Facial selection technique for ads can increase buyers by 15 percent

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Merely changing the face of a model in an ad increases the number of potential purchasers by as much as 15% (8% on average), according to a study being published by the Institute for Operations Research and the Management Sciences (INFORMS).

"Just the Faces: Exploring the Effects of Facial Features in Print Advertising," appears in the Articles in Advance section of the INFORMS journal *Marketing Science* and will appear in print later this year. The research was conducted by Li Xiao, Assistant Professor of Marketing at Fudan University (China), and Min Ding, Smeal Professor of Marketing and Innovation at Smeal College of Business, Pennsylvania State University, and Advisory Professor of Marketing at Fudan University.

The study shows that a technique to screen faces when designing ads can transform the current subjective process into a scientifically automated one. Considering the extensive use of human faces in advertising (over 50% of print ads contain human faces), this technique may be quite profitable.

"This technique will revolutionize the field of ad design," predicts author Min Ding.

The technique is eigenface method, which has been widely used for face recognition purposes in other fields, including personal device logons, human-computer interaction, and law enforcement's tracking of

suspects. Eigenface method aims to identify each face by a small set of key dimensions that together explain the variations in human faces.

The authors used eigenface method to extract and represent facial features in ads with a limited set of eigenface weightings. In an experiment with 989 participants, the authors used real models' faces and real ads with minimal modifications to elicit participants' natural reactions to print ads. Their results show that different faces affect ad effectiveness substantially and people show substantial differences in their facial preferences across product categories.

"An 8% increase in effectiveness could produce a substantial gain for the $600 billion ad industry," says author Li Xiao. "These methods can substantially increase sales in individual industries," add the authors. "For example, there is a potential for up to $5 billion additional sales for the automotive industry in the US alone."

Ad agencies would use four steps to employ this technique in ad design: (1) create a single database containing perhaps a thousand or more faces of professional models; (2) represent each face in the database with a set of eigenface weightings; (3) measure the facial preferences of target customers in a product category; and (4) identify the top faces that best match target customers' facial preferences for the specific product category.

These steps can be automated once enough data about characteristics of various product categories and facial preferences have been collected. This research was made public in conjunction with the INFORMS Society for Marketing Science (ISMS). The Informs Society for Marketing Science (ISMS) is a group of scholars focused on describing, explaining, and predicting market phenomena at the interface of firms and consumers.