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[Title]

Non-random association between sound and color- Insight from multi-lingual grapheme-color synesthetes and non-synesthetes

[Author(s)]

Chai-youn Kim<sup>1</sup>, Mi-jeong Kang<sup>1</sup>, Ye-seul Kim<sup>1</sup>, Hyun-woong Kim<sup>1</sup>

[Affiliation(s)]

<sup>1</sup>Korea University

Individuals with grapheme-color synesthesia experience "colors" when viewing achromatic letters and digits. Despite the large individual difference in synesthetic association between inducing graphemes and induced colors, graphemes sharing a certain perceptual or linguistic feature tend to be associated with similar synesthetic color. This talk is about a series of studies suggesting the importance of sound determining synesthetic color. The first study with a cross-linguistic approach shows that graphemes with similar sounds tend to induce analogous synesthetic colors. The second study examines whether graphemes within a same phonetic category across Korean hangul, Japanese hiragana and katakana as well as Latin alphabets tend to induce similar synesthetic colors. The last study further explores whether phonetic properties are associated with colors in a specific manner with other visual and linguistic features of graphemes removed. These results imply non-random association between sound and color not only in synesthesia but also in more general context.