

Identifying the Color of Taste: The Semantic Mapping of Sensory Relationships

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INTRODUCTION: Sensory processing and representation is a prominent point of study in psycholinguistics. Ullmann (1957), one of the first to study cross-sensory relationships, suggests that color cannot describe a sense as distant from it as taste; however, color terms often create interesting and novel exceptions to rules in English based on their specific properties (Petersen et al., 2007).

PURPOSE: The purpose of this study is to examine why some constructions seemingly violate our most basic understanding of sensory experience. Further, this project hopes to inform the long-debated inquiry about color word typology.

METHODS: Researchers recruited WSU undergraduates (N = 116) to respond to a Qualtrics survey. Task 1 assessed accessibility of color-taste constructions. Task 2 randomly blocked participants into study A (N = 52) and study B (N = 64). After examining visual stimuli – a picture of candy labelled with a flavor referent (cherry, blueberry, melon) and filled in with a color (red, green, blue) – participants were asked to determine which had the red, green, or blue taste, if any. The flavor referent's color matched the candy's color in study A (red cherry candy) but not in study B (blue cherry candy).

RESULTS: Researchers hypothesized that color-taste constructions would be highly accessible and if participants chose a color to describe a taste at all for something they could not taste, it would match the flavor referent. The data support these claims and suggest a stronger fit to a mental frame of a referent means a stronger correlation; for a blue cherry candy (study B), participants were most likely to identify it as a red taste but even more likely for a red cherry candy (study A).

CONCLUSION: This study gives critical insight to the way that we understand the human sensory experience and the way it is mentally constructed. It also gives new understanding to the way that we understand English adjectives and ways to make language more universal to those with sensory differences.