

A study on semantic space of color

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Unfolding methods to analyze semantic space were introduced and applied to color symbolism data. One of the unfolding methods uses the criterion of the fourth quantification method by Hayashi, and the other a penalty function. Color symbolism data were collected individually from subjects, who sat in front of a CRT display and were shown stimulus pairs to be rated one by one. The experiment consisted of two sessions, session 1, where color-word pairs were presented, and session 2, where color-color pairs presented. Subjects rated fitness of color for a word of color-word pairs and similarity of colors of color-color pairs. Unfolding analysis of the data from session 1, using the penalty function, produced successful configuration of colors and words. Color configuration formed a circle, like one in color science, and words configuration was reasonable. Modified Spearman rank correlation coefficient of the data and the distances estimated by the model was perfect. Applicability of unfolding methods to individual differences in preference was also noted.