to be chosen relative to pure indulgences. A co-activation and arousal explanation is proposed. Pleasantness and sin are co-activated in indulgence, which elicits arousal. This arousal is desirable in the context of indulgence – consequently removing sin from a pure indulgence reduces the co-activation and arousal, and leads to lower choice for the mixed indulgence.

Pleasure's a sin and sometimes sin's a pleasure.

-George Gordon, Lord Byron

Xyli Power Chocolate, meant to be eaten before bed, claims to ward off the growth of plaque causing bacteria (Mintel 2009). CocoaVia chocolate, say its makers, “have ingredients which may help to lower your cholesterol and promote healthy circulation while being deliciously rich and satisfying” (<http://www.cocoavia.com>). For those who would prefer their health benefits in another form, what about soda enriched with vitamins and minerals? Diet Coke Plus promises you that “great taste now has its benefits” (de Mesa 2007). And, for the student who'd really like to play that video game but has to learn her Shakespeare, here's Arden: the World of Shakespeare, a multiplayer computer game based on the plays of Shakespeare, in which there is, among other attractions, a “character who asks questions about Shakespeare and his plays; answer enough correct and you win a prize” (<http://swi.indiana.edu/ardenworld.htm>).

What do functional chocolate, vitamin-enriched sodas and educational video games have in common? They are all examples of ‘mixed indulgences’ which claim to simultaneously satisfy consumers’ hedonic and utilitarian consumption objectives, such as pleasure and health or education and entertainment. Mixed indulgences can be contrasted with ‘pure indulgences’ or ‘pure utilitarian’ products which focus on one type of goal: hedonic or utilitarian.

Marketers are optimistic about mixed indulgences. Chocolate manufacturers forecast that “consumers are increasingly seeking chocolate that offers them clinically proven physical and

emotional benefits” (Eyre 2008). The makers of Arden predicted, when launching the video game “The potential (of multiplayer games) for pleasure, business, education, and experimentation is just now beginning to emerge," (Fatten 2007).

Consumers, however, have been less than enthusiastic about these mixed indulgences. An article in the New York Times complained about one such mixed indulgence: “Why would anyone want to undermine Diet Coke’s appeal by giving it any redeeming value? It’s bad. People who drink it like to think they are bad. That’s good...” (Morris 2007). And, less than a year after its launch, the product was reportedly not selling well (Alarcon 2008). Pepsi Edge, a full-flavored cola with 50% of the calories and sugar of regular Pepsi, that the firm claimed had done extremely well in pre-launch taste tests, was quickly discontinued after a poor response from consumers (CNN Money 2005). The developer of Arden acknowledged that the first version of Arden had been a failure and abandoned development of the game, admitting that it was “no fun” for players who therefore did not stay long enough in the game world (Naone 2007).

Mixed indulgences, as a consumption category, have been receiving marketers and consumers’ attention over the last few years, however, little academic research has been undertaken to understand exactly how consumers might respond to such products. This research attempts to fill this gap by examining consumers’ perceptions and evaluations of mixed indulgences. It is structured around three broad research questions: (a) How are mixed indulgences perceived relative to pure indulgences? (b) What psychological processes can explain how these perceptions feed into consumer choice? (c) What conditions, either individual or situational, may moderate evaluations and choice of mixed indulgences?

MIXED INDULGENCES AND HEDONIC-UTILITARIAN CONSUMPTION

Mixed indulgences, as hedonic-utilitarian mixtures, can best be understood from the perspective of hedonic and utilitarian consumption. Hedonic and utilitarian consumption have been recognized as two facets of consumption that differ in affective intensity and motives. Hedonic consumption refers to the “multi-sensory, fantasy and emotive aspects” of consumption (Hirschman and Holbrook 1982) and evokes greater emotional arousal than the more reasoned, cognitive, utilitarian consumption (Bazerman, Tenbrunsel, and Wade-Benzoni 1998; Holbrook and Hirschman 1982; Mano and Oliver 1993). Hedonic products satisfy motives of pleasure or of expressing one’s personality (LeClerc, Schmitt, and Dubé 1994; Mano and Oliver 1993; Ratchford 1987); in contrast, utilitarian products fulfill cognitive goals and are judged by how well they function (Dhar and Wertenbroch 2000; Leclerc et al. 1994; Mano and Oliver 1993; Ratchford 1987). Since the goal of hedonic consumption is to provide pleasure, such consumption is consummatory in nature, while utilitarian consumption is construed as a means of achieving other goals (Batra and Ahtola 1990).

The Hedonic-Utilitarian Space as Multi-Dimensional

In past research, hedonic and utilitarian consumption have been operationalized as competing choices (Bazerman et al. 1998; Chernev 2004; Dhar and Wertenbroch 2000; Khan and Dhar 2007; O’Curry and Strahilevitz 2001; Okada, 2005; Read, Loewenstein, and

Kalyanaraman 1999; Shiv and Fedorikhin 1999; Shiv and Nowlis 2004; Strahilevitz 1999; Strahilevitz and Myers 1998; Wertebroch 1998). Examples of hedonic consumption that have appeared in past research include spa massages (Kivetz and Simonson 2002a), dinners in exotic restaurants (Strahilevitz and Myers 1998), low-brow movies (Khan and Dhar 2007; Kivetz and Zheng 2006; Read et al. 1999;) and consumption of indulgent products such as chocolate cake (Shiv and Fedorikhin 1999). Utilitarian consumption, on the other hand, has been represented by the consumption of alkaline batteries (Kivetz and Simonson 2002a), foil wrap, gasoline (Leclerc et al. 1994) high-brow movies (Khan and Dhar 2007; Kivetz and Zheng 2006; Read et al. 1999) and fruit salad (Shiv and Fedorikhin 1999).

Hedonic options are perceived to be both good and bad. Indulgences are pleasurable but they may also have costs, and consideration of these costs leads to the experience of guilt when considering or choosing these options. Indulgent foods may be considered unhealthy (Dhar and Simonson 1999; Shiv and Fedorikhin 1999). More broadly, hedonic consumption may be viewed as less justifiable than utilitarian consumption, especially in a Puritan or Calvinistic society that values functionality and frowns on frivolity (Kivetz and Simonson 2002a, b). Hedonic choices are presumed to entail use of resources (time or money) that could be more usefully deployed elsewhere (Read et al. 1999). The relatively low moral status accorded to the pursuit of hedonic consumption is summed up in the observation that “all major world religions have attempted to curb desires and inhibit their pursuit” (Belk, Ger, and Askegaard 2003). Hedonic consumption has thus been treated in the literature as ‘guilty pleasures’ (Giner-Sorolla 2001).

Utilitarian choices, too, have their positives and negatives. On one hand, such choices evoke relatively little guilt as they are easily justifiable choices. In fact, consideration of these choices may even lead to positive emotions of pride or self-respect (Giner-Sorolla 2001). These options, however, may be perceived to be boring or dull options (Giner-Sorolla 2001; Goodstein, Edell and Moore 1990; Mano and Oliver 1993) as they are much less pleasant than hedonic options.

The treatment of hedonic and utilitarian consumption as competing choices has implications for the study of mixed indulgences. In viewing options as either hedonic or utilitarian, that is, in considering hedonic and utilitarian as ends of a bipolar scale, this research excludes the consideration of options that could be both hedonic *and* utilitarian. Further, on a bipolar hedonic-utilitarian scale, it is unclear whether the midpoint represents high/high hedonic utilitarian mixtures or low/low hedonic-utilitarian mixtures although these two kinds of mixtures may be expected to elicit different consumer responses. There is, in short, a disconnect between the theoretical world, in which mixed indulgences cannot exist and the real world in which mixed indulgences are being introduced on a large scale.

An accurate representation of mixed indulgences would at least require the existence of a space with independent hedonic and utilitarian dimensions. Other literature argues for the existence of bivariate spaces, in place of previously assumed bipolar ones, to more accurately reflect reality. Research on attitudes and attitude ambivalence shows that individuals can hold simultaneous positive and negative attitudes (Cacioppo and Berntson 1994; Priester and Petty 1996, 2001; Priester, Petty, and Park 2007; Thompson, Zanna, and Griffin 1995). Recently,

researchers have shown that people can report mixed emotions in the form of simultaneous positive and negative emotions (Larsen, McGraw, and Cacioppo 2001; Larsen et al. 2004; Williams and Aaker 2002). Neural evidence also indicates that positive and negative emotions may be triggered by different systems in the brain (Cacioppo and Berntson 1994).

While a bivariate hedonic-utilitarian space is a useful starting point, it would not solve the issues of accurately and uniquely representing mixed indulgences. A second issue with current conceptualizations of hedonic and utilitarian consumption is that pleasure and guilt are correlated in the definition of such consumption - hedonic options are high-pleasure, high-guilt options while utilitarian options are low on both pleasure and guilt. Mixed indulgences which may be high-pleasure but low-guilt cannot be represented in this space. It would therefore appear, that, in addition to representing hedonic and utilitarian dimensions separately, positives and negatives of each dimension should be separately measured.

Current scales that measure hedonic and utilitarian consumption, however, measure only the bright side of hedonic and utilitarian consumption without referencing the dark side. For example, the scale items for the hedonic dimension used by Voss, Spangenberg, and Grohmann (2003) are *not fun-fun*, *not delightful-delightful*, *not thrilling-thrilling*, *enjoyable-not enjoyable*, which does not explicitly draw out the costs of hedonic consumption. Similarly, items used to define utilitarian include terms like *useful-useless*, *beneficial-harmful* (Batra and Ahtola 1990) and *practical-pleasurable* (Kivetz and Simonson 2002a, b) but not terms that reference the negative perceptions of utilitarian consumption being boring or dull. To accurately represent

mixed indulgences, it is therefore necessary to measure separately both hedonic and utilitarian dimensions and within those, the positives and negatives of each dimension.

In conclusion, an examination of the current research in hedonic and utilitarian consumption shows that there are several theoretical gaps in the understanding of the hedonic and utilitarian constructs. These gaps directly affect the study of mixed indulgences. The presence of mixed indulgences therefore calls for a re-conceptualization of the hedonic/utilitarian space to provide for both independence of hedonic and utilitarian dimensions and within those, the independence of positives and negatives of these dimensions.

Two pilot studies were undertaken to verify the theoretical reasoning. The results of these pilot studies, which are described in detail later on in this paper, provide evidence that consumers do represent the hedonic-utilitarian space in a more complex manner than current research indicates. Specifically, consumers not only regarded hedonic and utilitarian dimensions as independent, but also perceived hedonic and utilitarian dimensions to comprise good and bad sides. Four dimensions thus emerged: pleasantness, sin, utility and dullness. Pure indulgences (the 'hedonic option' in previous research) were represented as high on pleasantness and high on sin. Mixed indulgences, however, were represented as being equally pleasant as but less sinful than pure indulgences. Mixed indulgences therefore appear to be represented as marketers would intuitively suggest: all of the pleasure with none of the sin. This leads to the second question in this research: how does this representation affect choice for the mixed versus the pure indulgence?

Perceptions of indulgence, co-activation, and arousal

Perceptions of pleasantness and sin may co-occur in the consideration of indulgence. Previous research in the area of attitudes and emotions has shown that the co-activation of positive and negative may produce the state of ambivalence which is an aversive experience. The aversive nature of ambivalence draws from cognitive dissonance theory which proposes that dissonant cognitions produce a negative affective experience that individuals are motivated to reduce (Cacioppo and Berntson 1994; Festinger 1957; Newby-Clark, McGregor, and Zanna, 2002; Priester and Petty 1996, 2001; Priester, Petty, and Park 2007). Given consumers' perceptions of pure and mixed indulgences, there is likely to be greater co-activation of positive and negative for pure indulgences relative to mixed indulgences. Pure indulgences are therefore likely to elicit greater ambivalence. This greater ambivalence associated with pure indulgences is likely to be a source of discomfort, leading consumers to approach the less ambivalent and therefore less aversive mixed indulgence. Drawing on this literature, mixed indulgences, which elicit lower levels of aversive ambivalence, would be more likely to be chosen relative to pure indulgences, which elicit high levels of ambivalence.

Other research, however, provides evidence that the co-activation of positive and negative may be enjoyable. People may enjoy conflict in aesthetic pleasures such as art (Berlyne 1957) and may like sad music (Hunter, Schellenberg, and Schimmack 2007). Participants who enjoyed horror movies showed mixed emotions of fear and happiness when watching a fearful film (Andrade and Cohen 2007). In dramatic sports such as skydiving, participants report feeling both fear and exhilaration (Celsi, Rose, and Leigh 1993). In the food domain, several innately

aversive food items such as chili peppers are strongly preferred (Rozin 1999). Consumers may also have lay theories about the notion that co-activation is enjoyable. They report that the absence of desire (which they indicate as a co-activated construct) would be boring and tedious (Belk, Ger, and Askegaard 2003).

Why would co-activation be enjoyable? The answer to this may lie in the uncertainty generated by co-activated or mixed experiences. Uncertainty itself may sometimes be rewarding - previous research has shown that increasing uncertainty after a positive event can prolong pleasure (Lee and Qiu forthcoming; Wilson et al. 2005). Neurobiological studies also provide evidence for the rewarding aspects of uncertainty: non-predictability of the stimulus correlated with activity in the reward centers of the brain (Berns et al. 2001; Wilson et al. 2005). Similarly, romantic infatuation may last longer when there is uncertainty in the relationship (Wilson et al., 2005). Recent research shows that marital satisfaction is higher for couples who engage in novel rather than routine activities – presumably novel activities are a source of uncertainty (Acevedo and Aron 2009).

Subjective uncertainty elicits arousal (Berlyne 1957; Hebb 1955; Lee and Qiu forthcoming; Silvia 2005). Arousal, also known as activation, energy, or tension (Thayer 1978), is conceptualized as a generalized energizing force that is diffuse, non-directional and affectively neutral (Duffy 1957; Reizensein 1983). Arousal has been shown to increase attraction toward an already pleasant target (Dutton and Aron 1974; Foster et al. 1998; Gorn, Pham, and Sin 2001; Lee and Qiu forthcoming; Reizensein 1983; Schacter and Singer 1962; Wilson et al. 2005).

Hedonic stimuli are pleasant – the addition of arousal would make an already pleasant hedonic stimulus exciting (Russell 1980) and would therefore intensify attraction toward the stimulus.

In short, pure indulgences will elicit higher levels of co-activation than mixed indulgence, which are seen as equally positive, but less negative. This co-activation is a function of the interaction between pleasantness and sin and elicits arousal. Arousal intensifies the attraction of the hedonic stimulus – hence low-arousal mixed indulgences will be less likely to be chosen relative to high-arousal pure indulgences.

The theoretical discussion so far can be summarized in the framework given in figure 1. This framework is tested across four experiments.

Insert figure 1 about here

PILOT STUDY 1: DUAL NATURE OF HEDONIC DIMENSION

The objective of the pilot studies was to understand (a) consumers' representation of the hedonic-utilitarian space (b) consumers' perceptions of mixed and pure indulgences. In the first pilot study, the focus was more on the indulgence side and therefore the positive and negative aspects of hedonic consumption were considered. In the second pilot study, in addition to the

positive and negative aspects of hedonic consumption, positive and negative aspects of utilitarian consumption were also specifically allowed to emerge.

Participants and Procedure

This study was completed by 148 participants at a university in northeastern United States (29% male, 36% female, 34% did not specify gender; median age of those reporting = 20). The food domain was used as it is representative of a domain that has seen several mixed indulgence launches. Six product replicates were used across sweet and savory food categories. Examples of (mixed) pure indulgences were: (flavonol enriched) chocolate cake and (calcium enriched) cheese curls. Pure and mixed indulgences were presented to participants in counterbalanced order and no participant saw a pure and mixed indulgence version of the same product.

Participants saw a photograph and description of each product and rated that product on hedonic and utilitarian dimensions (1= strongly disagree, 9 = strongly agree) before moving to the next product. Thirty hedonic and utilitarian scale items were used from previous research (Batra and Ahtola 1990; Dhar and Wertenbroch 2000; Mano and Oliver 1993; Shiv and Fedorikhin 1999; Strahilevitz 1999; Strahilevitz and Myers 1998; Voss et al. 2003); in addition, items such as *sin* were added to reflect the expected conflicting nature of indulgence that has been missing from previous scales. A list of items is included in appendix A.

Results.

Hedonic-utilitarian perceptions. A principal-components factor analysis with promax rotation revealed three factors. The factor structure is given in table 1.

Insert table 1 about here

The first two factors were termed the pleasantness factor (*e.g., nice, comforting*) and the utility factor (*e.g., useful, functional*), corresponding broadly to current working definitions of hedonic and utilitarian. In addition, a third distinct factor emerged. This factor comprised items such as *sin* and *vice* and was termed the *sin* factor.

Mixed vs. pure indulgences. Pleasantness, sin, and utility indices were constructed using the means of items loading on each factor ($\alpha_{\text{pleasantness}} = .95$, $\alpha_{\text{sin}} = .77$, $\alpha_{\text{utility}} = .94$). The means across products are summarized in table 2. The results of table 2 show that while there were no differences for savory products, for sweet products, in two out of three categories, mixed indulgences were perceived to just as pleasant but significantly less sinful than pure indulgences.

Insert table 2 about here

Discussion.

Pilot study 1 provided preliminary evidence that hedonic and utilitarian dimensions are independent and within this, the hedonic dimension comprises positive and negative sub-dimensions of pleasantness and sin. This study also provided some evidence that mixed indulgences may be perceived as significantly less sinful though just as pleasant as pure indulgences. A limitation of pilot study 1, however, was its focus on hedonic dimensions. In Pilot study 2, items were added to understand whether sub-dimensions of utility existed.

PILOT STUDY 2: DUAL NATURE OF UTILITARIAN DIMENSION

Participants and Procedure

This study was completed by 77 participants at a university in the northeastern United States (68% female, modal age 18-21). Participants were assigned to one of two sets: pure indulgence or mixed indulgence, each containing three items. Both pure indulgence and mixed indulgence sets comprised a pure utilitarian item (fruit salad) and a pure indulgence item (ice-cream) that were identical across sets. The two sets also each comprised a third (target) item that was different across sets. In the pure indulgence set, the target item was another pure indulgence (chocolate cake); in the mixed indulgence set, the target item was a mixed indulgence (heart

healthy chocolate cake enriched with flavonols). Thus the pure indulgence set comprised fruit salad, chocolate cake and ice-cream while the mixed indulgence set comprised fruit salad, heart-healthy chocolate cake and ice-cream.

Participants evaluated each item using hedonic-utilitarian scales from pilot study 1. Five additional items reflected the notion of *dullness* (please see the note in appendix A).

Results

Hedonic-utilitarian perceptions. Pleasantness, utility and sin factors were replicated. Additionally, as table 3 indicates, a fourth factor emerged, on which items such as *dull* and *boring* loaded highly.

Insert table 3 about here

Mixed and pure indulgences. Indices for pleasantness, sin, utility and dullness were constructed as in pilot study 1 ($\alpha_{\text{pleasantness}} = .89$, $\alpha_{\text{sin}} = .86$, $\alpha_{\text{utility}} = .93$, $\alpha_{\text{dullness}} = .82$). To compare the mixed with the pure indulgence, the healthy cake was compared with the regular cake. Consistent with pilot study 1, the mixed indulgence was rated as pleasant ($M_{\text{pureind}} = 6.97$; $M_{\text{mixedind}} = 6.49$), ($F(1, 225) = .82$, NS) but less sinful than the pure indulgence ($M_{\text{pureind}} = 6.02$,

$M_{\text{mixedind}} = 5.13$), ($F(1, 225) = 12.07$, $p < .05$). To compare the mixed indulgence with the pure utilitarian item, the healthy cake and fruit salad in the experimental condition were compared. The mixed indulgence was rated as significantly less dull ($M_{\text{pureutil}} = 3.68$; $M_{\text{mixedind}} = 2.49$), ($F(1, 225) = 9.84$, $p < .05$) but also less utilitarian ($M_{\text{pureutil}} = 5.84$, $M_{\text{mixedind}} = 3.39$), ($F(1, 225) = 64.34$, $p < .01$) than the pure utilitarian option.

Discussion

Pilot study 2 expands the representation of the hedonic-utilitarian space to account for the dark side of utilitarian consumption. Further, mixed indulgences were distinct from both pure indulgence and from pure utilitarian options.

Together, the results of the two pilot studies provide evidence that the hedonic-utilitarian space is better conceptualized as a four factor multi-dimensional space. This four factor space separates out hedonic and utilitarian dimensions and within those the good and bad sides of each dimension. This four-factor representation not only questions existing assumptions about a bipolar hedonic-utilitarian scale but also points to the fact that consumers may de-link pleasure and guilt in hedonic and utilitarian consumption: mixed indulgences, in the pilot study, were perceived to be equally pleasant but less sinful than pure indulgences.

How do these perceptions influence actual choice behavior? Intuitively, mixed indulgences appear to dominate pure indulgences, as they are equally pleasant but less sinful versions of pure indulgences. Mixed indulgences would be expected to elicit less ambivalence

than the pure indulgence; given that ambivalence is an aversive experience, mixed indulgences should be more likely to be chosen relative to pure indulgences. As discussed earlier in this paper, however, in some cases, consumers may enjoy the co-activation of positive and negative, in which case the mixed indulgence would be less likely to be selected relative to the pure indulgence.

To test which of these predictions would hold true in the case of indulgence, study 1, a choice study was carried out.

STUDY 1 – CHOICE OF MIXED VERSUS PURE INDULGENCE

Participants and Procedure

This study was completed by 125 participants at a university in northeastern United States (58% women, modal age: 18-21). Participants were randomly assigned to one of two choice sets (pure indulgence/mixed indulgence) and asked to choose a dessert. As in pilot study 2, both pure indulgence and mixed indulgence choice sets comprised an identical pure utilitarian (fruit salad) and pure hedonic item (ice-cream), while the difference was the target item – either a pure indulgence (chocolate cake) or a mixed indulgence (flavonol enriched chocolate cake). A description of the stimuli can be seen in appendix B.

Results

Choice share of the mixed indulgence was significantly lower than that of the pure indulgence (choicepure = 66%, choicemixed = 41%), ($z = 2.48$, $p < .05$). Moreover, while the choice share of the pure utilitarian item (fruit salad) did not significantly change from the pure indulgence to the mixed indulgence condition (22% vs. 28%), ($z = .57$, NS), the choice of the other pure indulgence (ice-cream) increased when it was present in the choice set with a pure or mixed indulgence (13% vs. 29%), ($z = 2.20$, $p < .05$).

Discussion

The choice study showed that mixed indulgences may be less likely to be chosen relative to pure indulgences, despite evidence from previous studies suggesting that mixed indulgences may be perceived to be equally pleasant and less sinful than pure indulgences. The results of the choice study support the hypothesis of enjoyment of co-activation. The pattern of choice shares for other items also supported this hypothesis – the pure indulgence became disproportionately attractive when placed in a choice set with a mixed indulgence.

A limitation of study 1 was that it only measured choice. Consequently, a process explanation is tested in study 2 that links perceptions (obtained in the pilot studies) to choice (study 1).

STUDY 2 – CO-ACTIVATION AND AROUSAL FOR PURE AND MIXED INDULGENCE

Participants and Procedure

This study was completed by 156 participants at a university in northeast United States (62% female, median age = 20). Participants were exposed to an advertisement about a product that was either a pure indulgence (chocolate) or mixed indulgence (fiber-enriched chocolate). For a description of the stimulus, please see appendix C. Participants rated the product on hedonic-utilitarian dimensions (as in earlier studies), on scales designed to measure co-activation on items to measure arousal and finally on intention to purchase. Co-activation was measured in two ways. First, co-activation was assessed directly by asking participants for their responses on five items: (*I consider this product a guilty pleasure, this product is fun but bad for me, this product is naughty but nice, I feel both good and bad about consuming this product, I feel conflicted about consuming this product*) 1 = strongly disagree, 9 = strongly agree) (items drawn from Giner-Sorolla 2001; Williams and Aaker 2002). These items were averaged to form a direct co-activation assessment index ($\alpha_{\text{directindex}} = .83$). Second, co-activation was assessed by constructing an index, using separate positive (*consuming this product makes me feel good, I feel positively about this product*) and negative (*consuming this product makes me feel bad, I feel negatively about this product*) responses (1 = strongly disagree, 9 = strongly agree) (items based on Priester and Petty 2001). These responses were then combined into a single measure of co-activation using a linear model. Previous research has suggested that subjective ambivalence is a linear

function of roughly three times the conflicting minus the dominating reaction, where the dominating (conflicting) reaction refers to the greater (lesser) of the reactions (Thompson, Zanna, and Griffin 1995). Arousal was measured by asking consumers how excited they were and how thrilled they were to consume the product. Previous research has indicated that ‘excitement’ and ‘thrill’ are words that are extremely high on arousal (Bradley and Lang 1999). Finally, as a measure of behavioral tendency, participants were asked how likely they were to buy the product (1= not at all, 9 = extremely likely).

Results

Hedonic-utilitarian perceptions. A principal components factor analysis with promax rotation replicated the four factor structure outlined in pilot study 2. Factor loadings are given in table 4.

Insert table 4 about here

Indices were constructed as in the pilot studies ($\alpha_{\text{pleasantness}} = .78$, $\alpha_{\text{sin}} = .83$, $\alpha_{\text{utility}} = .83$, $\alpha_{\text{dullness}} = .84$). The mixed indulgence was perceived to be significantly less sinful ($M_{\text{pure}} = 5.15$, $M_{\text{mixed}} = 3.24$), ($F(1, 154) = 38.22$, $p < .01$) but not significantly less pleasant than the pure

indulgence ($M_{\text{pure}} = 4.95$, $M_{\text{mixed}} = 4.73$), ($F(1, 154) = .78$, NS), consistent with the results of previous studies.

Co-activation, arousal, and behavior. On the direct co-activation assessment index, the mixed indulgence was rated as producing significantly less co-activation than the pure indulgence ($M_{\text{pure}} = 5.47$, $M_{\text{mixed}} = 4.12$), ($F(1, 154) = 24.26$, $p < .01$). Further, on the constructed co-activation index, too, the mixed indulgence elicited significantly less co-activation than the pure indulgence ($M_{\text{pure}} = 9.34$, $M_{\text{mixed}} = 6.29$), ($F(1, 154) = 8.75$, $p < .01$). Arousal levels were significantly lower for the mixed indulgence versus the pure indulgence ($M_{\text{pure}} = 4.03$, $M_{\text{mixed}} = 3.26$), ($F(1, 154) = 6.59$, $p < .01$). Finally, intentions to purchase the mixed indulgence were lower than intentions to purchase the pure indulgence ($M_{\text{pure}} = 3.78$, $M_{\text{mixed}} = 3.18$), ($F(1, 154) = 3.70$, $p = .056$).

Process of Mediation. To better understand the potential mediating role of arousal on purchase intent for indulgences, four regressions were run on the arousal index (Baron and Kenny 1986). This analysis showed that (a) mixed indulgences were marginally less likely to be purchased than pure indulgences ($\beta = -.63$, $p = .056$), (b) mixed indulgences evoked significantly lower levels of arousal than pure indulgences ($\beta = -.77$, $p < .05$) (c) higher levels of arousal led to significantly higher intention to purchase ($\beta = .78$, $p < .01$) and (d) arousal was a significant predictor of purchase ($\beta = .78$, $p < .01$) while indulgence type was not ($\beta = -.03$, NS), (Sobel's $z = -2.51$, $p < .05$). Together, these equations provide preliminary support for the mediating role of arousal.

Discussion

Results of study 2 supported the process explanation that linked perceptions of mixed indulgence with choice. The mixed indulgence was perceived to be significantly less sinful though not less pleasant than the pure indulgence. The mixed indulgence also produced lower co-activation, lower levels of arousal and lower intention to purchase. A mediation analysis showed that arousal mediated the effect of type of indulgence on intention to purchase.

GENERAL DISCUSSION

This paper examined a category of products that were termed as ‘mixed indulgences.’ Mixed indulgences comprise products that have both hedonic and utilitarian attributes and consequently claim to fulfill both hedonic and utilitarian goals. While past research has considered hedonic and utilitarian as bipolar opposites, this paper re-conceptualized the hedonic-utilitarian space as a multi-dimensional space that could uniquely represent mixed indulgences, pure indulgences and pure utilitarian products. Specifically, the results of two pilot studies showed that consumers perceived hedonic and utilitarian to be independent dimensions and within those dimensions, perceived the positives and negatives of each dimension to be independent. The hedonic dimension comprised factors of pleasantness and sin while the

utilitarian dimension comprised utility and dullness factors. Mixed indulgences, in which utilitarian attributes were added to hedonic products, were perceived to be equally pleasant but less sinful than pure indulgences.

Despite these perceptions of mixed indulgences as equally pleasant but less sinful than pure indulgences, consumers were less likely to choose these products relative to pure indulgences. This discrepancy between perception and choice was explained by showing that pure indulgences had higher levels of co-activation of positive and negative than mixed indulgences. This co-activation elicited arousal that mediated the effect of type of indulgence on intention to buy, such that high arousal pure indulgences were more likely to be chosen than low arousal mixed indulgences. In doing this, this study showed that co-activation of positive and negative, at least in the indulgence domain may be an attractive, rather than aversive experience.

Contributions

This research makes several contributions. First, mixed indulgences, as discussed in the introduction, are a global mainstream trend, having been launched in domains as large as food, entertainment and leisure around the world. Despite the growth of mixed indulgences as a consumption category, little academic research has examined these kinds of products and consumers reactions to them. This research is among the first to systematically examine mixed indulgences in the context of hedonic and utilitarian consumption.

Second, this paper questions existing assumptions about the bipolarity of hedonic and utilitarian dimensions and the correlations between pleasure and guilt in hedonic consumption. These assumptions have restricted the study of mixed options and this research demonstrates that consumers themselves may have more nuanced representations of hedonic and utilitarian consumption than a simple bipolar scale would predict.

Third, the role of arousal uncovered in this research may explain why co-activation of positive and negative is sometimes uncomfortable and at other times enjoyable. Co-activation elicits arousal, but this experience of arousal may sometimes be evaluated positively and at other times may be evaluated negatively. The evaluation of arousal would depend both on the level of arousal individuals consider ideal as well as on the level of arousal individuals experience (Apter 1982). People may differ in their preference for different levels of arousal. For example, Americans have been shown to value high arousal positive emotions more than Chinese (Tsai, Knutson, and Fung 2005). Further, each individual may sometimes have a preference for low arousal and at other times a preference for high arousal (Apter 1982). When the individual has a preference for high arousal, a high arousal experience may be exciting and a low arousal experience may be boring. This would explain why, in an arousal-seeking state, low-arousal mixed indulgences would be less attractive than high-arousal pure indulgences. Similarly, when the individual prefers low arousal, low arousal experiences may be considered relaxing but high arousal experiences may be considered anxiety inducing (Apter 1982). Further research (discussed in the final section of this paper) will explore this idea of when consumers seek high and low arousal and implications for choice of indulgence.

Finally, this research also has implications for public policy. Obesity and overweight, for example, are critical issues in the US with 66% of consumers classifying as overweight and 32% as obese (Center for Disease Control and Prevention 2006). As consumers battle these conditions, they look to ‘better for you’ products to help them achieve both health and pleasure goals. Mixed indulgences may be such products, but although consumers may agree such products are ‘better for you,’ they may not end up buying them.

Limitations

The current research focused on a single type of mixed indulgence in which utilitarian attributes were added to hedonic products. Mixed indulgences, however, can be created in a number of ways, by adding or subtracting attributes from extreme options. Additive mixed indulgences involve adding attributes to a hedonic or utilitarian base, while subtractive mixed indulgences comprise removing attributes from a hedonic or utilitarian base. Additive mixtures can further be categorized into ‘*hedonic-plus*’ and ‘*utilitarian-plus*’ mixtures. Hedonic-plus additive mixtures imply adding utilitarian attributes to a hedonic base, such as have been studied in this paper. Utilitarian-plus mixed indulgences on the other hand may involve adding hedonic attributes to a utilitarian base. Examples of such utilitarian-plus mixtures are chocolate enriched calcium chews (e.g., Viactiv, Adora). Subtractive mixtures could similarly be sub-categorized. *Hedonic-minus* mixtures would involve subtracting hedonic attributes from hedonic bases. Examples of such mixtures are sugar-free chocolate or fat-free ice-cream. Finally, although theoretically *utilitarian-minus* mixed indulgences could be constructed by subtracting utilitarian

attributes from utilitarian products, such examples are extremely rare in the real world, suggesting that consumers may not see the value in such products. Further research should focus on the differences between types of mixtures. The same mixed indulgence could be framed in different ways. A calcium and chocolate mixture for example, can be framed either as calcium-enriched chocolate (hedonic-plus) or chocolate-enriched calcium (utilitarian-plus). This differential framing will change consumers' comparison points – with the chocolate in the former and with calcium in the latter – and consequently choice of such products.

PROPOSED RESEARCH

Mindsets and the Enjoyment of Arousal

As discussed earlier, the enjoyment of arousal may help explain consumers' responses to co-activation of positive and negative– why, in some cases, they find co-activation desirable and in other situations, uncomfortable. The enjoyment of arousal depends on two factors: the ideal or preferred level of arousal and the actual, experienced level of arousal (Apter 1982). Consumers may have a preference for low or high levels of arousal in different situations, in other words, they may be 'arousal seeking' or 'arousal avoiding' at different times (Apter 1982). For example, when consumers are in a goal-directed mindset, they have a task to complete which would require them to manage their energy efficiently, hence in such a situation consumers would be in an arousal-avoiding situation. On the other hand, when consumers are in an experiential mindset,

they would like to derive the most pleasure from the experience. Given that high-arousal emotions are positively valued, they would seek arousal as a means to achieve this full experience (Kaltcheva and Weitz 2006). Similar to this notion is the idea of telic and paratelic states (Apter 1982). In paratelic states, akin to an experiential mindset, the individual is playful, spontaneous and focused on the process. On the other hand, in a telic state, much like a goal-oriented mindset, the consumer is serious, future oriented, and focused on an end result. In paratelic states, consumers are arousal seeking, while they are arousal avoiding in telic states.

Given that the consumer is arousal seeking in a paratelic state, she would find conditions of high arousal exciting and enjoyable and may experience boredom when the actual level of arousal is lower than the actual level of arousal (Apter 1982). When asked to choose an indulgence in this state, the consumer should be more likely to choose the high-arousal pure indulgence than the low-arousal mixed indulgence. Conversely in a goal-directed or telic mindset, consumers prefer low arousal - in this case, given a choice between the pure indulgence and the mixed indulgence, they should prefer the mixed indulgence to the pure indulgence.

To test this notion, a 2 (mindset: paratelic/telic) x 2 (indulgence type: pure/mixed) study will be run. Mindset will be manipulated by getting participants to view a clip of either a comic film (paratelic) for enjoyment or a clip of a serious documentary for learning (Howard et al. 2002). They will then be exposed to the mixed indulgence or pure indulgence product and provide ratings on their likelihood to purchase the product, hedonic-utilitarian perceptions, hedonic-utilitarian scales, ambivalence and arousal, similar to those used in the pilot studies and in study 2. Participants in both mindsets should find the pure indulgence more arousing than the

mixed indulgence. However, participants in the paratelic mindset should be more likely to choose the high-arousal pure indulgence over the low-arousal mixed indulgence; the converse should hold true of participants in the telic mindset.

Mindsets can also be measured using the Telic Dominance Scale (Murgatroyd et al. 1978). The Telic Dominance scale is a 42 item scale that measures the extent to which the individual is serious minded, planning directed and arousal seeking versus playful, arousal seeking. For each item, individuals are asked to indicate which of the two actions they would prefer, for example (a) compile a short dictionary for financial reward or (b) write a short story for fun. Another example is whether they would prefer to (a) go to an art gallery to enjoy exhibits or (b) go to an art gallery to learn about the exhibits. The full scale is given in appendix D. Individuals who are paratelic dominant should prefer the pure indulgence whereas those who are telic dominant should prefer the mixed indulgence when asked to choose a snack or dessert (an essentially hedonic activity).

CONCLUSION

This paper has begun to examine, and develop a richer understanding of consumers' perceptions of, and preferences for, hedonic-utilitarian mixtures. Further research should be carried out both to examine consumer responses to different types of mixtures, as well as to understand moderators of the effect.

Appendix A

Hedonic-Utilitarian Scale Items (pilot study 1 and 2)

Item	Classification	Source
Agreeable	Hedonic	Batra and Ahtola, 1990
Comforting	Hedonic	Added by author
Delightful	Hedonic	Voss, Spangenberg, and Grohmann, 2003
Enjoyable	Hedonic	Voss et al., 2003
Exciting	Hedonic	Voss et al. 2003; Mano and Oliver 1993
Frivolous	Hedonic	Strahilevitz 1999; Strahilevitz and Myers 1998; O'Curry and Strahilevitz 2001
Fun	Hedonic	Voss et al. 2003
Nice	Hedonic	Batra and Ahtola 1990; Mano and Oliver 1993
Pleasurable	Hedonic	Batra and Ahtola 1990; Kivetz and Simonson 2002a, b; Mano and Oliver 1993
Indulgent	Hedonic	Added by author
Sinful	Hedonic	Added by author
Tempting	Hedonic	Added by author
Thrilling	Hedonic	Voss et al. 2003
Vice	Hedonic	Wertenbroch 1998
Something I want		Bazerman, Tenbrunsel, and Wade-Benzoni, (1998)
Something I should have	Utilitarian	Bazerman et al. 1998 (should)
Beneficial	Utilitarian	Batra and Ahtola 1990; Shiv and Fedorikhin 1999; Mano and Oliver 1993
Effective	Utilitarian	Voss et al. 2003
Functional	Utilitarian	Voss et al. 2003
Harmful	Utilitarian	Batra and Ahtola 1990; Shiv and Fedorikhin 1999
Healthy	Utilitarian	Shiv and Fedorikhin 1999
Helpful	Utilitarian	Voss et al. 2003
Necessary	Utilitarian	Voss et al. 2003
Practical	Utilitarian	Kivetz and Simonson 2002a, b; Voss et al. 2003
Rational	Utilitarian	Shiv and Fedorikhin 1999
Useful	Utilitarian	Batra and Ahtola 1990; Mano and Oliver 1993
Valuable	Utilitarian	Batra and Ahtola 1990; Mano and Oliver 1993
Virtue	Utilitarian	Wertenbroch 1998
Wholesome	Utilitarian	Added by author
Wise	Utilitarian	Shiv and Fedorikhin 1999

In Pilot study 2 the terms, boring and dull were added from Goodstein, Edell and Moore (1990) and flavorless and bland were added by the author. In addition, the word ‘interesting’ was also added to the hedonic scale by the author (Mano and Oliver 1993).

Appendix B

Stimuli for pilot study 2 and study 1

PURE INDULGENCE CONDITION

Imagine that you have just finished dinner at a nice restaurant and are now considering dessert. The menu provides you with three options that are listed below. All desserts are equally priced. Which dessert would you choose?

		
Cut pieces of seasonal fresh fruit.	Chocolate cake with chocolate chips and rich chocolate.	Smooth, creamy, premium French vanilla ice-cream.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fruit Salad	Chocolate Cake	Ice Cream

MIXED INDULGENCE CONDITION

Imagine that you have just finished dinner at a nice restaurant and are now considering dessert. The menu provides you with three options that are listed below. All desserts are equally priced. Which dessert would you choose?

		
Cut pieces of seasonal fresh fruit.	Chocolate cake with chocolate chips and special flavonol-enriched heart-healthy chocolate.	Smooth, creamy, premium French vanilla ice-cream.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fruit Salad	Chocolate Cake	Ice Cream

Appendix C

Stimuli (study 2)

PURE INDULGENCE CONDITION

LIFE IS SHORT. WHY SHOULD IT BE BORING, TOO?



Introducing *Flirt*[™] Chocolate Fingers.

Your chocolate fix is only a bite away.
Feelsinful as you *Flirt*[™] with each crunchy, chocolatey bite.

Go ahead. *Flirt*[™]. Be naughty. Oh yes, THAT naughty!!



MIXED INDULGENCE CONDITION (study 2)

LIFE IS SHORT. WHY SHOULD IT BE BORING, TOO?



Introducing *Flirt*[™] Fiber-enriched Chocolate Fingers.

Your fiber requirement is only a bite away.
Feel virtuous as you *Flirt*[™] with each crunchy, chocolatey bite.

Go ahead. *Flirt*[™]. Be naughty. But no, not THAT naughty!!



Appendix D

The Telic Dominance Scale

For each item, please check the item that you prefer. If you are not sure, please check the “not sure” answer. Do not leave any answers blank.

1.	Compile a short dictionary for financial reward* Write a short story for fun Not sure
2	Going to evening class to improve your qualifications* Going to evening class for fun Not sure
3	Leisure activities which are just exciting. Leisure activities which have a purpose* Not sure
4	Improving a sporting skill by playing a game Improving it through systematic practice* Not sure
5	Spending one's life in many different places Spending most of one's life in one place* Not sure
6	Work that earns promotion* Work that you enjoy doing Not sure
7	Planning your leisure* Doing things on the spur of the moment Not sure
8	Going to formal evening meetings * Watching television for entertainment Not sure
9	Having your tasks set for you* Choosing your own activities Not sure
10	Investing money in a long term insurance/pension scheme* Buying an expensive car Not sure
11	Staying in one job* Having many changes of job

	Not sure
12	Seldom doing things 'for kicks' * Often doing things 'for kicks' Not sure
13	Going to a party Going to a meeting* Not sure
14	Leisure activities Work activities* Not sure
15	Taking holidays in many different places Taking holidays always in the same place* Not sure
16	Going away on holiday for two weeks Given two weeks of free time finishing a needed improvement at home* Not sure
17	Taking life seriously* Treating life light-heartedly Not sure
18	Frequently trying strange foods Always eating familiar foods* Not sure
19	Recounting an incident accurately* Exaggerating for effect Not sure
20	Spending \$100 having an enjoyable weekend Spending \$100 on repaying a loan* Not sure
21	Having continuity in the place where you live* Having frequent moves of house Not sure
22	Going to an art gallery to enjoy exhibits To learn about the exhibits* Not sure
23	Watching a game Refereeing a game* Not sure
24	Eating special things because you enjoy them Eating special things because they are good for your health* Not sure
25	Fixing long-term life ambitions* Living life as it comes Not sure

26	Always trying to finish your work before you enjoy yourself* Frequently going out for enjoyment before all your work is finished.
27	Not needing to explain your behavior. Having purposes for your behavior* Not sure
28	Climbing a mountain to try and save someone* . Climbing a mountain for pleasure Not sure
29	Happy to waste time Always having to be busy* Not sure
30	Taking risks Going through life safely* Not sure
31	Watching a crucial math between two ordinary sides* Watching an exhibition game with star performers Not sure
32	Playing a game Organizing a game* Not sure
33	Glancing at pictures in a book Reading a biography* Not sure
34	Winning a game easily* Playing a game with the scores very close Not sure
35	Steady routine in life* Continual unexpectedness or surprise Not sure
36	Working in the garden* Picking wild fruit Not sure
37	Reading for information* Reading for fun Not sure
38	Arguing for fun Arguing with others seriously to change their opinions* Not sure
39	Winning a game* Playing a game for fun Not sure
40	Travelling a great deal in one's job Working in one office or workshop*

	Not sure
41	Planning ahead* Taking each day as it comes Not sure
42	Planning a holiday* Being on holiday Not sure.

* denotes the telic choice in each item.

Not sure is scored as 0.5.

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Table 1

Factor Structure of Hedonic-Utilitarian Perceptions (pilot study 1)

Items	Factor - Pleasantness	Factor - Utility	Factor - Sin
Enjoyable	.94	-.13	-.10
Tempting	.89	-.14	.05
Pleasurable	.88	-.05	-.08
Delightful	.86	.00	-.06
Something I 'want'	.81	.05	-.04
Comforting	.78	.00	.11
Fun	.78	.10	.08
Nice	.76	.07	-.04
Exciting	.69	.24	.16
Agreeable	.62	.16	-.22
Thrilling	.60	.29	.16
Indulgent	.57	-.26	.25
Useful	-.11	.88	-.04
Helpful	-.08	.88	-.00
Functional	-.11	.81	.11
A virtue	.05	.76	.19
Beneficial	.02	.75	-.08
Practical	-.09	.72	.08
A wise choice	.06	.72	-.24
Valuable	.12	.72	-.06
Necessary	.04	.71	.19
Healthy	-.11	.65	-.32
Effective	.18	.63	.17
Rational	.19	.51	-.30
Sinful	.09	.11	.74
Vice	.01	.20	.73
Harmful	-.09	-.11	.59
Wholesome	.25	.48	-.12
Something I should have	.38	.48	-.13
Frivolous	.09	-.13	.44

Table 2**Product Ratings on Indices (pilot study 1)**

Product	Pleasantness	Utility	Sin
Chocolate cake	6.81	3.57*	4.60
Flavonol enriched chocolate cake	6.14	4.45*	4.12
Ice-cream	6.61	4.23	4.80**
Calcium enriched ice-cream	6.61	4.60	2.78**
Chocolate chip cookies	6.67	3.59**	5.60**
Fiber enriched chocolate chip cookies	6.23	4.79**	4.14**
Potato chips	5.17	2.91	4.48
Protein enriched potato chips	4.81	3.50	3.70
Buttered popcorn	5.20	3.08**	4.17
Calcium enriched buttered popcorn	5.47	4.31**	3.54
Cheese curls	5.30	2.87*	4.04
Calcium enriched cheese curls	4.92	3.63*	4.36

* differences significant at $p < .05$

** differences significant at $p < .01$

Table 3

Factor Structure of Hedonic-Utilitarian Perceptions (pilot study 2)

Items	Factor 1 Utility	Factor 2 Pleasantness	Factor 3 Sin	Factor 4 Dullness
Effective	.84	.02	.16	.10
Functional	.83	-.05	.07	.08
Virtue	.81	-.04	.09	.07
Helpful	.81	.05	-.01	.01
Necessary	.77	-.11	.04	-.04
Beneficial	.77	-.07	-.31	-.10
Useful	.75	.08	-.03	.06
Rational	.73	.04	.00	.14
Practical	.72	.07	-.12	.05
Wholesome	.68	.00	-.19	.02
Wise	.67	.09	-.34	-.06
Valuable	.66	.08	.15	-.08
Healthy	.60	-.08	-.48	-.04
Something I should have	.55	.26	-.26	.10
Enjoyable	-.05	.88	.04	.03
Pleasurable	-.09	.87	.06	.00
Agreeable	-.06	.86	-.21	.24
Comforting	-.06	.84	.08	.23
Nice	.12	.73	-.08	.08
Something I want	.08	.70	-.08	-.14
Delightful	.05	.68	-.05	-.09
Tempting	-.04	.65	.23	-.22
Fun	.10	.59	.18	-.22
Exciting	.13	.55	.14	-.27
Vice	.00	.05	.81	.08
Sinful	-.04	.01	.80	.02
Harmful	-.10	-.01	.78	.03
Frivolous	-.04	-.03	.77	.20
Indulgent	-.15	.27	.62	-.03
Dull	.07	-.03	.11	.77
Boring	.10	.02	.02	.73
Bland	.23	-.29	.32	.45
Flavorless	.36	-.30	.22	.26
Thrilling	.18	.33	.39	-.26
Interesting	.27	.38	.28	-.32

Table 4**Factor Structure of Hedonic-Utilitarian Perceptions (study 2)**

Items	Sin	Pleasantness	Dullness	Utility
Sin	.87	-.09	-.11	.06
Wicked	.78	-.26	-.12	.16
Vice	.75	.19	.03	-.08
Regret	.72	.07	.13	.00
Should not have	.72	.18	.18	-.22
Pleasant	.19	.73	-.02	.02
Agreeable	-.14	.71	.15	.06
Nice	-.15	.70	-.02	.15
Delightful	.07	.67	-.26	.05
Comforting	.11	.66	-.01	-.01
Enjoyable	.10	.60	-.36	.05
Dull	.03	.09	.87	-.10
Boring	.00	-.03	.78	.03
Bland	-.06	.02	.74	.04
Flavorless	.00	-.08	.61	.10
Useful	-.07	.02	-.06	.78
Helpful	-.06	.07	.05	.74
Functional	.03	.10	.21	.72
Practical	-.07	-.02	.10	.64
Necessary	.20	.03	-.15	.55
Virtuous	.00	.24	.04	.34
Tedious	.35	-.24	.46	.18

Figure 1

Basic Theoretical Framework

