Color, Form, and Emotion in Judgments of Preference and Harmony

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Background: The Influence of Color and Form on Preference

Aesthetic judgments are influenced by both form and color

Dominance Order: 1) Ground color, 2) Figure color, 3) Form

$$\text{Pleasantness} = f\left(\frac{w_f * \text{form} + w_{gc} * \text{gcolor} + w_{fc} * \text{fcolor}}{w_f + w_{gc} + w_{fc}}\right)$$

(Lazreg and Mullet, 2000)

When shown two figure-ground configurations with the same colors in opposite spatial arrangement people preferred the display in which the bluer region was larger.

(Nothelfer, Schloss, & Palmer, VSS 2009)

Research Questions

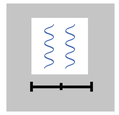
How do shapes and colors of lines influence preference and/or harmony judgments?

Does emotional content of the colors of lines influence preference and/or harmony judgments?

General Methods

Line-Mark Rating Tasks

Experiment 1:
Preference
Harmony



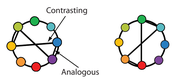
Line Pairs

Lines on Ground

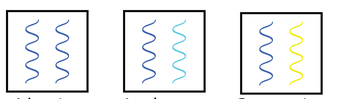
Experiment 2:
Preference
Harmony
Emotional Fit
Emotion

Experiment 1: Color and Form in Judgments of Preference and Harmony

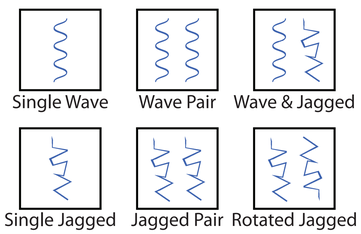
Eight Saturated Hues from the BCP-37:



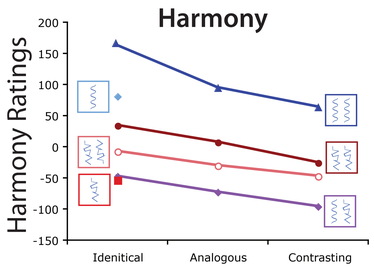
Three Types of Color Combination

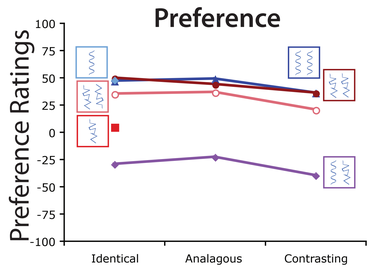


Six Types of Line Display



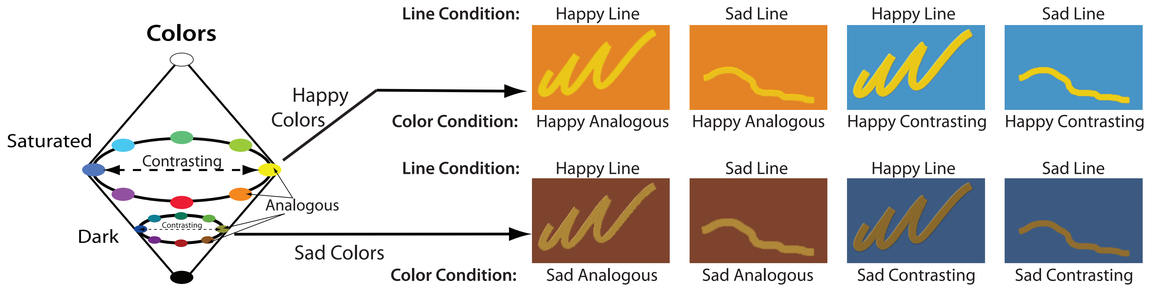
Results



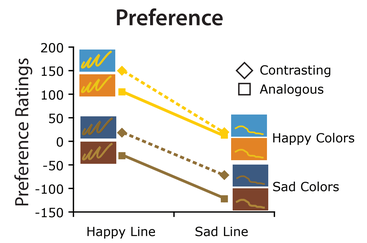


54% of the variance in preference ratings is explained by:
1) Harmony ratings (49%): more harmony → higher preference
2) Average preference for line colors (5%):
more preferred colors → higher preference

Experiment 2: Color, Form, and Emotion in Figure-Ground Combinations

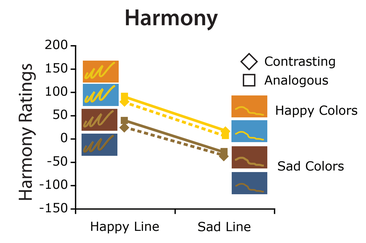


Results



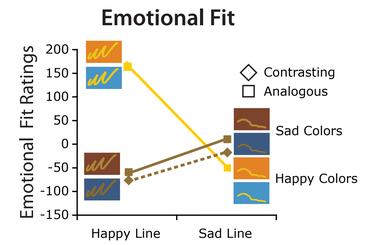
Happy lines and colors > sad lines and colors (p<.001)

Contrasting colors > analogous colors (p<.001)



Happy lines and colors > sad lines and colors (p<.001)

No effect of color similarity



Happy lines and colors > sad lines and colors (p<.001)

Emotional Fit: Happy lines fit better with happy colors and Sad lines fit better with sad colors (p<.001)

Conclusions

For all line types, harmony ratings increased as a function of hue similarity, consistent with Schloss and Palmer (2007): harmony for figure-ground pairs is driven by hue similarity.

For figure-ground combinations, people preferred happy color combinations and happy line displays, which were judged to be more harmonious than sad color/line displays.

References and Acknowledgements

Lazreg, C.K., Mullet, E. (2001). Judging the Pleasantness of Color Form Combinations. *The American Journal of Psychology, vol 114 (4)*, 511-533.

Nothelfer, C.E., Schloss, K.B., and Palmer, S.E. "The Role of Spatial Composition in Preference for Color Pairs." Presented at 9th Annual Meeting of Vision Science Society, Naples, FL, May 2009.

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