Composing an Ad:

The Role of Image Cropping and Overlapping on the Effectiveness of Public Service Announcements

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Background

It is known that the viewer of a visual stimuli can be affected by such simple visual characteristics as image colour (Gao & Xin, 2006) or size (Codispoti, De Cesarei, 2007). However, the interconnection of various image elements is also important. For example, cognitive complexity of an image can affect observer's emotional reactions (Winkielman, Cacioppo, 2001; Reber, Schwarz, & Winkielman, 2004). Together with the fact (Kallgren, Reno, & Cialdini, 2000) that arousal can be an important factor in the effectiveness of appeals used in public service announcements (PSAs), this proposes that manipulating image composition to control image complexity can be one of the key means to increase the effectiveness of visual PSAs. Two common composition techniques that affect visual complexity are cropping and overlapping objects in an image. To test their role on PSA effectiveness a two-part laboratory experiment was conducted. It was hypothesized that ads based on more complex images will be more effective in changing audience's emotions and intentions.

EXPERIMENT 1

Aim

To evaluate the effects of cropping and overlapping objects in an image on perceived image complexity and evoked emotions.

Method

30 participants (mean age – 23.17 years, SD – 7.24)

70 images:

4 crop versions (total 36):

- non-cropped
- slightly cropped
- heavily cropped
- cropped over joints

3 overlap versions (total 24):

- non-overlapping
- slightly overlapping
- heavily overlapping

Measures:

- Emotional arousal rating (9-point scale: *Weak* - *Strong*)
- Emotional valence rating (9-point scale: *Unpleasant* - *Pleasant*)
- Image complexity rating (9-point scale: *Complicated* - *Simple*)
- Eye tracking

Main results

- Overlapping affects complexity ratings (but no emotion effects)
- Weak effects of cropping (even when cropped over joints)
- Image complexity correlates with emotional valence ($r_s = .612$)

EXPERIMENT 2

Aim

To assess the role of PSA image complexity on the effectiveness of PSA constructed from image and text appeal.

Method

30 different participants (mean age – 25 years, SD – 7.47)

71 PSAs (images from Experiment 1 + text):

2 crop versions (total 48):

- non-cropped
- heavily cropped

2 overlap versions (total 18):

- non-overlapping
- heavily overlapping

3 text appeals (presented in Lithuanian):

- Informational: “You have to take care of nature”
- Emotional: “You have to take care of nature, otherwise you and your children will suffer”
- Normative: “You have to take care of nature – more and more people agree with that”

Measures:

- Response to pro-environmental questions
- Behavioral reaction to real litter in the room
- Subjective rating of PSA effectiveness
- Memory test
- Eye tracking

Main results

- Participants declared intention to behave pro-environmentally (including “Yes” to question “Would you pick up trash?”)
- Only one participant picked up the litter from the ground
- Pro-environmental responses were quicker to complex ads
- However, simple ads were rated as more effective
- Visual characteristics were more memorized than text.

Conclusions

- Image composition (especially object overlap) can be used to manipulate the complexity of an ad;
- More complex images are related with more positive emotions evoked by that image;
- Visual complexity is related to the effectiveness of an ad (although the effects on PSA viewers' intentions and subjective ratings of said PSA effectiveness are opposite);
- Traditional design rules (such as avoiding cropping over joints) might not be effective for non-professional viewers;
- Intentions and the actual behaviour can drastically differ (image complexity affected intentions only);
- The link between ad complexity and the type of appeal was not demonstrated;
- Nevertheless, image composition is an important factor in the effectiveness of public service announcements

Recommendations for future research

- More robust eye-tracking measures are needed to have a better understanding of the role of image complexity on ad effectiveness (e.g. more complex images could increase effectiveness by directing observer to rely more on text, instead of emotional mechanisms);
- More specific memory task could be useful in determining the role of visual complexity on memory.

References

- Codispoti, M., & De Cesarei, A. (2007). Arousal and attention: Picture size and emotional reactions. *Psychophysiology*, 44, 680-686.
- Gao, X. P., & Xin, J. H. (2006). Investigation of human's emotional responses on colors. *Color Research and Application*, 31, 411-417.
- Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and Social Psychology Bulletin*, 26(8), 1002-1012.
- Reber, R., Schwarz, N. & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*, 8(4), 364-382.
- Winkielman, P. & Cacioppo, J. T. (2001). Mind at ease puts a smile on the face: Psychophysiological evidence that processing facilitation elicits positive affect. *Journal of Personality and Social Psychology*, 81(6), 989-1000.

This research was funded by a grant (No. S-MIP-17-134) from the Research Council of Lithuania.