How many pictures should your print ad have?

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ABSTRACT

This study examines the impact of increasing the number of images in a print advertisement on affective and cognitive responses. In advertisements with both positive and negative pictures, increasing the number of positive (negative) images increases positive (negative) affect. However, consistent with theory regarding the mechanism underpinning affect integration in a simultaneous presentation context, in advertisements with only positive or only negative images, increasing the number of positive (negative) images of similar affective intensity does not increase positive (negative) affect. For both types of advertisements, additional pictures have no effects on attitude toward the ad when they exemplify a product attribute or benefit that an existing picture(s) already depicts.

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1. Introduction

Pictures in advertising attract attention (Pieters and Wedel 2004), generate emotional responses (Chowdhury et al., 2008) and create beliefs about product attributes (Mitchell and Olson, 1981). In many instances print advertisements employ multiple images. For example, an advertisement for a clothing store with multiple pictures of models wearing the stylish attire available at the store. This research investigates the potential benefits of increasing the number of pictures in a print advertisement.

In the marketing literature, only two studies look at the effects of multiple pictures in print advertising, Singh et al. (2000) compare an eight-page advertising spread with multiple pictures to a four-page version of the ad. Their results suggest that reducing pictures that do not generate relevant imagery does not decrease advertising effectiveness. A number of limitations are present with this study. First, only peripheral pictures are eliminated. Second, the images are spread out over multiple pages and presented sequentially, as opposed to a single page ad with pictures presented simultaneously. Third, the pictures are not separately pre-tested to measure the affect they generate, making it impossible to understand how viewers integrate the affect from different pictures into an overall response.

Chowdhury, Olsen, and Pracejus (2008) investigate affective responses to a print advertisement containing either one or two images. Results indicate that for advertisements using only univalenced pictures (only positive or only negative pictures), the peak affect from any one of the pictures determines the overall affective response to the ad. However, for advertisements with oppositely valenced pictures (both positive and negative pictures) a compensatory mechanism determines overall emotional response. This study does not consider the impact of additional pictures on important cognitive responses such as attitude toward the ad. The study examines a maximum of two pictures, reducing the ability to determine the underlying method of affect integration. For example, a careful consideration of the compensatory findings reveals two possible outcomes when increasing the number of pictures in advertisements with oppositely valenced pictures.

One possibility is that viewers: (1) process positive pictures and negative pictures separately, and then (2) integrate the affect generated by these separate types of pictures. This process may seem reasonable given that positive pictures generate primarily positive affect and negative pictures generate primarily negative affect and as positive affect and negative affect are independent constructs (see Watson and Tellegen, 1985). This process implies that one positive picture and one negative picture will generate the same overall affect as five positive pictures (of similar intensity) and one negative picture. However, rather than processing positive and negative images separately, individuals may utilize the additional positive images as separate sources of positive affect to counteract the negative affect generated by negative images. This would imply that increasing the number of positive pictures would increase overall positive affect. Both mechanisms would appear to have some merit...
and the exact outcome of the proposed compensatory mechanism for oppositely valenced pictures in a print advertisement needs further examination.

The purpose of this research is: (1) to examine the impact of more than two images in a print advertisement, (2) to investigate the differing mechanisms of affect integration in univalenced and mixed valenced contexts, and, (3) to further investigate the disjunction between affect and cognition. The next section develops predictions regarding the effects of increasing pictures in mixed valenced and single valenced advertisements. The effects are examined for both affective and cognitive measures, as affective responses and cognitive responses are separate constructs (see Malhotra, 2005) and both are important dependent variables in terms of measuring advertising effectiveness (see Chowdhury et al., 2008).

2. Theory development in brief

2.1. Increasing the number of images in a mixed valence context

2.1.1. Affective response

Research on positive emotions shows that individuals use positive emotions as a resource to undo the effects of negative emotions (e.g., Fredrickson and Levenson, 1998). Other research on how individuals integrate positive and negative events (e.g., Linville and Fischer, 1991) also demonstrates that individuals use positive events to cope with negative events. In a print advertisement with oppositely valenced images the most effective approach is to treat each positive affective element as a separate source of positive affect than to average across the positive elements. Having more positive elements allow for a greater number of sources of positive affect to counteract the negative affect, thus decreasing overall negativity and increasing overall positiveness. Thus, affect integration of oppositely valenced images should follow a compensatory mechanism where the number of positive images and negative images are taken into consideration.

2.1.2. Cognitive response

Unnava and Burnkrant (1991) demonstrate that an advertisement that uses both words and pictures to describe a product attribute is not more effective that an advertisement with only pictures to describe the same attribute, as the words do not generate any additional imagery in the mind of the viewer. Similarly, if additional pictures in an advertisement exemplify a benefit already depicted by an existing image then the extra pictures should not generate additional imagery that is more relevant in the mind of the viewer. A separate stream of research also shows that when affective stimuli influence decisions, these decisions tend to be “sensitive to the presence or absence of affect producing stimuli but relatively insensitive to further variations in the magnitude of the stimuli" (Cohen et al., 2008, p. 312, based on Hsee and Rottenstreich, 2004). A mixed valenced pictorial print advertisement has a set of positive pictures and a set of negative pictures. A prototypical member of each set should affect evaluations, and having a greater number of positive or negative images rather than just one of each should not impact liking for the advertisement.

2.2. Increasing the number of images in a single valence context

2.2.1. Affective response

In the context of affective psychology, scope refers to the quantititative aspect of affective stimuli (Hsee and Rottenstreich, 2004). Scope neglect implies insensitivity to the number of a type of stimuli (positive or negative). Chowdhury, Olsen, and Pracejus (2008), show that in the case of the integration of only positive or only negative images in a print advertisement, a peak effect determines overall affective response. In a set of same valenced affective stimuli, the stimulus with the highest affective intensity determines overall affective response. This peak effect predicts scope neglect for univalence affect integration. For example, the integration of multiple positive images of similar intensity should generate the same positive affect as one positive image of equal intensity.

2.2.2. Cognitive response

Positive images generate relevant positive imagery in the viewer's mind, while negative images generate relevant negative imagery in the mind of the viewer. This leads to a liking for ads with positive pictures (e.g., Mitchell and Olson, 1981). However, for ads with only positive or only negative images, additional positive or negative images used as examples of the same product attribute/benefit should not create additional imagery that is more relevant. Research also demonstrates that when affective stimuli impact evaluations, decisions are sensitive to the type of affective stimuli (positive versus negative) but insensitive to the number of affective stimuli (Hsee and Rottenstreich, 2004). This implies that viewers evaluate advertisements with positive pictures more favourably than those with negative pictures, but additional pictures of similar valence have negligible effects on evaluations.

Two experiments test the predictions. Experiment 1 examines advertisements with both positive and negative images, while Experiment 2 investigates advertisements with univalenced images.

3. Experiment 1

3.1. Participants and design

150 undergraduate students participated for course credit. The three between-subject conditions were: 1 Positive-1 Negative (1 Pos-1 Neg), 3 Positives-1 Negative (3 Pos-1 Neg), and 1 Positive-3 Negatives (1 Pos-3 Neg).

3.2. Stimuli development

The experiment utilized 10 images (five positive and five negative). In a separate pre-test, 46 participants (participants from the same student population as those in this study) had rated the images on a scale from −5 (extremely negative) to +5 (extremely positive). The selected images were moderate in intensity (i.e., the positive pictures were all rated between +2 and +3 on the scale and the negative pictures were all rated between −2 and −3 on the scale). The five moderate positive images were: children leaving school (m = 2.54, sd = 1.46), man with pigeons (m = 2.37, sd = 1.58), man and woman at party (m = 2.41, sd = 1.33), woman dancing (m = 2.37, sd = 1.39), and woman holding champagne glass (m = 2.5, sd = 1.39). The five moderate negative images were: man pulling cart (m = −2.89, sd = 1.52), man leaning against wall (m = −2.17, sd = 1.34), little girl looking sad (m = −2.67, sd = 1.56), man holding head (m = −2.83, sd = 1.12), and child crying during game (m = −2.41, sd = 1.69).

The pictures were used in a print advertisement for a digital camera. The copy in the ad read, “For over 75 years, [Brand Name] has been the leading choice of photo-journalists. The images captured are high quality pictures). The advertisement was 8.5” × 11”, black and white, printed on plain white paper. Each picture was approximately 3” × 3”. As five different images were used for both categories of pictures (positive and negative), the 1 Pos-1 Neg condition employed all 25 possible
combinations of images. In the 3 Pos-1 Neg condition and the 1 Pos-3 Neg condition, all possible image combinations were used resulting in 50 unique ads for each of these conditions.

3.3. Procedure and dependent variables

Participants viewed the advertisement for thirty seconds and then completed a questionnaire with the dependent measures. The positive and negative affect scale was taken from Pham, Cohen, Pracejus, and Hughes (2001). The scale consisted of ten items anchored “1 (not at all)” and “7 (very strongly)”. The negative affect scale included the following six items: “I had unpleasant feelings viewing the ad”; “I was disgusted by the ad”; “I was fearful viewing the ad”; “The ad made me feel bad”; “The ad made me feel angry” and “The ad made me feel sad”, α = 0.88. The positive affect scale included the following four items: “The ad made me feel happy”; “The ad made me feel good”; “The ad made me feel joyful” and “I had pleasant feelings viewing the ad”, α = 0.88. Three items were used to measure attitude toward the ad (Aad), with seven-point rating scales for each item. The items were: likeable, favourable, and appealing, α = 0.89. The average responses to the items defining positive affect, negative affect, and attitude toward the ad determined overall scores for each construct.

3.4. Results

Table 1 presents the results of Experiment 1.

An analysis of variance (ANOVA) indicates that the experimental conditions differ in terms of positive affect, F (2, 147) = 14.90, p < .001. The 1 Pos-1 Neg condition is lower than the 3 Pos-1 Neg condition, t (98) = 2.20, p < .05 and higher than the 1 Pos-3 Neg condition, t (98) = 3.31, p < .01. The 3 Pos-1 Neg condition is higher than the 1 Pos-3 Neg condition, t (98) = 5.43, p < .001. The conditions also differ in terms of negative affect, F (2, 147) = 17.97, p < .001. The 1 Pos-1 Neg condition is higher than the 3 Pos-1 Neg condition, t (98) = 2.93, p < .01 and lower than the 1 Pos-3 Neg condition, t (98) = 3.06, p < .01. The 3 Pos-1 Neg condition is lower than the 1 Pos-3 Neg condition, t (98) = 5.98, p < .001. The conditions do not differ in terms of attitude toward the ad, F (2, 147) = 0.96, ns. The findings support the predictions.

4. Experiment 2

4.1. Participants and design

158 undergraduate students participated for course credit. The four between subject conditions were: Positive Single (1 Pos), Three Positives (3 Pos), Negative Single (1 Neg) and Three Negatives (3 Neg).

4.2. Stimuli development

The same type of print advertisement as utilized in the previous experiment was used. The difference was in the subset of images used.

Table 2 presents the results of Experiment 2.

An analysis of variance (ANOVA) indicates that the experimental conditions differ in terms of positive affect, F (3, 154) = 42.78, p < .001. However, the 1 Pos and the 3 Pos condition do not differ, t(76) = 1.15, ns. The 1 Neg and the 3 Neg condition also do not differ t(78) = 0.62, ns. The conditions differ in terms of negative affect, F (3, 154) = 38.08, p < .001. However, the 1 Neg and the 3 Neg condition do not differ, t (78) = 0.47, ns. The 1 Pos and the 3 Pos condition also do not differ t(76) = 0.21, ns. The conditions differ in terms of attitude toward the ad, F (3, 154) = 4.43, p < .01. However, the 1 Pos and the 3 Pos condition do not differ, t(76) = 0.90, ns. The 1 Neg and the 3 Neg conditions also do not differ, t(78) = 0.42, ns. The findings support the predictions.

5. Discussion

The results show that for advertisements with univalenced images, advertisers should select one image that has the requisite affective valence and intensity and provides a clear example of the benefit being advertised. When advertisements use oppositely valenced images a higher number of positive or negative pictures can generate greater affective response. However, in advertisements with oppositely valenced pictures one positive and one negative image should be adequate to provide information or produce liking unless the extra pictures depict additional product benefits. In terms of theoretical implications, the results imply that scope neglect occurs in univalence affect integration, however scope effects occur in oppositely valenced affect integration. This is due to the peak mechanism that drives univalence affect integration, while a compensatory mechanism drives oppositely valenced affect integration. The findings support the view that cognitive evaluations based on affective stimuli are insensitive to scope.

The results establish that more is not necessarily better for pictures in advertising. Rather any benefits of additional pictures depend on whether the advertisement uses univalenced or oppositely valenced pictures and on whether advertisers measure feeling responses or liking responses.

References


