Is Seeing Believing? Consumer Responses to Opacity of Product Packaging
   Sucharita Chandran, Boston University, USA
   Rishtee Kumar Batra, Boston University, USA
   Benjamin Lawrence, Boston University, USA

Prior studies have shown that product and packaging design influences consumer reactions and purchase behaviors, however, research has neglected to examine a package’s opacity or lack of transparency on consumers’ perceptions. Utilizing three experiments this study looks at the effect of opacity on product evaluations and demonstrates that product opacity influences willingness to pay and quality perceptions, and these effects are mediated through evaluations of trust.

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Benjamin Lawrence, Boston University, USA

Product and packaging design has shown to influence consumer reactions and purchase behaviors (Bloch 1995; Holbrook and Anand 1992; Raghubir and Greenleaf 2006; Veryzer 1993, 1999). Research in visual aesthetics has focused on product shapes and dimensions (Krider, Raghubir, and Krishna 2001; Yang and Raghubir 2005) while one specific characteristic of packaging, its opacity or lack of transparency has received little attention (Dantas et al. 2004). This research addresses this important aspect of packaging design, transparency, which has been neglected in visual marketing research. Three studies investigate if and when transparency in packaging affects consumers’ product attitudes and examines trust as a mediating factor.

**Study One**

Study one was an exploratory study aimed at understanding how packaging of familiar and unfamiliar brands affects consumers’ perceived quality, trust, and willingness to pay. This study employed a 2(Brand: Familiar/Unfamiliar) X 2(Packaging: Clear/Opaque) between-subjects design in which 128 participants were asked to evaluate either an opaque package of mouthwash or a comparable clear package manufactured by either Landers (unfamiliar brand) or Listerine (familiar brand). Subjects were asked how much they would be willing to pay for the mouthwash and then to rate the perceived quality of the product. Next, participants were asked to describe what input they used when making their judgments of quality regarding the mouthwash. Finally, participants answered a series of four questions aimed at gauging their familiarity with the brand and attitude toward the brand. Neither novelty nor attractiveness of the packaging were found to be significant covariates in explaining any of the key dependent measures and were thus not used for further analysis.

With respect to perceived quality, a two-way ANOVA revealed a significant interaction effect between brand and packaging (F(1,127)=3.85, p=.052) such that for Lander’s mouthwash, participants felt that the mouthwash was of better quality when packaged in a clear bottle than opaque bottle (mean=3.70 versus 3.47) but the opposite was true for Listerine (mean=5.38 versus 5.96). For willingness to pay, a two-way ANOVA also revealed a significant interaction effect between brand and packaging (F(1,127)=5.41, p<.05) such that for the unfamiliar brand of mouthwash (Lander’s) participants were willing to pay significantly more for a clear bottle (mean=$3.23) versus an opaque bottle (mean=$2.73). Interestingly, however, when the brand of mouthwash was familiar (Listerine), there was no significant difference in participants willingness to pay for clear versus opaque bottles (mean=$3.72 versus $4.12). An analysis of participants’ open-ended responses indicated that for unfamiliar brands, consumers were skeptical of the contents of bottle of mouthwash where as for a more familiar brand; there was not a sense of distrust due to packaging. Study two further examines the role of trust in the process of forming product attitudes based on packaging attributes.

**Study Two**

Study two examined the role of product type upon response to packaging design. In this 2(Product: Cough syrup/Toilet Cleaner) X 2(Packaging: Clear/Opaque), between-subjects study, 133 participants rated one of four possible product-packaging combinations along five performance-related dimensions. As in the past study, in order to rule out product attractiveness as an alternative explanation for the findings, two measures were utilized to gauge product attractiveness, but were not found to be significant.

With respect to perceived performance, a two-way ANOVA revealed a significant interaction effect between product and packaging (F(1,132)=21.11, p=.000), with all means being significantly different from one another. Participants evaluating the toilet bowl cleaner felt that a transparent package was of poorer quality than an opaque package (mean=1.74 versus 3.87) while for cough syrup, the opposite was true, they felt that a transparently packaged cough syrup was of better quality than an opaque packaged cough syrup (mean=3.33 versus 2.77). A mediation analysis revealed that trust was a significant mediator in the inference of product quality from product packaging such that for combinations that were inconsistent with expectations (e.g. clear toilet bowl cleaner), participants’ trust for the product was significantly lower than conditions in which packaging was consistent with expectations (e.g. opaque toilet bowl cleaner). Given that trust is a mediating mechanism that helps explain the results found in both study one and study two, the next study sought to reverse the effects of study two by enhancing trust in the inconsistent product packaging conditions.

**Study Three**

Study three was identical to study two in most dimensions. For this study, only the toilet cleaner product category was used, with the goal being to enhance trust in the transparently packaged toilet bowl cleaner and thus enhance ratings of product quality and performance. 89 subjects participated in a between-subjects study in which packaging (clear/opaque) was manipulated as well as the presence or absence of trust-enhancing information (eco-friendly claims made/no claims made). To increase the level of trust in the