Unwrapping Packaging: Does It Pay, and “How”!
The Role of Aesthetically Appealing Packaging in Product Valuation

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Abstract

There is little to no research specifically studying whether aesthetically appealing packaging (AAP) plays a role in the evaluation and experience of products. Do products truly benefit from AAP? Do all types of products benefit equally? In this paper, we firstly provide empirical evidence demonstrating the influence of AAP on product valuation and product attitude. We also propose and test a conceptual model of packaging. We find that AAP positively impacts product valuation and attitude for hedonic products but offers no such benefits for utilitarian products. We propose a dual cognitive-affective process of how AAP may positively impact product attitude and valuation, which produces differential effects for utilitarian and hedonic products. We further find that for familiar brands, affective reactions play a greater role than cognitive reactions in mediating the impact of packaging on product attitude, suggesting that the influence of AAP may be at a more nonconscious automatic level. We present this work as a significant first step toward a fuller understanding of the conceptual role of packaging in the entire product experience.

Keywords: Aesthetically appealing packaging, product valuation, affect, cognition, utilitarian, hedonic.
It appears that marketers consider the potential of a package to be much more than a medium of distribution, storage and protection of a product, which is supported by the multitude of attractive shapes, sizes and colors one sees in any store one enters. Manufacturers of food and other consumer packaged products spend large sums of money developing "easy-to-open" packages that are more convenient for quick meals or for easy dispensing, and visually appealing packages which appear to communicate more than mere information about the product inside (figure 1a). Apart from the realm of consumer packaged goods, in which the packaging is visible at the time of purchase (and hence may play a role in the purchase decision process), we also see significant and creative innovations in packaging for situations in which the packaging is not visible before or at the time of purchase. For example, Apple invests significantly in developing simple, uncluttered, easy to use and visually appealing packages, even for its internet computer orders, in which the package does not affect the purchase decision. Figure 1b shows a comparative presentation of the delivered products for a Lenovo Thinkpad and an Apple MacBook Pro. The simple packaging for the Thinkpad, while fully functional, may only be characterized as “ordinary” when compared to the sleek and attractive packaging for the MacBook—packaging which appears to transcend beyond the simple functions of storage and protection during transit. Even retailers nowadays are investing considerable amounts of money in the packaging of their private label merchandise, where one of the goals is to signal the high quality of their products. These examples indicate that packaging is viewed by industry to have an influence on consumers—either in terms of their product choice or on their product usage experience, depending on whether the visibility of the packaging applies before, during or after the purchase.

1 “Paying the Price”, Progressive Grocer (2006) describes how national organic retailer Wild Oats is realizing the importance of all elements of the marketing mix (especially packaging) in communicating a message of high quality for their line of products.
However, there are certain brands like Lenovo who refrain from using attractive packaging for their products. Does this put their product at a disadvantage?

*Figure 1a: Superior packaging: Evian bottled water (left); XM Satellite Radio (right)*

*Figure 1b: Apple Packaging stands out… Thinkpad box (left) versus the MacBook box (right)*

Academic researchers reiterate the importance of product design and aesthetics as an opportunity for differential advantage in the marketplace (Hoegg, Alba and Dahl 2010, Creusen and Schoormans 2005, Bloch 1995), but where does packaging fit into the whole product design schema? Though intrinsically associated with a product, but most often discarded after opening, often not even visible before purchase, the role of packaging in the product evaluation process, if any, is likely to be special and subtle. For long the marketing literature had largely relegated the role of packaging to another medium of advertising, especially at the point of purchase. It is important to distinguish the roles of packaging and advertising. On the one hand, packaging may indeed be treated as a specific form of advertising because it can be used as a tangible medium of
communication to convey valuable information about the product inside. However, consider that the packaging may not actually be visible before or during the purchase decision for a large number of purchase situations. Also, consider that it is “part and parcel of” the delivered product and is hence more inherently linked to the product before (and possibly during) actual use or consumption as compared to advertising. A consumer interacts with a package through the powerful sense of touch, even if it is to simply open the package, take out the product inside and then discard the container. Engaging in touch can create positive attitudes and ultimately lead to positive behavior (Peck and Wiggins 2006). Moreover, unwrapping the packaging is typically the consumer’s first point of contact with the product. All this argues for examining the role of packaging in particular. There are comprehensive academic theories of how advertising impacts brand attitudes, the emotions it evokes and how that impacts brand/product perceptions (e.g. Edell and Burke 1987, 1989; Holbrook and Batra 1987), but there is no such systematic study of packaging. For example, do different kinds of packaging evoke different reactions in consumers? Are there external manifestations of these reactions in terms of their purchase behavior? Are consumers willing to pay more for products presented in aesthetically appealing packaging (AAP)? Does AAP benefit different types of products in the same manner? Is there a differential effect of AAP based on brand familiarity? We seek to answer these questions in this paper.

Note that in this research we are specifically concerned with the impact of aesthetically (visually) appealing packaging on product evaluations, and not with the impact of package shape, size and specific graphics on product perceptions, of which there is substantial empirical evidence (Wansink 1996, Yang and Raghubir 2005, Garretson and Burton 2005). In summary, we aim to study whether and how AAP impacts product valuation and to develop a theory of how this interaction works. We postulate that the role of packaging may be more subtle than
other product-related stimuli (product design, advertising etc), yet the impact on attitude to product may be substantial. Our results show that a) AAP does indeed positively impact product valuation for hedonic products but not for utilitarian products for both familiar and unfamiliar brands. In three separate studies, it was found that AAP led to increased selling price or choice/purchase price for a hedonic product as compared to the same product in an ordinary package. Attitude toward the product was also superior when it was presented in the appealing packaging. b) Affective reactions evoked by the appealing packaging were stronger and significantly more positive than those evoked by the ordinary packaging; again, this effect was restricted only to hedonic products. c) Through a series of analytical models we propose a dual cognitive-affective theory of how AAP may positively impact product valuation and attitudes (figure 2), and find that for familiar brands, the role of affect is more significant than the role of cognition, but this is reversed for non familiar brands.

We present this research as a significant first step toward a full understanding of the conceptual role of packaging in the whole product experience, and toward giving packaging its due importance in the academic literature. We posit that packaging is much more than a short-term advertising medium which only influences point-of-purchase decisions, and instead postulate it to be a medium that may help form and maintain a long-lasting relationship between a consumer and a brand or product.

The rest of the paper is organized as follows: we first present the theoretical background for this research including a review of the most relevant streams of literature in consumer behavior- packaging, emotions and product design, and position our work and build our theory in this context. We then present three studies to test our hypotheses and all the relevant analyses,
and derive a conceptual model of the role of packaging. Finally we discuss the limitations of the current work, and discuss the practical implications of our research.

Theory, Hypotheses and Conceptual model

Theory
Packaging and Consumer Behavior. The bulk of the packaging literature to date focuses on size, shape, and graphics and their impact on product perceptions. Indeed, for the most part, marketing literature has relegated the role of packaging to primarily an advertising medium. As early as in the 1960s, marketing practitioners had called out to industry to pay more attention to packaging. Twedt (1968) urges that "the potential contribution of a superior package to profitability is simply too great to be ignored." He proposed a simple framework for the industry to evaluate a potential new package which he called "VIEW" (Visible, Informative, Emotionally appealing, Workable). While arguing that packaging is even more powerful than advertising because of the sheer exposure the package receives at the time of purchase, Light (1980) does, however, relegate packaging to be a tangible medium of information for the buyer, “the last incentive or obstacle to purchase (or, the ‘Silent Salesman’).” While he suggests that packaging does increase perceived value of the product he posits that it does so by providing tangible information about the attributes of the product (strength etc.) and calls for a clear theory to study exactly how packaging affects product valuation.

The literature on package sizing (and shape) is more evolved and has seen a lot of interest in recent times. Wansink (1996) showed that larger package sizes do accelerate usage volume when attention is drawn to unit prices. In fact, Wansink has a series of research studies observing
the patterns of consumption when the size of the package is varied, all establishing that larger package sizes lead to increased consumption. There have also been studies on how particular shapes may affect perceptions of product quantity. For example, Yang and Raghubir (2005) demonstrate that people perceive elongated beer bottles to contain more beer than squat beer cans. In a similar vein, Wansink and Ittersum (2005) show how even experienced bartenders pour more alcohol into long glasses as opposed to shorter glasses. Folkes and Matta (2004) find that unusually shaped containers that attract attention are perceived to contain more product than containers that do not attract attention. Raghubir and Greenleaf (2006) find that the ratio of the sides of rectangular packages can influence preferences and they show how that may be related to market demand.

In the domain of package graphics research, Bone and France (2001) show that graphics have a more lasting impression on customers than words. Underwood, Klein, and Burke (2001) find that images on the package increase attention drawn to the brand, but that this favors lesser known brands and works less well for well known brands. Garretson and Burton (2005) find that “spokes characters” on packages induce more favorable attitudes to the brand, although they may distract from the primary message of the communication campaign or the package. Deng and Kahn (2009) show how the location of the product image on a package façade influences consumers’ perceptions of the visual heaviness of the product and evaluations of the package. In a recent research of relevance, Reimann et al (2010) find that products in aesthetic packages are often selected over products in standardized packages, and functional MRIs attribute this to the neurological “reward value of aesthetics” effect. Two other pieces of work particularly relevant to the current research look at the influence of the type of packaging on perceptions of the product inside. In an informal study, McDaniel and Baker (1977) find that customers perceive
chips in a polyvinyl bag to be fresher than chips in an easy-to-open wax bag. In a recent working paper Batra and Brunel (2009) find that attractive wrappers may signal better quality of the enclosed product (chocolate).

Our research is fundamentally different from most of the extant research on packaging because we specifically address the role of aesthetically appealing packaging (AAP) on different product types. Additionally, we attempt to do a financial assessment of the returns of AAP in terms of consumer willingness-to-pay, and also propose a conceptual model of packaging. Please note that “packaging” in our research specifically refers to an external container which encloses the product; it is not an integral part of the product form (unlike Reimann et al 2010, Young and Raghubir 2005, Folkes and Matta 2004), and is not required to be present during use of the product. Also note that we do not attempt to dissect the impact of the individual elements of packaging like shape, color or texture, but use an overall measure of visual attractiveness to differentiate between the packaging options used. We go with Orth and Malkewitz (2008)’s definition of package design as “the various elements chosen and blended into a holistic design to achieve a particular sensory effect,” which is based on the principles of Gestalt psychology (Koffka 1922) and work on design theory (Bloch 1995, Veryzer 1999). Further, given that we do not use any unusual, visually arousing or attention-grabbing packaging (Folkes and Matta 2004), and based on the evidence from extant research on packaging size and shape, we too expect that the processing of packaging aesthetics would be largely nonconscious. Consequently, individual design elements of packaging may not be explicitly processed. To our point, the literature in product design and aesthetics (Creusen and Schoormans 2005, Bloch 1995) too has typically used an overall measure of product attractiveness without dissecting individual elements, and we
similarly expect package aesthetics to have a holistic impact and do not expect individual
elements like color, texture etc to have differential impacts on attitude and behavior.

*Emotions in Advertising and Consumer Behavior.* “Of the different affective states like emotions,
feelings, moods, sentiments and passions, emotions are the most relevant for product experience
because they imply a one-to-one relationship between the affective state and a particular object”
(Frijda, 1986, quoted in Desmet and Hekkert, 2002). Up till the late nineties, much of consumer
research had been predominantly cognitive in nature, and the role of affect had received
“inadequate attention” (Shiv and Fedorikhin 1999, Loewenstein 1996). Most of the emotions
based literature in Marketing thus far had been restricted to the study of affect elicited by
advertising. This literature covered a) what specific emotions are primed by different kinds of
advertising, b) what are the best methods to measure these emotions and c) what kind of impact
do emotions primed by advertising have on attitude toward the featured product or brand (Poels
and Dewitte 2006). Batra and Ray (1986) reviewed some of this literature on affective responses
(moods and feelings) evoked by advertising and identify 13 major categories of affective
responses- interest, authenticity, control, pride, security etc. They proposed that affective
responses should supplement the cognitive (logical) responses studied most often in
communications research and show that such responses have a significant impact on both
attitudes toward advertising as well as toward the brand. In a similar vein, Edell and Burke
(1987) distinguished between feelings generated by the ad and thoughts or judgments about the
ad, and demonstrate that they independently and uniquely contribute to evaluation of the product.
Many authors have since revised the different categories of emotions in different consumption
experiences (Richins 1997).
In the above stream of research, the focus is on emotions that are evoked by the specific context or stimulus, task-induced or “integral affect.” Note that even “incidental affect”- affect that is unrelated to the decision at hand- can have a significant impact on judgment and choice (Loewenstein and Lerner 2003). Researchers have looked at the impact of visceral emotions on decision behavior (Loewenstein 1996, Peters et al 2006), the impact of specific emotions like anger and regret on decision-making (Lerner and Tiedens 2006, Connolly and Butler 2006) and how manipulating emotion or mood affects product valuation. Lerner, Small, and Loewenstein (2004) demonstrate how priming emotions like sadness and disgust using video clips can influence economic decisions, such as selling prices for highlighter sets.

While we measure and control for incidental affect and mood, in this work our goal is to understand whether there is a difference in emotions (along with cognitive reactions) evoked in a product evaluation situation (integral affect) which may be attributed to manipulations of packaging appeal. Note that it is now generally accepted that consumer decision-making is influenced by automatically evoked affect as well as cognitions generated in a more controlled manner (Berkowitz 1993, Shiv and Fedorikhin 1999). We further wish to study whether affect and cognition\(^2\) can be shown to be mediators in the relationship between aesthetically appealing packaging and product valuation. This would take packaging beyond the simple notion of a short-term advertising medium which only influences point-of-purchase decisions and instead postulate it to be a medium that helps form and maintain a long-lasting relationship between a consumer and a brand or product.

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\(^2\) Note that while the bulk of the literature has traditionally used the term “cognitive” to represent thoughts and judgments, which are distinctly different from “affect” or emotions, current research in judgment and decision theory refer to cognitive processes as comprising both logical thoughts as well as emotions. We stick with the conventional interpretation of cognition to mean judgments/thoughts/logical reactions, and differentiate it from affect or emotions.
Product Aesthetics and Design. Product design had long been credited as a tool for gaining differential advantage in the marketplace (Creusen and Schoormans 2005, Bloch 1995), although it is only recently that there has been a significant revived academic interest in the area. In general, aesthetics is now being looked upon as an integral aspect of the product experience that may have a significant impact on product perceptions and consumer behavior (Hoegg and Alba 2008), even in cases where design should be irrelevant (Townsend and Shu 2010). Hoegg, Alba and Dahl (2010) and Batra and Brunel (2009) have identified a “negative aesthetic effect”, wherein very aesthetically pleasing designs are found to have a detrimental effect on the perceived functionality of a product. Meanwhile, product designers too have begun to realize the need to understand what kind of messages and emotions are conveyed by their products in order to design more effective products (Desmet and Hekkert 2002, Demirbilek and Sener 2003, Boatwright and Cagan 2010).

In this research we seek to establish that external packaging is an integral component of product design, and the aesthetics of packaging can have an independent and specific effect on the valuation of products.

Hypotheses
Packaging of hedonic versus utilitarian products. Researchers identify two major dimensions of product relevance- the first being the notion of instrumental or utilitarian performance whereby the product is seen to perform a useful function, and the second being that of hedonic or aesthetic performance (Mano and Oliver 1993, Hirschman and Holbrook 1982). Utilitarian benefits refer to the functional, instrumental and practical benefits (example, fuel economy and safety for a car), while hedonic benefits refer to the aesthetic, experiential, and enjoyment-related benefits of
consumption offerings (example, sunroof and luxurious interior for a car; Chitturi, Raghunathan and Mahajan 2008). Despite having two dimensions, products may be classified as primarily hedonic versus utilitarian (Okada 2005, Dhar and Wertenbroch 2000, Batra and Ahtola 1990). Differences have been found in the manner in which people evaluate and experience hedonic and utilitarian products, and in the reactions these products evoke. For example, Kempf (1999) finds that arousal is higher during trial of a hedonic product as compared to a utilitarian product, and the effect of affective (cognitive) responses on trial evaluations are greater for hedonic (utilitarian) products. Hedonic products are found to be rated higher than utilitarian products when provided singly versus jointly (Okada 2005); in a similar vein Dhar and Wertenbroch (2000) find that relative preference of hedonic items is higher in forfeiture versus acquisition choices. Chitturi, Raghunathan and Mahajan (2008) find that superior performance on hedonic attributes lead to customer delight while superior performance on utilitarian attributes lead to customer satisfaction. From all this evidence it appears clear that hedonic and utilitarian products are processed differently, and the same associated stimulus may give rise to differential outcomes. The primary benefit of a hedonic product manifests in the form of experiential enjoyment, while the primary benefit of a utilitarian product is practical functionality (Okada 2005, Batra and Ahtola 1990, Mano and Oliver 1993). Given this, it seems more likely that all aspects of the product experience, including the (appearance and/or handling of the) enclosing package, would be weighted more for a hedonic versus a utilitarian product. For utilitarian products, packaging may be considered to be a utilitarian benefit- merely functional for protection and storage of the product. However, for hedonic products, aesthetically appealing packaging (AAP) may be considered to be a hedonic benefit (visual appeal) in that it adds to the complete hedonic experience of the product (Batra and Brunel 2009). Thus, AAP is likely to
favorably impact evaluation (in terms of valuation as well as attitude to product) of hedonic products more than utilitarian products. Hence we hypothesize:

\[ H_{1a}: \text{When a product is presented in aesthetically appealing packaging, the attitude/valuation for the product will be higher as compared to when it is presented in ordinary packaging.} \]

\[ H_{1b}: \text{The effect described in } H_{1a} \text{ will be restricted to hedonic products only.} \]

The nonconscious role of packaging. It is now generally accepted that a significant part of consumer decision making occurs outside of conscious awareness, or is influenced by factors unrecognized by the decision maker, even if the stimulus is consciously perceived (Fitzsimons et al 2002, Bargh 2002). Although packaging (as we define in this research) is intrinsically associated with a product, it is most often discarded after opening, and often not even visible before purchase; hence we expect that the role of packaging in the product evaluation process, if any, is likely to be subtle. Indeed, researchers studying package sizing and shape (Wansink 1996, Wansink and Ittersum 2005, Yang and Raghubir 2005, Raghubir and Greenleaf 2006) have found that the processing of the packaging stimulus is nonconscious. Research in product design aesthetics also suggests that processing of attributes related to design may be more automatic, spontaneous and nonconscious as compared to functional attributes (Veryzer 1999, Townsend and Sood 2010). Moreover, since we do not use packaging that is significantly superior or significantly inferior on aesthetic appeal in this research, we do not expect packaging to be consciously acknowledged or have a frontal verbal impact on product evaluation. Therefore, even though we expect a (hedonic) product to benefit from AAP, we posit that ordinary packaging may not necessarily detract from the base valuation of the product evaluated without any form of packaging. Hence we hypothesize:

\[ H_2: \text{The effect of aesthetically appealing packaging will be nonconscious.} \]
The mediating role of cognition and affect. Today researchers generally concur that consumer decision making may be underscored by two parallel processes- one more experiential or affective, which tends to occur more automatically, and the other more rational and cognitive in nature, associated with more deliberative processing (Berkowitz 1993, Shiv and Fedorikhin 1999). Edell and Burke (1987), Burke and Edell (1989) among others demonstrated that exposure to advertising evoke both cognitive as well as affective reactions, which independently and uniquely contribute to product evaluation. In a similar vein we posit that exposure to a product in a certain type of packaging will evoke both cognitive as well as affective reactions to the product, and both these types of reactions will play a mediating role in the impact of packaging on product attitude and valuation. Since affective reactions are automatic and occur “without effort” as opposed to cognitive reactions (Zajonc 1980), we hypothesize that in the case of AAP, affect would play a stronger role than cognition in influencing attitude toward the product. This is based on the preceding discussion about how the processing of the packaging stimulus is likely to be nonconscious, hence more likely to be sustained at the more automatic level of affect rather than cognition. Further, Kempf (1999) while studying the roles of affect and cognition in product trial found that affect played a greater role for a hedonic product than for a utilitarian product. Based on this we particularly expect that AAP would evoke greater positive affect for the hedonic product than for the utilitarian product. Our hypotheses are:

\[ H_3: \] Cognitive reactions (judgments) and affective reactions (emotions) will act as mediators between attitude toward packaging and attitude toward product.

\[ H_4: \] The contribution of affective reactions (emotions) in explaining product attitude will be greater than the contribution of cognitive reactions (judgments).

\[ H_5: \] Aesthetically appealing packaging will evoke higher positive affective reactions (emotions) for hedonic products as compared to utilitarian products.

Brand familiarity and packaging. Prior ownership or experience with a brand significantly impacts product evaluation or willingness-to-pay measures (Strahilevitz and Lowenstein 1998).
Although in advertising research we see that attitude toward an ad can influence attitude toward the concerned brand (Edell and Burke 1987), given our posited subtle influence of packaging, we do not expect that attitude toward packaging can be isolated without bringing packaging into a conscious realm of evaluation, as in advertising. We expect that the role of prior experience with a brand would be significant, and would have to be controlled for before we attempt to isolate the effect of packaging. As before, even for an unknown or new brand we expect that AAP would have a positive effect on valuation for hedonic products but would have no effect for utilitarian products. However, since prior experience with the brand is absent, we posit that for unknown brands the role of cognition may be more significant than the role of affect in the mediation process between packaging and attitude to product. Consumers are more likely to use signals like brand name, price, product appearance, advertising etc. as signals of product quality when objective quality is unknown or too complex to assess (Dawar and Parker 1994). Hence in the absence of other information about a product, packaging may play a more conscious role in the evaluation of the product, and “signal” quality, enhancing valuation. We hypothesize:

\[ H_{6a}: \text{When an unknown brand product is presented in aesthetically appealing packaging, the attitude/valuation for the product will be higher as compared to when it is presented in ordinary packaging.} \]

\[ H_{6b}: \text{The effect described in } H_{6a} \text{ will be restricted to unknown brand hedonic products only.} \]

\[ H_7: \text{For unknown brands, the contribution of cognitive reactions (judgments) in explaining product attitude will be greater than the contribution of affective reactions (emotions).} \]

**A Conceptual Model for Packaging**

The ultimate goal of this paper is to understand the conceptual role of packaging in the whole product experience. Figure 2 depicts our proposed model of the role of packaging in influencing attitude toward product and product valuation. This model is adapted from Holbrook and Batra (1987) which itself draws upon numerous results from the literature on advertising and its influence on product and brand perceptions. Holbrook and Batra (1987) were the first to present
the missing link of the intervening role of emotions in the standard model of advertising
effectiveness and attitude, and we use a similar basis for proposing our conceptual model of the
role of packaging. Exposure to packaging elicits a reaction toward it (“attitude toward
packaging”) which in turn evokes specific thoughts/judgments (cognitive reactions) and
feelings/emotions (affective reactions) that elicit an overall reaction toward the featured product
(“attitude toward product”), which finally impacts behavior in terms of valuation or willingness-
to-pay. The key is that both cognitive as well as affective reactions mediate the impact of
packaging on attitude toward the product (Shiv and Fedorikhin 1999, Burke and Edell 1989,
Edell and Burke 1987). In our model we will also attempt to determine the relative contributions
of cognition and affect in impacting attitude and behavior. In the spirit of Zajonc (1980), we
hypothesize that the more spontaneous, faster affective reactions may predominate over the more
involved, slower judgment or cognitive reactions, particularly for a subtle element like
packaging. We go a step beyond the traditional attitude model and also demonstrate the impact
of product attitude on behavioral intent, in terms of product valuation (selling prices) and
willingness-to-pay (WTP). Finally, the impact of packaging will be moderated by product type,
hedonic versus utilitarian, and the above model of packaging will apply only for hedonic
products.

Figure 2: A conceptual model of how packaging impacts product valuation via a dual cognitive-
affective process; moderated by product type
Overview of Studies and Results

In three studies using different hedonic and utilitarian products presented in both appealing and ordinary packaging, we show that AAP offers benefits only for the hedonic product. Subjects indicate higher selling prices/higher willingness-to-pay and more positive attitude toward the product for a hedonic product when it is presented in appealing packaging as opposed to ordinary packaging. There is no such differential impact for the utilitarian product. In the second experiment we additionally study the emotions (affect) and judgments (cognition) elicited by the products and find that AAP evokes significantly higher positive emotions for the hedonic product but not for the utilitarian product. We also test our proposed conceptual model of packaging and find that cognition and affect mediate the impact of packaging on attitude toward the product, and that the role of affect is more significant, which contributes to the differential effect of packaging on hedonic versus utilitarian products. In the third study we investigate the impact of AAP on an unknown brand product, to account for the effect of prior experience with the brand. We also keep product design constant by manipulating the positioning of the same product once as utilitarian and once as hedonic and find again that AAP enhances WTP for an unknown brand hedonic product, but has no impact for an unknown brand utilitarian product. We also find that cognitive reactions play a more significant role than affect in mediating the impact of packaging, in the absence of brand information.
Study 1: Impact of Packaging on Product Valuation

The purpose of the first study was to evaluate the impact of aesthetically appealing packaging (AAP) on the valuation of hedonic and utilitarian products. We used a 2 (product nature: hedonic versus utilitarian) X 2 (packaging: ordinary versus appealing) between-subjects design. Four sections of an MBA marketing class (N = 180) of a leading North American university participated in the study and were assigned to one of the four conditions.

Stimuli Description

The hedonic product used was a mug with the school logo and the utilitarian product was a flash drive (figure 3a). In a pretest of 22 undergraduate students, the school logo mug was characterized as more hedonic ($M_{mug} = 3.8$, $M_{fd} = 1.7; p<.01$) and the flash drive as more utilitarian ($M_{mug} = 4.3$, $M_{fd} = 5.7; p<.01$), using single-item measures of hedonism and utilitarianism (Dhar and Wertenbroch 2000, Okada 2005). Four types of packaging were pretested among a different group of 16 undergraduate students who made comparative evaluations of four boxes, the two extremes of which were used for the main study. A corrugated box was rated the least desirable ("ordinary"), and a black gift box was rated the most desirable ("appealing"); $M_{cor\_box} = 2.1$, $M_{black\_box} = 5.2; p<.01$; (figure 3b).
Procedure

Participants were each given an open box containing either a mug or a flashdrive and informed that the product was theirs to keep in exchange for answering some questions about it. Subjects first evaluated the product on different aspects including appeal and perceived usefulness to allow them to spend some time thinking about the product before indicating a monetary value (adapted from Mano and Oliver 1993). They were then informed that they now had a chance to sell back their product for a predetermined price, which would be randomly picked later. They had to indicate for each of a list of prices whether they would keep or sell the product at that price (appendix 2). This incentive-compatible technique for eliciting selling prices is formally equivalent to the "Becker-DeGroot-Marschak" or BDM elicitation method (Becker, DeGroot, and Marschak 1964) and was carefully explained to subjects (appendix 1) since they had been informed that the study was an exercise to understand the application of the BDM technique, as
part of a lecture on pricing. Subjects were also asked to explain their reason(s) for their indicated selling price and for their overall evaluation of the product, to see whether anyone would consciously acknowledge the (influence of) packaging at this stage. The second section of the questionnaire specifically drew subjects’ attention to the packaging and asked them to what extent they thought they and others had (not) been affected by it (appendix 3). The goal of this was to make the packaging salient to the subjects and to make them aware that packaging may have been a possible influencing factor. In case the impact of packaging had been at a nonconscious level, at this stage we wanted to bring that evaluation into the conscious zone. After the questionnaires were collected, the product exchange price was revealed and the product-cash exchange was conducted.

**Analysis and Results**

The average selling price of the mug in the appealing packaging condition (APC) was $5.55 and the average selling price in the ordinary packaging condition (OPC) was $4.73; $p < .05$, establishing that AAP had a positive impact on the valuation of the hedonic product, and confirming $H_{1a}$. There is actually a reversal of the effect of AAP on the valuation of the utilitarian product, although not significant- the average selling price of the flash drive in the APC was $4.46 and $5.02 in the OPC; $p > .1$, confirming $H_{1b}$ (figure 4).

There were some additional interesting findings with respect to the influence of packaging on people’s evaluation of the hedonic product. Firstly, as we had expected, not a single participant mentioned the box when asked to list reasons for their evaluation and selling price of the mug. However, when asked directly about how much they felt their evaluation had been impacted by packaging, people in the APC claimed to have been *significantly* more affected
by packaging than those in the OPC (M_{appealing} = 2.1; M_{ordinary} = 1.7; p < .01). Further, in both conditions subjects felt that packaging should impact product valuation in general, and this was significantly higher than how much they claimed packaging had actually impacted their evaluation of the mug. Similarly, all subjects thought that others had been significantly more impacted by packaging (while evaluating the product in question) than they themselves had. All this suggests that though the impact of packaging may be subtle, the conscious understanding and beliefs of people is that the impact is actually significant. All these findings provide initial support for H₂, suggesting that the impact of packaging could be at a nonconscious level. Interestingly, there were no such differences in the evaluation of packaging for the flash drive, leading us to postulate that packaging may not have played any role at either a conscious or nonconscious level for the utilitarian product.
**Discussion**

The first study cleanly demonstrated that packaging manipulations affected product valuations for a hedonic product but not for a utilitarian product. The study also yielded some initial insights into how packaging may work nonconsciously in influencing product perceptions for the hedonic product, which will be tested in detail in the next study. Note that the appealing box cost 50 cents more than the ordinary box to manufacture, yet generated an additional value of about 82 cents (more than its own worth) for the product over and above the same product in the ordinary box. This shows that investment in creating more appealing packaging can be quite profitable for certain types of products.

A limitation of this study could be that the packaging (particularly the appealing box) may have been perceived to be of future use, which could have influenced the overall valuation of the hedonic product, however, that logic may not hold given that there was no difference in valuation for the utilitarian product presented in the same two boxes. In the second study we seek to replicate these results in a different product category, and in a scenario in which the packaging would be “disposable” or not considered to be of future use.

**Study 2: Understanding the Role of Packaging in Impacting Product Valuation and Attitudes**

**Objectives of study**

The main objective of this study was to measure the judgments (cognitive reactions) and emotions (affective reactions) evoked by hedonic and utilitarian products presented in appealing and ordinary packaging, and to test our proposed conceptual model of packaging (hypotheses 3-
5). We also sought to replicate our initial findings in a different product category, particularly in one where the true value of the product is known to the subjects. Further, in order to ensure that the incremental valuation for the product in the appealing packaging did not derive from any perceived additional benefit of reusability of packaging, the packaging used in the second study was “disposable” and hence unlikely to be considered for reuse.

Findings from the first study suggested that it could be that packaging becomes more salient the more appealing it is, and less noticeable when it is ordinary, since people in the appealing packaging condition thought they had been more affected by packaging than people in the ordinary packaging condition. In other words, it may not necessarily be that the ordinary packaging detracts from the base valuation of the product, but it could be that the appealing packaging enhances the base valuation of the product. In this study we hence explicitly test the directional impact of the two kinds of packaging by having a third condition in which the hedonic product is evaluated without any kind of packaging. This would also test hypothesis 2, the nonconscious impact of packaging.

**Stimuli Description and Design**

As before we had a 2 (product nature: hedonic versus utilitarian) X 2 (packaging: ordinary versus appealing) between-subjects design. There was an additional fifth condition only for the hedonic product which was administered without any packaging. Undergraduate students (N = 269) of a major North American university participated in the study in exchange for course credit and were randomly assigned to one of the five conditions. The hedonic product was a pre-paid retail card charged with $25 from a café, Panera Bread, a popular hangout place for undergraduate students of the university. The utilitarian product was a pre-paid retail card charged with $25 from Giant
Eagle, the leading grocery chain of the city. In a pretest of 22 undergraduate students, the Panera Bread card was characterized as more hedonic ($M_{PB card} = 4.2$, $M_{GE card} = 1.9; p<.01$) and the Giant Eagle card as more utilitarian ($M_{PB card} = 4.2$, $M_{GE card} = 4.9; p<.05$). The packaging was a combination of a backing card and an envelope. The two packaging options—appealing and ordinary—were selected on the basis of pretest studies in which another set of undergraduate students ($N = 40$) evaluated 4 different packaging options for the retail card. The least liked and the second-most liked packaging options were selected for the main studies (figure 5a, 5b).\(^3\)

![Figure 5a: The stimuli used in Study 2 (left: Hedonic product/ordinary packaging, right: Hedonic product/appealing packaging)](image)

![Figure 5b: The stimuli used in Study 2 (left: Utilitarian product/ordinary packaging, right: Utilitarian product/appealing packaging)](image)

**Procedure**

Participants first recorded their current overall mood and baseline emotion levels (adapted from the PANAS scales, Watson, Clark and Tellegen 1988) after which they were handed the product in the appropriate packaging for evaluation. They were informed that the card was charged with

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3 The most liked packaging was a more expensive option, and we did get the desired effect in terms of the positives evoked with the second-best packaging. Moreover, we felt it would be more efficient to be able to show that even with a minor additional investment in packaging marketers could significantly increase valuations for their products.
$25 and that they could be used just like cash at any Panera Bread (or Giant Eagle) outlet in the United States and were valid for a lifetime (see Appendix 4 for the actual instructions to subjects). They were asked to indicate from a list of prices ranging from $1 to $30\(^4\) how much they would pay for the product in front of them. The elicitation method is similar to the choice price method used by Lerner, Small and Loewenstein (2004) in that the subjects knew that the card was charged with $25 cash and were in a sense making a tradeoff between different amounts of cash and $25 on a store card. Their explanations below their selected price (examples: “It’s just like $25 cash”, “Would rather have $25 cash than $25 cash that can be used only at ___” etc.) indicated that they were indeed making a tradeoff between cash and $25 “store cash”. They also had the option of saying that they would not buy the card at any price.

Apart from choice prices or willingness-to-pay (WTP), they were also asked to indicate how satisfied or dissatisfied they would be if they were to purchase the card from us for $25 and indicate reasons why. Open-ended statements for likes and dislikes were also taken. Other measures taken were overall “attitude toward the product” which included how much they like or dislike the product and how favorably or unfavorably they react to the product on a scale of 1 to 7. These measures for overall attitude toward the product were adapted from previous literature (Holbrook and Batra 1987, Richins 1997).

Subjects also rated a set of 18 judgment measures and 30 emotions (Appendix 5) on a 5-point scale (“Not at all” to “Very Strongly”). Cognitive reactions consist of subjects’ judgments of the characteristics of the product (descriptions of the product such as “ordinary, nice to touch, cute, exciting...”) whereas affective reactions consist of feelings subjects experience during

\(^4\) The upper-end of the range was set higher than $25 to see whether any subject would choose a higher price on account of the packaging and presentation of the card. Only two subjects indicated a price higher than $25 and mentioned that it was due to the convenience of the card being presented to them at that point, rather than their having to get it from the store.
exposure to the product (example, “bored, curious, creative, happy, excited etc”). As per Edell and Burke (1987), this distinction is important because although a subject may consider a product to be of “good quality”, they may not be “impressed” by it. Our final selection of measures for judgments was adapted from Burke and Edell (1989). While affective responses to advertising have been studied in great detail, Richins (1997) argues why the relevance of the advertising measures to consumption situations (such as ours) is marginal by saying that emotions elicited by advertising are vicarious rather than directly experienced and are hence likely to be of lower intensity. Further, the typically dramatic executions of advertising may be capable of eliciting the entire gamut of emotions, while the range of emotions elicited by consumption is likely to be more limited. For this reason, we adapted our working set of emotions from Richins (1997)’s 16 dimensions of consumption emotions which we felt were more relevant for our study.

The order of judgments and emotions were varied in two rotations- one in which the negative judgments and emotions appeared first, and the second in which the positives appeared first\(^5\). The third part of the questionnaire was a section on opinion, attitude and behavior regarding the concerned store. The questionnaire concluded with a section in which the packaging was made salient and subjects were asked how much they thought they had been influenced by packaging and were also asked to rate the packaging of the product presented to them. The 7-point likeability measure represented subjects’ “attitude to packaging.” This part additionally served as a manipulation check to ensure that the appealing packaging was indeed considered superior to the ordinary packaging.

\(^5\) Measures were randomized and presented in blocks rather than individually randomized in order to prevent respondent fatigue.
**Analysis and Results**

Since the entire sample was not uniformly disposed to the concerned store, we restricted the analysis to subjects who visit the store at least a few times per year (those who indicated their frequency of visiting as “Few times a week/Few times a month/Few times a year” and excluding subjects who indicated “Never/Hardly ever”). Willingness-to-pay (WTP) is also more accurately obtained when the product holds personal relevance for the subjects (Strahilevitz and Loewenstein 1998, Derbaix 1995). Note that in terms of initial disposition to the store, the samples in the different conditions were equivalent in their frequencies of visiting\(^6\), and also in terms of their initial moods and base emotions, so that any differences may be purely attributed to the packaging manipulation.

(i) **Impact of packaging on the hedonic product.** The average WTP or choice price in the appealing packaging condition (APC) was $21.28 and the average WTP in the ordinary packaging condition (OPC) was $18.98 (\(p<.05\)), establishing that appealing packaging had a positive impact on the valuation of the Panera card, and confirming \(H_1\); (figure 6). The average WTP for the no-packaging condition (NPC) was $19.34, which is significantly lower than in the APC but not significantly different from the OPC. This establishes that the impact of the appealing packaging is positive with respect to no packaging, but we cannot claim that the ordinary packaging (that was used in our study) significantly detracts from the valuation of the product evaluated without packaging, supporting \(H_2\) and the nonconscious impact of packaging.

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\(^6\) We did not explicitly measure initial disposition to the store in order to get subjects’ unbiased first reactions to the product. The likeability measure of the store was taken later, after exposure to the product, so that could not be used as an unbiased indicator of subjects’ disposition to the store (since exposure to the product may have biased this estimate). This is a measure of post-exposure attitude toward brand. Hence, as a surrogate for pre-exposure attitude toward brand, we use subjects’ frequency of visiting the store, assuming that there would be a positive correlation between how much they like the place and how much they frequent it.
Note that for all the other measures as well, the values for the NPC are not statistically different from the OPC, but are significantly lower than the APC. Since the purpose of the NPC was mainly to check the direction of impact of the two kinds of packaging, which we have now established, we restrict the rest of the analysis only to the two packaging conditions.

In terms of attitude to product, likeability of the product was significantly higher in the APC compared to OPC. The collective positive emotions elicited by the product were also significantly higher (Table 1), and individually on the dimensions of contented, confident, calm, happy, excited, energetic, playful, romantic, thankful and sentimental. Positive judgments were directionally superior for the APC on the whole; significantly higher ($p<.05$) than OPC on appealing, exciting, special and authentic. An interesting observation was that for the open-ended responses to the description of a typical visit to Panera Bread (“What would a typical trip to a Panera Bread café look like for you? For example, “I would first purchase … then I would do …”), a significantly higher proportion of the sample in the APC used affect-rich or hedonic words and phrases (“cozy ambience/enjoy/good mood/nice music/relax/chat/smell of food/yummy pastries” etc.). It could be that the appealing presentation of the product primes more spontaneous affect than in the other conditions.

Just as in Study 1, there were few subjects (only two, both in the APC) who mentioned packaging/presentation as a reason for liking the product or for paying their stated WTP. Unlike in Study 1 however, when asked to rate how much packaging influenced their evaluation, the score was not higher for the APC in this study, which could have been a function of the disposable nature of the packaging. On the other hand, the actual evaluation of the packaging and presentation (serving as a manipulation check, administered at the end of the survey) showed that

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7 There was no difference in the scores by order of presenting negatives first versus positives first.
subjects did think the packaging was significantly better in the APC. Interestingly, people in the NPC had a significantly higher score than either of the two packaging conditions on how much they thought packaging “should affect” people’s evaluations of products in general! These results again suggest that the impact of packaging is in reality more subtle than people actually believe it to be.

Table 1: Impact of packaging on the hedonic product; key results

<table>
<thead>
<tr>
<th></th>
<th>Appealing Packaging (APC)</th>
<th>Ordinary Packaging (OPC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average frequency of visiting store</td>
<td>2.5</td>
<td>2.3</td>
</tr>
<tr>
<td>Valuation and Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average WTP ($)</td>
<td>21.28*</td>
<td>18.98</td>
</tr>
<tr>
<td>Satisfaction if purchase for $25</td>
<td>4.0 ms</td>
<td>3.6</td>
</tr>
<tr>
<td>Like the product</td>
<td>5.4*</td>
<td>4.9</td>
</tr>
<tr>
<td>Judgments and Emotions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average negative judgments</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Average positive judgments</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Average negative emotions</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Average positive emotions</td>
<td>2.1*</td>
<td>1.8</td>
</tr>
<tr>
<td># “affect-rich” responses to Panera experience (% of sample)</td>
<td>53%*</td>
<td>27%</td>
</tr>
<tr>
<td>Packaging manipulation check</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Like presentation of product</td>
<td>5.0**</td>
<td>3.8</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; *p<.07

ii) Impact of packaging on the utilitarian product. As in Study 1, we find that appealing packaging does not have a significant positive impact for the utilitarian product. The average WTP or choice price in the APC was $20.78 and the average WTP in the OPC was $20.17 (p>.1; figure 6). Neither is there any advantage for the product in the APC in terms of attitude to product (likeability) or other key measures. Only for some measures related to visual appeal of the product (“nice to touch, attention-grabbing, imaginative and cute”) did the APC show some superiority, suggesting that AAP may play a role in attracting visual attention even for utilitarian
products, but this would need to be further researched. More critically, unlike for the hedonic product, the collective positive emotions elicited by the product in APC were no different ($M_{APC} = 1.9; M_{OPC} = 1.8; p > .1$). Thus we find that appealing packaging evokes higher positive affective reactions only for the hedonic product and not for the utilitarian product, supporting H$_8$.

![Diagram showing the valuation of products with ordinary packaging and appealing packaging for both hedonic and utilitarian products.](image)

**Figure 6: Packaging and product valuation: Study 2**

**Toward a Conceptual Model of Packaging**

*The role of affect/cognition in product evaluation*

Previous factor-analytic reductions of consumption-related emotions (Watson et al. 1988, Richins et al. 1992) have yielded two major dimensions of consumption-related affect—positive and negative. When we ran a factor analytic reduction of the emotions (judgments) specifying two factors, all the negative emotions (judgments) loaded onto one factor while all the positive emotions (judgments) loaded onto the other. The two emotions factors explained 44% of the total
variance, while the two judgment factors explained 46% of the total variance.\(^8\) The two dimensions should be viewed as a simple summary of judgments and emotions rather than a complete characterization of the entire cognitive and affective experience (Richins 1997). We use the four factor output by the factor analysis as variables in our conceptual model analysis below.

Figure 2 shows our model of packaging in which we propose the mediating role of judgments and emotions. We now establish these directions of influence as proposed in our model through a series of linear models (figure 7). Since our proposed model of packaging effects is fully recursive, we can easily apply a straightforward OLS estimation (Holbrook and Batra 1987) to estimate the relationship between packaging and attitude to product. The fourth model in this series would additionally help us determine the relative contribution of cognitive versus affective reactions. To investigate if judgments/emotions mediate the effect of packaging on product attitude, we assess the following four potential conditions (adapted from Holbrook and Batra 1987; based on Baron and Kenny 1986):

1. A significant effect of attitude toward packaging on judgments/emotions; in simple correlation.
2. A significant effect of judgments/emotions on attitude toward product; in simple correlation.
3. A significant effect of attitude toward packaging on attitude toward product; in simple correlation.
4. A disappearance or diminution of the effect of attitude toward packaging on attitude toward product when controlling statistically for judgments/emotions; via multiple regression.

\(^8\) Running an unrestricted factor analysis for the emotions we obtained 6 factors explaining 64% of the variance. Since the objective of the paper is to establish that emotions play a mediating role in packaging impacting product attitude and valuation, and not to determine the “best” set of emotions that are evoked by a particular kind of packaging, we perform the analyses using only the two-factor results. Given that the impact of packaging appears to be particularly subtle, we expect the 2-factor positive-negative approach to suffice for the present analysis. The Cronbach alphas for the positive/negative judgments/emotions dimensions were respectively .89/.69 and .91/.85. The complete factor analysis output is available from the authors on request.
The final link to be estimated is the direct impact of attitude toward product on product valuation. A fifth model assesses this final link between attitude and behavior (Figure 7).

![Diagram](image)

**Figure 7: Testing the conceptual model through a series of linear models**

**Model Estimation**

As before, the model estimation was restricted to the sample of subjects who claimed to frequent the respective stores at least a few times per year. Frequency of visit was also modeled as a covariate, since “ownership history” is likely to be a key factor in determining attitude toward a product (Strahilevitz and Loewenstein 1998). The other covariate was a dummy variable to control for the moderating role of product type (utilitarian versus hedonic).

Models 1a through 1d establish a significant effect of attitude toward packaging (likeability of packaging) on positive and negative judgments and emotions, establishing condition 1. A multiple regression in model 2 establishes a significant effect of positive and negative judgments and emotions on attitude toward product (likeability), establishing condition 2. A simple regression for model 3 shows that a positive attitude toward packaging is correlated with a positive attitude toward the product, and hence establishes condition 3. After controlling for frequency of visit and nature of product, when emotions and judgments are included in a multiple regression (model 4), attitude toward packaging no longer has a significant effect on attitude to product, thus establishing condition 4.
The correlation patterns as established in models 1 through 4 (see Table 2 for all results) fulfill conditions 1 through 4, establishing that emotions and judgments appear to act as mediators between packaging and attitude toward product, supporting H4 and thus verifying our proposed conceptual model.

When attitude toward product was regressed on WTP, controlling for frequency of visit, a plot of the residuals clearly depicted a correlation between the variance of the error term with frequency of visit. Thereafter, using a weighted least squares estimation correcting for heteroscedasticity, we find a significant relationship between attitude toward product (A_{pdt}) and WTP ($\beta_{15} = .62, p < .05; R^2 = .15, F = 8.44, p < .01$), which provides the final link of our conceptual model.

Note that in models 2 and 4 incremental R^2 is the highest for the factor for positive emotions (.26) followed by the factor for negative judgments (.14). Moreover, directly comparing the standardized beta weights for the two factors establishes that the effect size of the former is greater than the effect size of the latter (0.36 versus 0.25). In other words, affect (particularly, positive emotions) explain a higher proportion of the variance in attitude toward product, as compared to cognition, confirming H4.
Table 2: Summary results, Models 1-4

<table>
<thead>
<tr>
<th>Model</th>
<th>Effect of attitude toward packaging (A_pkg) on judgments (J_pos, J_neg) and emotions (E_pos, E_neg)</th>
<th>Coeff.</th>
<th>Sig</th>
<th>Model sig.</th>
<th>R²</th>
<th>Incremental R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Model 1a (A_pkg on E_pos)</td>
<td>β₁ = .14</td>
<td>p &lt; .01</td>
<td>F=4.76; p&lt;.01</td>
<td>.08</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model 1b (A_pkg on E_neg)</td>
<td>β₂ = -.11</td>
<td>p &lt; .05</td>
<td>F=3.47; p&lt;.05</td>
<td>.06</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model 1c (A_pkg on J_pos)</td>
<td>β₃ = .14</td>
<td>p &lt; .01</td>
<td>F=7.83; p&lt;.01</td>
<td>.13</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Model 1d (A_pkg on J_neg)</td>
<td>β₄ = -.13</td>
<td>p &lt; .05</td>
<td>F=4.00; p&lt;.01</td>
<td>.07</td>
<td>-</td>
</tr>
<tr>
<td>Model 2</td>
<td>Effect of judgments/emotions on attitude toward product (A_pdt)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive emotions E_pos</td>
<td>β₅ = .50</td>
<td>p &lt; .01</td>
<td>F=19.23; p&lt;.01</td>
<td>.43</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Negative emotions E_neg</td>
<td>β₆ = -.07</td>
<td>p &gt; .5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Negative judgments J_neg</td>
<td>β₇ = -.44</td>
<td>p &lt; .01</td>
<td></td>
<td>.14</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Positive judgments J_pos</td>
<td>β₈ = .16</td>
<td>p &gt; .1</td>
<td></td>
<td>.02</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>Effect of attitude toward packaging on attitude toward product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude toward packaging A_pkg</td>
<td>β₉ = .23</td>
<td>p &lt; .01</td>
<td>F=9.34; p&lt;.01</td>
<td>.15</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Model 4</td>
<td>Effect of attitude toward packaging and judgments/emotions on attitude toward product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive emotions E_pos</td>
<td>β₁₀ = .49</td>
<td>p &lt; .01</td>
<td>F=17.03; p&lt;.01</td>
<td>.44</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Negative emotions E_neg</td>
<td>β₁₁ = -.06</td>
<td>p &gt; .5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Negative judgments J_neg</td>
<td>β₁₂ = -.42</td>
<td>p &lt; .01</td>
<td></td>
<td>.14</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Positive judgments J_pos</td>
<td>β₁₃ = .14</td>
<td>p &gt; .1</td>
<td></td>
<td>.02</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Attitude toward packaging A_pkg</td>
<td>β₁₄ = .09</td>
<td>p &gt; .1</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

Study 2 demonstrates that aesthetically appealing packaging (AAP) evokes positive product attitudes and behavioral intent (WTP) for a hedonic product that are significantly higher than when the product is presented in ordinary packaging. However, while AAP adds value over and above the base valuation of the product presented without packaging, ordinary packaging does not significantly detract from the base valuation, suggesting that packaging may have an (positive) impact only when it is noticeably more attractive, and ordinary packaging may not have a detrimental effect on valuation. Note that the appealing packaging cost about $.40 more than the ordinary packaging, yet created an additional value (in terms of WTP) of almost $2.00.
for the hedonic product! Just as in the first study, this reinstates the claim of AAP as a sensible economic investment on the part of marketers of hedonic products. Also like in Study 1 we find no benefit of AAP for the utilitarian product in terms of increased valuation.

Appealing packaging evoked significantly higher positive emotions (for the hedonic product only) than the ordinary packaging, however, it may be noted that the ordinary packaging was not found to evoke higher negative reactions (in terms of judgments and emotions). The appealing packaging also appeared to prime more affect-rich statements about Panera Bread.

Our series of linear models establishes all the links in our proposed conceptual model as depicted in Figure 7. We found that emotions and judgments mediate the relationship between AAP and attitude toward the product. We also found that the contribution of affect, particularly positive emotions, is greater than the contribution of cognition in driving attitude toward the product. This further supports our initial conjecture that the impact of packaging is more at a subtle automatic level, the level at which emotions work, and provide an explanation for why so few of our subjects spontaneously mentioned packaging as an influencing factor in their product evaluation.

After the respondents had indicated a choice price, we had asked them how satisfied or dissatisfied they would be if they were to buy the card for its face value ($25) from us. The intention of this question was to see whether there was any indication that appealing packaging could cause higher post-purchase satisfaction, although the purchase situation was hypothetical. We found that the mean satisfaction for the hedonic product in the APC was higher (marginally significant; $p<.07$) than in the OPC. This is in line with Mano and Oliver (1993)’s findings that product satisfaction is strongly linked to positive affect, which we find to be higher for the hedonic product in the APC. Although our measure for satisfaction is not perfect, this result does
provide preliminary support for the notion that AAP can result in higher post-purchase satisfaction. Again, this would have to be researched further.

An alternative potential explanation for our findings could be that the more appealing packaging caused subjects to evaluate the hedonic product in “gift” mode thereby causing them to value it higher than subjects who evaluated the product in the ordinary packaging (“utilitarian mode”; Mano and Oliver 1993, Dhar and Wertenbroch 2000). However, in the open-ended explanations for their choice prices for the hedonic product, only 4 subjects mentioned that the card could be given as a gift, out of which two were from the OPC, one from the NPC and only one from the APC. Almost all the responses were about how they themselves would utilize the card at a restaurant that most of them frequented habitually. Further, after their first exposure to the product, when asked how they would react if they were to receive this product as a gift, the mean response on a 7-point scale was actually higher for the (hedonic) product in the OPC (“I would dislike/like receiving this product as a gift”: $M_{OPC} = 5.4 > M_{APC} = 4.6; p < .05$). All this evidences that the appealing packaging in this study did not evoke stronger gift perceptions than the ordinary packaging. Hence this explanation does not appear to be plausible in our case.

**Study 3: Impact of Packaging on Unknown Brand**

The objective of the last experiment was to study the impact of AAP on hedonic and utilitarian products with no brand information, since in both the previous studies the role of prior experience with the brands in question was significant. While we expect a differential effect of AAP on unknown brand hedonic versus utilitarian products as before, we also posit that the role of cognition may be more significant than the role of affect in the mediation process between
packaging and attitude to product, as packaging may be used as a signal of quality for an unknown brand product and thus play a more conscious role.

Note that the hedonic and utilitarian products used in previous studies were physically (visually) different from each other while the set of packaging remained the same. Therefore in this study we manipulated the positioning of a single product once to be hedonic and once to be utilitarian in nature. In this manner the physical appearance of the product (product design) remained the same, and any difference in the two conditions may thus be attributed in entirety to a main effect of the appearance of packaging (and no interaction effects between product design and packaging). As before we used a 2 (product: hedonic versus utilitarian) X 2 (packaging: ordinary versus appealing) between-subjects design. This study was administered to an online panel of subjects consisting of a mix of students of a major North American university and members of the general population.

**Stimuli Description**

The product used was a candle in a coconut shell frame (figure 8). The description of the product was manipulated so as to be perceived as either hedonic or utilitarian (Appendix 6). The corrugated and black boxes from Study 1 were used as the ordinary and appealing packaging options respectively.

*Figure 8: The product (candle) and packaging (left: “Ordinary”, right: “Appealing”) used in Study 3*
Procedure
An online panel of subjects was requested to participate in a brief “product evaluation study” which would be administered online, in exchange for being entered into a lottery for an Amazon gift card of $25. After an initial evaluation of their current mood, participants were shown an image of either the ordinary or appealing box, which would “open” after they clicked on it, and revealed the product inside. This was done to simulate the physical act of removing the product from the packaging. On the subsequent screens, as they answered questions looking at the product including willingness-to-pay, a reduced image of the original packaging was also present at the side, to act as a subtle reminder of the packaging. Again, this was done to simulate the actual physical studies in which subjects had evaluated the product while the packaging lay to one side. A much reduced set of cognitive reactions (judgments) and affective reactions (emotions) was administered, along with manipulation checks for product positioning (hedonic or utilitarian; see Appendix 6) and a conscious evaluation of the packaging at the end of the study.

Analysis and Results
280 subjects took the study over a period of 5 days. The average time taken to complete the study online was 4 minutes and 45 seconds. The Utilitarian – Hedonic score (Dhar and Wertenbroch 2000) for the utilitarian condition was +1.35, and -1.59 in the hedonic condition; \( p < .01 \), so the positioning manipulation was effective. In the hedonic condition, the average purchase price of the candle in the appealing packaging condition (APC) was $11.85 and the average selling price in the ordinary packaging condition (OPC) was $9.13; \( p < .01 \). In the
utilitarian condition, the average purchase price of the candle in the APC was $9.90 and the average selling price in the OPC was $8.85; \( p > .1 \). Hence even for an unknown branded product we see a positive impact of appealing packaging on product valuation for a hedonic product but not for a utilitarian product, confirming \( H_{6a-6b} \). There was, however, no significant difference on any of the other measures. While our selection of cognitive and affective measures was limited, we again find support for the mediation analysis of our conceptual model\(^9\). Notably, in this analysis, we find that in model 4 \( (R^2 = .35, F = 30.75, p < .01) \); the incremental \( R^2 \) for the combined cognition factor \( (\beta_{\text{cognition}} = .90, p < .01) \) was .34 versus .01 (standardized betas or effect sizes .48 versus .15) for the combined emotions factor \( (\beta_{\text{affect}} = .22, p < .05) \). This indicates that the role of cognition may be more significant than the role of affect in the mediation analysis for products without brand information, supporting \( H_7 \). In other words, in the absence of other information, it appears that appealing packaging may play a more conscious role in signaling product quality.

**Discussion**

This study was a clean demonstration of the differential effect of aesthetically appealing packaging (AAP) on the identical product when viewed as hedonic versus utilitarian, and showed how AAP positively impacts valuation for a hedonic product even in the absence of brand information. We also find that the more conscious thought process (cognition) appears to play a greater role as compared to the more automatic thought process (emotions) in the mediation analysis, for an unknown brand product. A key limitation of this study was that the product and packaging were not physically present before the subject, so the absence of touch (as compared to the previous administrations) could have caused the lack of difference on some of the other measures.

\(^9\) The complete analysis is available from the authors upon request.
key measures. Moreover, a limited set of judgments and emotions were used for this study, to prevent subject dropouts which are harder to control for online administrations. However, our current findings do provide a valuable insight for marketers of new products— it appears that they may be able to charge a significant price premium for their product if they are able to present their product in marginally more attractive packaging and communicate the benefits of the product as hedonic rather than functional.

**General Discussion**

**Summary and future research**

Our research links packaging appeal to product valuation, and shows that the impact is differential based on the hedonic or utilitarian nature of the product. Table 3 summarizes the major findings of this research. We find that aesthetically appealing packaging (AAP) enhanced valuation/willingness-to-pay and attitude toward product, for both familiar and unfamiliar brands. Moreover, the impact of AAP may be at a nonconscious level, mediated by both affect and cognition; the role of the former (latter) being more significant for familiar (unfamiliar) brands. Most notably, we find no positive effects of AAP on utilitarian products.

Future research might replicate these results for a broader variety of products, possibly studying the influence of packaging appeal as a function of perceived functional complexity of a utilitarian product. Boundary conditions could also be tested with extremely appealing (unappealing) packaging which we expect would bring packaging into the conscious realm of evaluation; in which case our model may not apply. It would be interesting to study whether extremely appealing packaging may backfire for more functionally complex products, and
reduce perceived functional competence of the product. Future work could also empirically examine the influence of packaging on behavior and product choices in a real world setting, and finally future work could examine the influence of packaging on post usage product satisfaction, retention or re-purchase probabilities.

Table 3: Summary of findings, Studies 1-3

<table>
<thead>
<tr>
<th></th>
<th>FAMILIAR BRAND</th>
<th>UNFAMILIAR BRAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEDONIC PRODUCT/ POSITIONING</td>
<td>• AAP positively impacts attitude and behavioral intent</td>
<td>• AAP positively impacts behavioral intent</td>
</tr>
<tr>
<td></td>
<td>• Affective reactions play a significant role in mediating impact of AAP on attitude</td>
<td>• Cognitive reactions play a significant role in mediating impact of AAP on behavioral intent</td>
</tr>
<tr>
<td>UTILITARIAN PRODUCT/ POSITIONING</td>
<td>• AAP has no impact on attitude or behavioral intent</td>
<td>• AAP has no impact on attitude or behavioral intent</td>
</tr>
</tbody>
</table>

Managerial Implications

This research is a significant first step toward a full understanding of the conceptual role of aesthetically appealing packaging (AAP) in the entire product experience. We have proposed a theory and conceptual framework of how packaging impacts product valuation and attitudes. The framework is of importance to both manufacturers and marketers of products, who spend significant amounts of money to make their packages cosmetically appealing. Our research shows that it may not be prudent for manufacturers of utilitarian products to go beyond functional packaging. Lenovo may have it right with their simple effective packaging, saving them unnecessary expenditure. However, for hedonic products this investment may not be in vain, and they may be able to extract more surplus from consumers with even a small additional investment in packaging. A gift card for a restaurant or spa should be packaged beautifully but a gift card for a grocery or convenience store need not. Bottled water need not resemble a perfume...
bottle, but superior presentation of the satellite radio package may positively impact the total experience of a predominantly hedonic product. A new product could fare better by being presented in AAP and having its hedonic attributes emphasized. Our findings should encourage manufacturers that they may be able to control the cognitive and affective reactions evoked in consumers even with something like packaging, which is neither an integral part of the core product, nor an external influence like advertising. Our research suggests that for companies (like Apple) who are known for their superior packaging, it may make sense to have the package subtly displayed along with their product in their stores (for instance, a corner of the Apple store could display one iPod in its acclaimed cubic box, and one iBook displayed in its entire packaging; or in retail stores which have exceptionally attractive bags, these bags could be displayed in a corner of the store etc.). Conventionally for products like these, the consumer is exposed to the packaging only after purchase (or after receipt) of the product, while we show that exposure to AAP before purchase may actually enhance WTP. Further, the ability of AAP to evoke positive cognition and affect and to enhance product satisfaction that we found in our research suggests that packaging may also play a key role possibly even in influencing the nature of the lifelong relationship with the brand, even after the purchase decision has been made. This may be one explanation for the high levels of loyalty and customer satisfaction typically seen with Apple products. Apple’s high investments in packaging may be one of the reasons they form lifelong relationships with their consumers via the positive emotions and thoughts evoked on exposure to the exceptional packaging and presentation of their products, even after purchase. We present here some more anecdotal evidence for the rich and emotional experience consumers have with their Apple products, particularly due to the superior packaging. Consumers say: “There is something about unwrapping Apple products that just gives you this warm feeling
inside- remember when you opened your first iPod?”; “I can't imagine throwing them (the package) away- it's more than a record of a serial number, it's a record of a good event that happened in my life;" "There's this ballet of unwrapping that is clearly intentional- it prolongs your excitement about finally owning the product" (Judge at the I.D. Magazine Annual Design Review at which Apple is a regular award winner, while discussing the iPod packaging). These statements evidence that Apple’s packaging creates a positive sensory experience that evokes strong emotions in consumers, which is likely to be the foundation of a long-term relationship.10

In summary, for primarily functional products there is still no evidence that attractive packaging can be beneficial either in terms of increased valuation or improved attitude to product, so it may be more prudent for manufacturers of functional products to cut costs on packaging and to focus on the functionality of the product itself. However, for hedonic products, if it is not possible for marketers to expose their packaging to consumers before the purchase decision (in order to extract more surplus), they may still rest assured that investing in packaging could enable the consumer’s relationship with their brand post-purchase to be strengthened, which is also a highly desirable outcome. Our research depicts the significance of packaging in the brand-customer relationship process, and we hope that this aspect of the product experience will inspire more research in time to come.

10 Further recall that in our second study, the appealing packaging appeared to elicit many more affect-rich or hedonic comments about Panera Bread than the ordinary packaging. Future research would more carefully examine the role of AAP post product purchase.
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*HUGE Mac 20th Anniversary Poster: 'Apple Macintosh Packaging Concept'*
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*TMO Reports - iPod Packaging Wins Design Distinction Award*
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Appendices

Appendix 1: Instructions for Study 1
Hello! Thank you for participating in this study to demonstrate different methods of Value elicitation.

We are going to ask you some questions about what you think of products that are sold in the ___ (school) Bookstore. There are no right or wrong answers, we are asking only for your opinions.

You have been given a mug, and the mug is now yours to keep. Please take a few moments to look at the mug that you have been given and then answer some questions about it.

After that we will give you an opportunity to sell back your mug to us for cash. You will be asked to indicate from a range of prices at what price you would sell the mug for. We will randomly pick one price from the range indicated in the questionnaire (through a random drawing), and if you indicated that you would sell for that price (or less), we will take the mug back and give you the cash amount for the price that is drawn. If your indicated price is higher than the price drawn then you keep the mug.

Please note that if you indicate a price that is lower than what the mug is worth to you, and if a price higher than that is drawn, you would be required to give up the mug in exchange for the likely low price drawn. On the other hand, if you indicate a price that is higher than what the mug is actually worth to you, and if a price lower than that is drawn, you lose the opportunity to exchange the mug for the likely decent price drawn. So it is in your best interests to indicate the price that is reflective of what the mug is TRULY worth to you.

Once again, thank you for participating in this survey.

Appendix 2: Elicitation Selling prices in Study 1 (BDM method)
Now you will have an opportunity to sell back your mug for cash if a price, which has already been randomly determined, is acceptable to you. For each of the possible prices below, indicate whether you wish to sell your mug and receive this price, or keep your mug and take it home with you. For each price indicate your decision by marking an X in the appropriate column. The predetermined price will be revealed and all participants will actually make the exchange of the mug for the cash amount drawn, IF they have indicated they will sell for that price.

<table>
<thead>
<tr>
<th>Price</th>
<th>Keep</th>
<th>Sell</th>
</tr>
</thead>
<tbody>
<tr>
<td>$.25</td>
<td></td>
<td>$4.25</td>
</tr>
<tr>
<td>$.75</td>
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</tr>
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<td>$1.25</td>
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<td>$3.75</td>
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<td>$7.75</td>
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</table>

Appendix 3: Impact of Packaging
Sometimes packaging and presentation are responsible for people's evaluations of products. Take a look at the packaging of this product- in terms of the envelope, the backing card inside and the presentation overall.

Please answer the following questions based on the packaging of this product.

a) To what extent was your evaluation of this product affected or unaffected by the packaging?

Totally unaffected by packaging/ Somewhat unaffected by packaging/ Somewhat affected by packaging/ Totally affected by packaging

b) To what extent do you think OTHERS' evaluation of this product was affected or unaffected by the packaging?

Totally unaffected by packaging/ Somewhat unaffected by packaging/ Somewhat affected by packaging/ Totally affected by packaging
c) To what extent do you think that evaluation of a product should be affected or unaffected by the packaging?

Should be totally unaffected by packaging/ Should be somewhat unaffected by packaging/ Should be somewhat affected by packaging/ Should be totally affected by packaging

Appendix 4: Elicitation of WTP in Study 2

Please look at the product that has been handed to you. It is a card from Panera Bread which has been charged with $25.

These cards may be used anytime at any Panera Bread café anywhere in the United States on a single or ongoing basis. One may keep adding value to these cards by charging it with any amount of dollars. These cards are equivalent to cash in the amount loaded on them, and the cards never expire.

If we were selling this card to you in this experiment and asked you to pay money for this card, how much would you be willing to pay for it? Remember that it is charged with $25 which can be used just like cash at Panera Bread, and you could use it and add value to this card as you wish over a lifetime.

You don’t have to pay any money to us for this card. We are simply showing this $25 Panera card to you, and want to know how much you would pay for it if we were selling it to you.

Please check (√) the MAXIMUM value (select only ONE value) that you would be willing to pay for this card from the following table.

<table>
<thead>
<tr>
<th>I would pay</th>
<th>I would pay</th>
<th>I would pay</th>
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<tbody>
<tr>
<td>$30</td>
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<td>$10</td>
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<tr>
<td>$21</td>
<td>$11</td>
<td>$1</td>
</tr>
</tbody>
</table>

Please explain your response. Why would you not pay more/less, or why would you not want the card at all?

Appendix 5: SELECTED QUESTIONS, STUDY 2

Judgments/thoughts elicited by product
We will now ask you to consider this product in some detail. Please look carefully at the product in front of you before answering the next few questions.

We are interested in your thoughts about this product. Please tell us how well you think each of these words/phrases listed below describes this product by marking a response 1 through 5. If you think the word/phrase ……… describes this product….. Extremely well…mark 5; Very well…mark 4; fairly well…mark 3; not very well…mark 2; Not at all well…mark 1.

Selection of judgments used in Study 2:
Ordinary       Cold       Irritating       Pretentious
Emotions elicited by product

Now we would like you to tell us how this product makes you feel. We are interested in your reactions to this product and not how you would describe it.

Please tell us how much you feel each of these feelings while looking at this product. If you feel the feeling ……

Very strongly…mark 5; strongly…mark 4; somewhat strongly…mark 3; not very strongly…mark 2; not at all…mark 1.

Selection of emotions used in Study 2:

Appendix 6: STUDY 3

Utilitarian description of product:
This is a candle designed to be used in the kitchen, bathroom or heavy-traffic areas of the home. This half coconut candle is first sanded, then pedestaled and filled with pure beeswax. The pure wax contains a proprietary blend of activated charcoal which when burnt absorbs and effectively eliminates unpleasant odors like smoke/cat litter/sweat/urine/musty smells. The candle will last for up to 40 hours.

Hedonic description of product:
This is a candle designed to be used in the bedroom or in your personal space in the home. This half coconut candle is first sanded, then pedestaled and filled with pure beeswax. The pure wax is blended and scented with the wonderful essences of coconut, and is presented in a natural, organic setting for the most enjoyable, relaxing and therapeutic experience. The candle will last for up to 40 hours.

Hedonic/Utilitarian manipulation check (adapted from Dhar and Wertenbroch, 2000):

Please read carefully the following descriptions of two kinds of consumer products.

Hedonic products: Products and experiences that are pleasurable, fun, enjoyable and appeal to the senses. Examples: alcohol, jewelry, going to the movies.

Utilitarian products: Products and experiences that are useful, functional, practical and beneficial. Example- vacuum cleaner, diapers, visiting the dentist.

Now please evaluate the following product on how hedonic and/or utilitarian you consider the product to be. Please note that the product could have both hedonic and utilitarian dimensions, or may be primarily one more than the other.

Not at all utilitarian/hedonic    Extremely utilitarian/hedonic

Selection of judgments used in Study 3: Useful Good quality Attractive design Will enhance the ambience of my home Worth my money Reliable Will work as promised (C-alpha = 0.86)

Selection of emotions used in Study 3: Happy Pampered Relaxed Invigorated Romantic (C-alpha = 0.89)