

The perfect car, according to science: Study used morphing technique and consumer choice model

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This 2010 Ford Fusion may have been more popular with consumers because it mimicked the aesthetic features found on luxury car models. Credit: Wikimedia

Released on Sept. 4, 1957, Ford dubbed its Edsel "the car of the future." It was designed to stand out, but most people didn't like the way it looked. Add "ugly" to a laundry list of problems from poor performance to a high price tag and the car tanked—its only lasting legacy being a

lesson in how not to develop a product.

But what does the ideal car look like?

University of California, Riverside professor Subramanian "Bala" Balachander and his collaborators explored that question in a study that is forthcoming in the *Journal of Marketing*. Balachander is the Albert O. Steffey Chair and Professor of Marketing at UCR's School of Business.

By combining data on aesthetic design and sales, the researchers showed that while customers don't like cars to look too different from the market average, they also don't want something that looks too similar. When buying a [luxury car](#), it is more important that the car looks consistent with the brand, and less important that it looks like other cars in the market segment. Cars in the economy segment can gain in popularity by mimicking the aesthetics of their luxury counterparts.

The findings will help marketing professionals make better decisions on aesthetic design, and can be applied to a wide range of product categories including electronics, wearable technologies and household appliances, Balachander said. "Using our quantitative design model, product design managers in all sectors can forecast sales and profits of alternative aesthetic designs," Balachander said.

Although quantifying the physical appearance of real products is challenging, the researchers used a recently developed morphing technique to construct the 'average' car in a particular market segment or brand from a series of individual pictures. Once developed, the researchers determined the similarity of more than 200 car models from 33 brands sold in the U.S. between 2003 and 2010 to that average, examining their segment prototypicality (how typical a product is compared to other products in the same market), brand consistency (how much a product looks like the average product in a brand's product

lineup) and cross-segment mimicry (how much the design of an economy product mimics a luxury product), while controlling for other variables such as price and advertising.

Their results showed that the aesthetic design of a product can have a significant effect on consumer preference, with consumers preferring products that are neither too similar to the average product nor drastically different. In the luxury category, customers prefer cars that adhere more closely to the brand, and less to the market average. Products in the economy segment of a market can gain by mimicking the aesthetics of luxury products.

Balachander said the results highlight the fine line between creating products that appeal to consumers because they stand out, but are not perceived as ugly—like the infamous Edsel.

"In contrast to previous research, which has shown that consumers prefer a more prototypical car, our study highlights the advantage of introducing some level of freshness into a new model, particularly if those unique design elements mimic those of a luxury [car](#)," Balachander said.

More information: Yan Liu et al, The Effects of a Product's Aesthetic Design on Demand and Marketing Mix Effectiveness: The Role of Segment Prototypicality and Brand Consistency, *Journal of Marketing* (2016). [DOI: 10.1509/jm.15.0315](https://doi.org/10.1509/jm.15.0315)

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