

Web-Experiment on colour harmony principles applied to computer user interface design

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Using the World Wide Web as a research instrument for the psychological investigation in the field of human computer interface design involves positive as well as negative implications. If one is interested in the colour aspect of interface design the lack of control concerning the particular testing conditions may be judged as a severe problem as carefully controlled lighting conditions etc. are usually regarded as essential in colour research. But yet the WWW can be very useful as it offers an access to variety of subjects, computers, operating systems etc., and this variety could be used as a very appropriate sample of conditions that a user interface is 'confronted' with in 'real life'.

Two experiments were conducted to test a hypothesis concerning the aesthetics of colour combinations that was deduced from Martindales (1984) 'theory of cognitive hedonics'. Another question to be answered was how similar the aesthetic ratings of colour combinations are if they are presented in a simple formal shape (pattern of rectangles, experiment 1) and in the form of a screen mask (Experiment 2), respectively. If they corresponded designers could easily apply findings of the research on colour harmony conducted with simple patterns to practical interface design jobs. The data were collected under relatively controlled conditions in the laboratory, and in addition as a WWW experiment.

Results of the ANOVA for repeated measures indicate that similar colours make relatively pleasant colour combinations, regardless whether presented in a simple shape or as a coloured screen mask. The correspondence between the aesthetic judgements for the simple pattern and the complex screenshot is satisfactory. There are some significant main effects and interactions due to the origin of the data, WWW or laboratory. But as the overall patterns of data from the Web and the lab are quite similar, these effects should be interpreted as being caused by the variation of 'real life' conditions and definitely not discourage researchers to use the WWW for investigating colour design questions.

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