Is There Room For Social Stimuli in Green Ads?: An Investigation of the Use of Human Face in Green Advertisements

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Introduction

Importance of Green Messaging
- Green washing creates discussions regarding sustainable practices and communication) messages (Dangelico & Vocalelli, 2017).
- Ads messages are most effective when consumer attain processing fluency (Lee & Aaker, 2004).
- Green messages often rely on informational cues such as eco-labeling and message framing e.g. environmental advantages (White, Habib, & Hardisty, 2019).
- Green behaviors and attitudes can also be encouraged predominantly through positive affect, e.g. presenting a pleasant natural scenery (Matthes, Wonneberger, & Schmuck, 2014) or even threat appeals (Cheng, Woon, & Lynes, 2011).
- Others have used both cues, attractiveness and expertise in celebrity endorsements to influence consumers' decisions (Eisend & Langner, 2010).

Use of Human Face in Ads
- Human faces are perceived as powerful and noticeable social stimuli (Gao et al., 2011).
- Facial expressions are used for communicating emotions, alertness, pain, intention and personality (De la Torre & Cohn, 2011).
- Faces evoke judgmental reactions (Todorov, 2012), such as trustworthiness (Todorov, 2008).
- Research shows a positive relationship between facial expressions of happiness and attitude toward ads (Lewinski, Fransen, & Tan, 2014).
- A smiling model in ads induces attitude change and increases consumer's purchase intention (Trivedi & Teichert, 2019).
- Studies have investigated effects of emotional appeals and informational cues toward brand and ad attitude (Matthes et al., 2014). However, the impact of the presence of human face in green ads has not been examined.

Research Question
- What is the impact of human face (vs. without face) presented in green (vs. non green) ads?

Methods

Study 1: Eyetracking study
- 66 undergraduate students (32 females) in the Netherlands
- Tobii model X2-30_Compact
- Examine the effects of face (vs. no-face) green ad
- 10 different green ads, 8 distractors and the 2 target ads (see Figure 1)
- Randomized order and each shown for 3000 MS
- Completed a short demographic questionnaire after watching the ads

Study 2: Behavior experiment
- A 2 (green vs. non-green ad) x 2 (face vs. no-face)
- M-Turk survey carried out in the United States with 120 participants (60 females)
- The green ads were similar to the ones used in study 1, but with a non-green ad condition included
- Dependent variables: attitudes toward ad, brand, purchase intentions , likelihood to share and recommend the ad to others

Results

Eye tracking study
- A paired t-test examined the difference between the total fixation duration between with face vs. no face in green ads (see Figure 2)
- Higher AOI of "face" compared to ads without face: (M_{with_face} = 2. 878 vs. $M_{without\_face}$ = 2.793, t(65) = -2.154, p = .035)
- Longer fixation on the "message" in the green ad: ($M_{without\_face}$ = 2.023 vs. M_{with_face} = 1.664, t(65) = 4.145, p < .001)
- Longer fixation on the "product" in green ad: ($M_{without\_face}$ = .7702 vs. M_{with_face} = .4894, t(65) = 3.985, p < .001).

Behavioral study
- Using a 2 (green ad vs. non-green ad) x 2 (with face vs. no face) between subject design, we found the main effects on the message in green and non-green ads on attitude toward ad (A_{ad}), brand (A_{brand}), likelihood to share, likelihood to recommend the product and purchase intentions.
- Significant positive effect of the green (vs. non green) ads on A_{ad} ((F (1, 116) = 10.820, p = .001), likelihood to share (F (1, 116) = 10.225, p = .002) and likelihood to recommend (F (1, 116) = 6.260, p = .014). But no effects of green vs. non green ads on A_{brand} (F (1, 116 = .025, p = .875) and willingness to purchase (F (1, 116 = 4.339, p = .129).
- Main effects of the face (vs. without face) was not significant
- Significant interaction effect between face and green on sharing (F(1, 116) = 3.379, p = .069) and likelihood to recommend (F(1, 116) = 3.800, p = .054)
- There were significant effects of face (vs. no face) in green ads on A_{ad}, likelihood to share, and likelihood to recommend (see Figure 3)
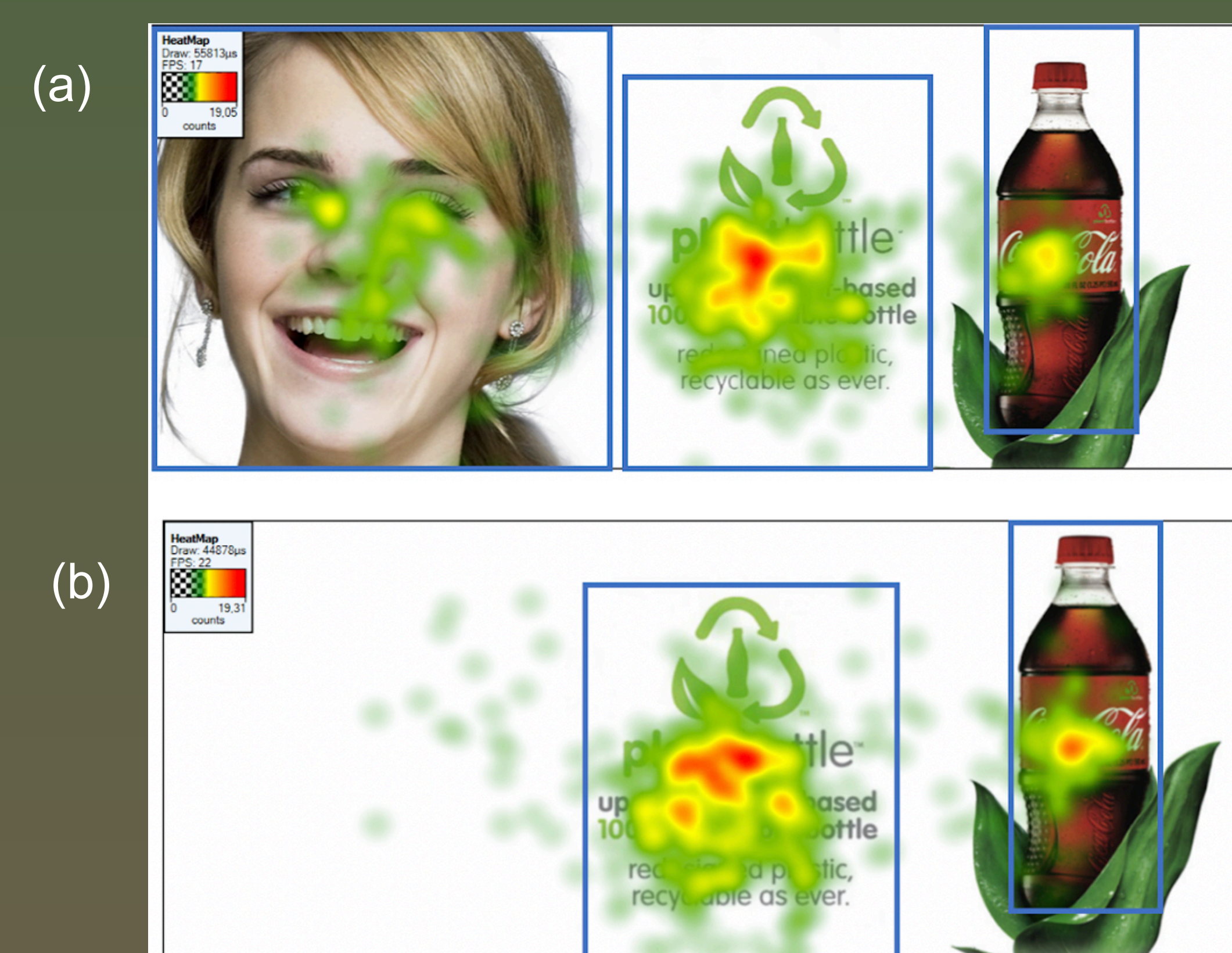

Figure 1. Ad stimuli, Area of Interest (AIO), and heat map results from the eyetracking study for the green ad (a) with a face and (b) without a face condition.
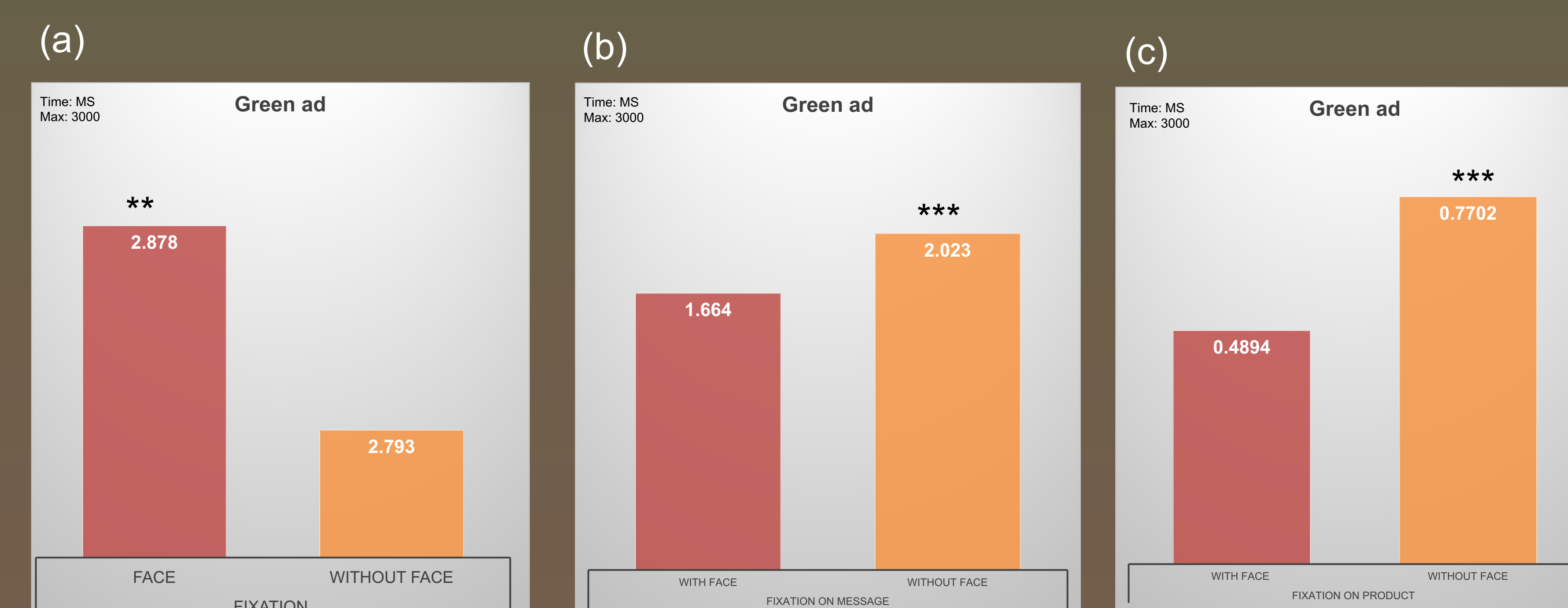

Figure 2. Eyetracking data measuring duration of gaze and fixation (msec) between with face vs. without face in green ads. Fixation on AIO include (a) fixation on face, (b) fixation on message and (c) fixation on product.
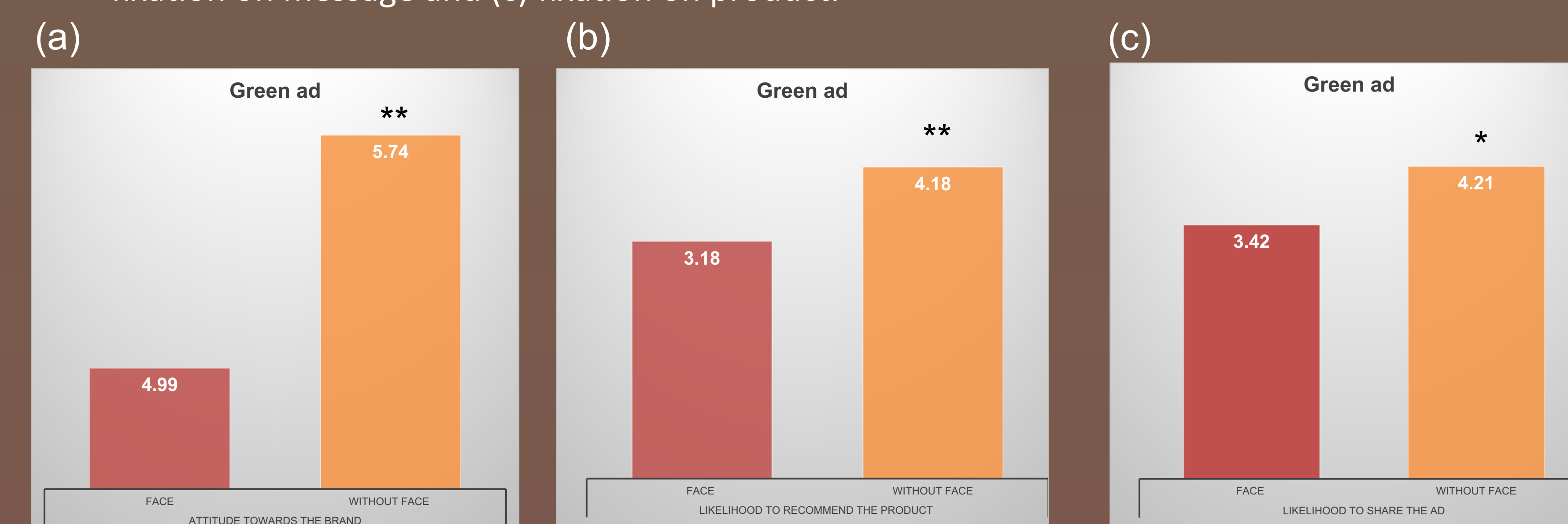

Figure 3. Behavioral data comparing attitudes and behavioral intentions between with vs. without face in green ads, including (a) attitude towards the ad, (b) likelihood to recommend and (c) likelihood to share the ad.

*** p < .0001

Discussion

Conclusions
- While consumers pay more attention to the faces in the ads, they may not perceive this practice as more positive
- Less attention is paid toward the green message and product, suggesting faces in green ads might be distracting.
- Attitudes toward the green ads are less positive when a face is present.
- While others have reported positive impact of the presence of a human face in ad messages, we did not find such effects in non-green ads, suggesting faces in green ads might be distracting.

Implications
- Marketers should design green ads differently from non-green ads
- The use of human face (social cues) should be cautiously used or even avoided in green ad designs.

Limitations and Future Research
- Examine AOI-accuracy
- M-Turk validation
- Consider using other images such as animals, non-celebrity figures in green ads
- Examine other individual difference factors such as green attitude and green knowledge.

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