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Color Language Does Not Affect Chromatic Thresholds

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Abstract: Speakers of languages that differ in their color vocabulary perform differently on a range of supra-threshold categorization tasks and these variations are predicted by their respective color vocabulary. Here we compare two language groups (English and Herero) who have different color vocabularies for the green-blue region of color space. Discrimination thresholds were compared for English and Herero color boundaries using a perceptual task that was unlikely to involve the activation of verbal codes. This enabled an assessment of whether color perception is modulated by color language, rather than color language merely having an online influence on performance, as shown by supra-threshold tasks. The pattern of discrimination thresholds was the same for English and Herero speakers. Discrimination thresholds were not consistent across test points but there was no evidence of lowered discrimination at either the English or Herero boundary. These findings suggest that color language does not affect chromatic thresholds.