The Influence of Prototypicality and Level of Exposure on Consumers' Responses to Product Designs: Field Evidence From German Car Buyers

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Existing research on product design has suggested that a design's prototypicality is an important determinant of consumers' aesthetic responses. Furthermore, most studies have measured consumers' reactions to designs varying in prototypicality after a single exposure. In reality, however, consumers have multiple opportunities to observe a product before making a decision. In this research, we investigate if the positive effect of prototypicality is moderated by the level of exposure. More specifically, we postulate that more prototypical designs will lose in aesthetic appeal after multiple exposures, whereas less prototypical designs will gain in aesthetic appeal. Two studies focusing on German car buyers provide converging support for this prediction.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/15179/volumes/v37/NA-37

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EXTENDED ABSTRACT
In recent years, a growing number of industries have begun to regard product aesthetics as a fundamental part of their competitive strategy (Cox and Cox 2002). Yet, there is surprisingly little research that relates specific components of a product’s design to consumers’ aesthetic responses (Bloch 1995). Put differently, very few studies have investigated why some product designs are considered to be more aesthetically pleasing than others (for exceptions see, Cox and Cox 2002; Veryzer and Hutchinson 1998). One factor that has been investigated as a potential determinant of consumers’ aesthetic responses is a design’s prototypicality. That is, product designs that are typical of their general category have been found to elicit more positive evaluations than product designs that are atypical of their category (e.g., Veryzer and Hutchinson 1998).

However, there are numerous examples showing that some products succeed in the marketplace precisely because their designs are unique and revolutionary. How can one account for this apparent discrepancy? One explanation may be based on the fact that most studies have only measured participants’ reactions to designs varying in prototypicality after a single exposure. However, consumers usually have multiple opportunities to observe a product before making a decision. Considering decision processes of this kind is important since research from other areas demonstrates that the aesthetic appeal of a stimulus is influenced by the level of exposure (Bornstein 1989). Therefore, this research examines if and to what extent the relationship between a design’s prototypicality and consumers’ preferences is moderated by the extent of exposure.

The most common explanation for the positive effects of prototypicality is based on the concept of fluency, which refers to the cognitive ease that people experience when processing a stimulus. Research in this area has shown that stimuli that are more prototypical can be processed more fluently than stimuli that are less prototypical (Winkielman et al. 2006). Fluency, in turn, may be hedonically marked and may elicit positive affect that is subsequently transferred to the stimulus (Winkielman and Cacioppo 2001). From this perspective, products with prototypical designs should be preferred over products with atypical designs.

Current theorizing, however, also indicates that fluency-based affect emerges at very early stages of information processing (Winkielman et al. 2003). Hence, if consumers only have a single opportunity to observe a product, the fluency signal is a very relevant information for forming a judgment. When, however, consumers have multiple exposures, they may be able to extract additional information from the product, such that the fluency signal is not the only information available (Novemsky et al. 2007). This, in turn, may affect how consumers respond to different designs. Whereas prototypical designs may initially elicit a positive response, they may feel boring once all their features have been extracted. Atypical designs, however, may still feel interesting after multiple exposures. Consequently, we postulate that more prototypical designs will lose in aesthetic appeal after multiple exposures, whereas less prototypical designs will gain in aesthetic appeal. Two studies focusing on German car buyers were conducted to test this prediction.

Study 1 experimentally manipulated the prototypicality of a car’s design (prototypical, not prototypical) and the level of exposure (3, 6, 9 exposures). We also examined two different car segments (compact cars and mid-size executive cars) to increase the generalizability of our findings. To create car designs that varied in terms of their prototypicality, we relied on image morphing techniques. To this end, we took standardized pictures of 16 compact cars and 12 mid-size executive cars and created two different morphs out of these images for each segment. One of the morphs was particularly typical of its segment, whereas the other was particularly atypical. Afterwards, we asked a total of 306 German car buyers to evaluate these images and manipulated the level of exposure. The results confirmed our predictions and showed that the relationship between prototypicality and aesthetic liking is moderated by the extent of exposure. Whereas prototypical car designs began to lose in aesthetic appeal after 9 exposures, atypical car designs were considered more attractive with increasing amounts of exposure.

Study 2 sought to enhance the external validity of these findings by examining if the interaction between prototypicality and exposure also affects sales. To this end, we calculated a prototype similarity score for each of the 28 cars in our sample (Winkielman et al. 2006). Furthermore, we assumed that the extent of exposure would be determined by how long a car has been available on the market. Again, the results confirmed our hypothesis. While sales for prototypical cars increase rapidly in the first years, they reach a peak fairly quickly, after which sales drop again at a rapid rate. Atypical cars, however, take a much longer time to reach their peak. At the same time, they also show a slower rate of decline, such that they are sold successfully for longer periods of time than cars that are prototypical.

This research makes several contributions to the literature. Firstly, our studies show that the effect of design prototypicality is moderated by the level of exposure. Assuming that consumers have multiple exposures to a product before making a decision, atypical designs may eventually be more successful than very prototypical designs. Secondly, our studies also contribute to the literature on fluency and consumer choice. Research in this area has typically found that consumers are more likely to choose a product when they experience feelings of fluency (Schwarz 2004). Building on these findings, our studies suggest that fluency effects are more likely to be observed when consumers have limited opportunity to process a product in great depth, but may be less pronounced with increasing amounts of exposure.

REFERENCES


