



Cross-Cultural Studies Of Color Preferences: US, Japan, and Mexico

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Background

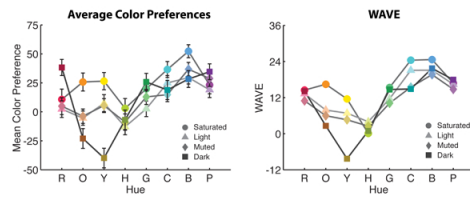
Ecological Valence Theory (EVT):

Preference for a given color is largely determined by peoples' affective response (positive/negative) to all of the objects/entities that they associate with that color.

Weighted Affective Valence Estimate (WAVE) of a color:

The average of the affective valence ratings of all objects associated with the color, weighted by the similarity of that color to the color of each associated object.

The WAVEs explain 80% of the variance in average color preferences



Palmer and Schloss (2010)

Implication of the EVT:

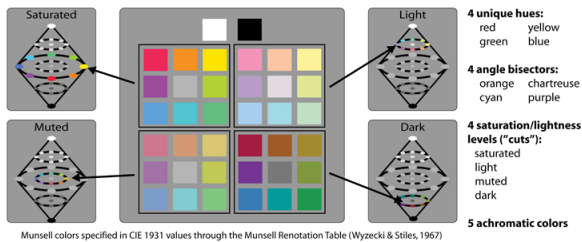
The WAVEs produced by a given culture should predict that culture's color preferences better than the WAVEs produced by a different culture.

Research Question:

Do WAVEs obtained from US, Japanese, and Mexican, participants predict their own color preferences better than WAVEs obtained a different culture do?

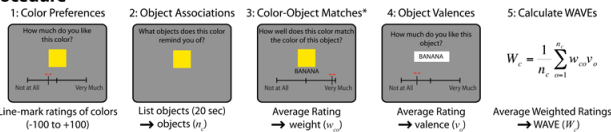
General Methods

Berkeley Color Project (BCP) 37 Colors



Munsell colors specified in CIE 1931 values through the Munsell Renotation Table (Wyzecki & Stiles, 1967)

Procedure

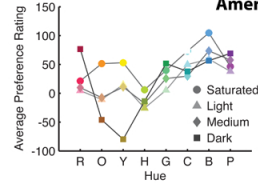


$$W_e = \frac{1}{H_e} \sum_{i=1}^n W_{e_i} V_{e_i}$$

*These data are not yet available from Japan and Mexico. The weights (w_{e_i}) for these data sets were estimated from the log frequency with which objects were mentioned for each of the 32 colors.

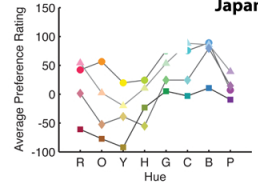
Cross-Cultural Differences in Color Preferences

American Color Preferences



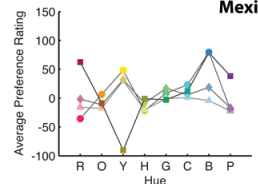
- Americans prefer cool over warm hues
- dislike dark orange (brown) and dark yellow (olive)
- prefer highly saturated colors to both light and muted colors (Palmer & Schloss, 2010)

Japanese Color Preferences



- Japanese prefer cool over warm hues
- dislike dark orange (brown), dark yellow (olive), and dark red
- like light colors (pastels) more and dark colors less than Americans do (Fushikida, Schloss, Yokosawa, & Palmer, VSS-09)

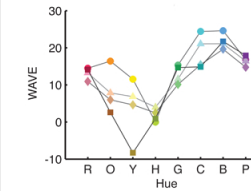
Mexican Color Preferences



- Mexicans show no preference for cool over warm hues
- dislike dark yellow (olive) but not dark orange (brown)
- like both light & saturated colors less than Americans and Japanese do

Cross-Cultural Differences in WAVEs

American WAVEs



Color Preferences

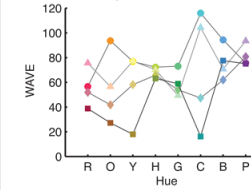
	US	Japan	Mexico
US	.89	.74	.55
Japan	.55	.66	.30
Mexico	??	??	??

American WAVEs predict American preferences better than Japanese or Mexican preferences.

Similarly, Japanese WAVEs* predict Japanese color preferences better than American preferences or Mexican preferences.

* Using log frequency as weights.

Japanese WAVEs



Conclusions and Future Directions

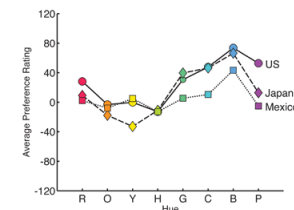
As predicted by the Ecological Valence Theory, WAVEs produced by participants in a given culture predict color preferences within the same culture better than they predict color preferences from a different culture.

Future Directions:

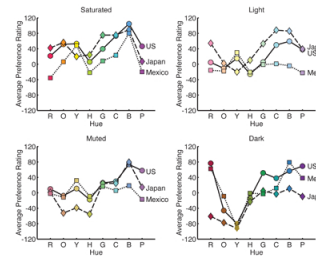
- Complete measurement of WAVEs in Japan and Mexico.
- Collect color preferences and WAVEs in India, Serbia, and elsewhere.
- Investigate influences of color symbolism on cross-cultural differences.

Cross-Cultural Differences by Hue and Cut

Comparing Hue Preferences (Averaged across Cut)



Comparing Hue Preferences (Separated by Cut)



References and Acknowledgments

- Fushikida, W., Schloss, K. B., Yokosawa, K., & Palmer, S. E. (2009). "Cross-Cultural Differences in Color Preference: Japan vs. the USA." *The 9th annual meeting of The Vision Sciences Society*. Naples, FL.
- Palmer, S. E. & Schloss, K. B. (2010). An ecological valence theory of human color preference. *Proceedings of the National Academy of Sciences*.
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