

Using eye-tracking and electrodermal activity to assess impact of human face images in service ads

Jan Watson¹, Hongjun Ye², Jintao Zhang², Yigit Topoglu¹, Rajneesh Suri^{2,3}, Hasan Ayaz^{1,3,4,5,6}

¹ School of Biomedical Engineering, Science and Health Systems, Drexel University, Philadelphia, PA USA

² Lebow College of Business, Drexel University, Philadelphia, PA USA

³ Drexel Solutions Institute, Drexel University, Philadelphia, PA USA

⁴ Department of Psychology, College of Arts and Sciences, Drexel University, Philadelphia, PA USA

⁵ Department of Family and Community Health, University of Pennsylvania, Philadelphia, PA USA

⁶ Center for Injury Research and Prevention, Children's Hospital of Philadelphia, Philadelphia, PA USA

Visual messaging has been widely researched in psychology and communications specifically within the area of advertising [1,2]. Such messaging research seeks to identify the characteristics and variables within an advertisement that contribute most to its effectiveness [3]. As it has long been known that human perceptual processing is uniquely affected by human facial features [4,5] it should be no surprise that consumer behavioral research has focused on the role of the human face in ad design, demonstrating increased brand recognition, improved attention capture and heightened product preference for print advertisements containing face and face-like images when compared to their faceless counterparts [6,7]. But have these findings incorrectly assumed that all faces are created equal? To date, advertising studies have sampled content exclusively from databases of commercial images that employ model actors and actresses, unequivocally skewing results and conclusions in the positive direction. This begs the question, will the presence of a "normal" face (non-model, non-celebrity) necessarily boost an advertisement's value and appeal even if deemed disagreeable by societal and commercial standards? Even worse, what if a 'bad' face imposes a deleterious effect on an advertisement's messaging content, repelling the audience that it intended to inspire?

The present study aimed to investigate the relationship between the presence of a human face images in print advertising and viewer affinity for ad content using combined eye-tracking, electrodermal activity and self-reported measures. Thirty-three participants (20 female, mean age=42 years) were instructed to preview 42 different personal injury law firm service advertisements and self-reported advertisement ratings were used to stratify ads into low and high-affinity categories. For the measure of advertisement engagement [8,9], mean eye gaze fixation durations were recorded within both text and image areas of interest (AOIs). Additionally, electrodermal activity (EDA) non-specific skin conductance response (nSCR), which has shown to be a reliable indicator of the stress reaction was recorded for the viewing duration of each advertisement [10]. Study results indicate that there were lower mean eye gaze fixation durations (i.e., decreased engagement) with text content in poorly rated advertisements when an image of a human face was present as well as greater nSCR (i.e., a higher stress response) when a human face was present in the poorly rated advertisements. Interestingly, effects from eye-tracking and EDA measures were not present in advertisements with favorable ratings, where longer fixation durations were dedicated to text AOIs as opposed to image AOIs regardless of the presence of a face image and no differences in EDA nSCR was observed. These results suggest that negatively perceived human faces may impact the perception of an advertisement's message and demonstrates that combined eye-tracking, EDA and self-reported measures can provide a neuroergonomic assessment of advertisement preference and engagement in real-world environments.

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