Effects of Unity of Form on Visual Aesthetics of Website Design

Ahamed Altaboli and Yingzi Lin

Abstract
Unity of form represents the extent to which visual objects on the screen are related in size. High levels of unity of form can be achieved by using objects with similar sizes on the screen and/or by reducing numbers of objects on the screen. Findings of earlier observational studies suggested that unity of form has significant effects on perceived visual aesthetics of website design in the case of highly symmetrical designs. The purpose of this study is to verify these findings. This study was conducted to systematically test effects of number of objects and number of different sizes of objects on perceived visual aesthetics of website design under the condition of high level of symmetry. Results showed that both factors have significant effects on perceived visual aesthetics. Designs with less number of objects and less number of sizes induced higher levels of perceived visual aesthetics.

Method
A two-factor within subject design was utilized with the two parameters as the main factors. Each of the two factors was tested at two levels (high and low). Four different designs of a webpage were prepared to represent the four experimental conditions. All four designs have identical styles (colors, fonts, etc); only visual elements related to the two factors were manipulated. Symmetry in all the four designs was kept at higher levels.

User perception of visual aesthetics was measured using the VisAWI (Visual Aesthetics of Website Inventory) questionnaire (Moshagen and Thielisch, 2010). The instrument is based on four interrelated facets of perceived visual aesthetics of websites: simplicity, diversity, colorfulness, and craftsmanship. Responses were gathered on-line from 25 participants (Average age 41.5 years, standard deviation 16.4 years, 13 males and 12 females).

Results and Conclusions
Analysis of results showed that both factors (number of objects and number of different sizes) have statistically significant effects on perceived visual aesthetics. Designs with lower levels of both factors were perceived as having better visual aesthetics. However, these effects weren’t consistent over all the four parts of the questionnaire (representing the facets of visual aesthetics). The effect of number of objects was only significant on the simplicity facet and on the overall perceived aesthetics (total questionnaire score of all facets). Effect of number of different sizes was only significant on the craftsmanship facet, only at the higher level of number of objects. The next step should be to repeat the experiment in the case of designs with low levels of symmetry. This step would be necessary to completely confirm the results.

Selected References


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Effect of number of objects on perceived visual aesthetics of website design

Effect of number of different sizes on perceived visual aesthetics of website design

Summary of average scores

Screen shot of the four designs of the webpage

Analysis of Variance Results

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<th>F</th>
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No of different sizes = (low)
No of objects = (low)
No of different sizes = (high)
No of objects = (high)

1.66 9.96 0.38 9.96
1.98 3.73 0.38 0.196
1.98 3.65 0.38 0.196
1.98 3.73 0.38 0.196