

## New research shows consistency in synaesthetic experiences

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A quirky psychological phenomenon known as "grapheme-color synaesthesia" describes individuals who experience vivid colors whenever they see, hear, or think of ordinary letters and digits. A hallmark of synaesthesia is that individuals seem to be idiosyncratic in their experiences. That is, most synesthaetes will consistently see the same colors accompanied with specific graphemes, but few of these experiences appear to be shared with other synesthetes.

But new research appearing in the April issue of *Psychological Science*, a journal of the Association for Psychological Science, adds to a growing body of evidence suggesting that commonalities do indeed exists across synesthetes. I

n their own study of 70 synesthetes, and a reanalysis of 19 more in previously published data, psychologists Julia Simner, of the University of Edinburgh and Jamie Ward of the University of Sussex have found that synesthetes share certain grapheme-color combinations (for example, the letter 'a' is frequently associated with seeing the color red).

Interestingly, they found that the particular pairings are determined by how frequently graphemes and the colour terms are used is used in language: common letters (e.g., "a") pair with common colour terms (e.g., 'red') and uncommon letters (e.g., 'v') pair with uncommon colour terms (e.g., 'purple'). This shows that perceptual synaesthetic experiences are influenced by environmental learning.



They then made an interesting discovery about all people. Colleagues had reported that that the frequency of graphemes influenced the saturation of the colour, but Simner and Ward discovered the root of this effect: that colors we speak about most often (i.e., those with the highest linguistic frequency) are the least saturated (e.g., black, white).

Although these findings may help explain common features of synaesthesia, the precise relationship remains unclear, according to the authors. However, the current study aligns with past research suggesting "that different measures of such associations converge to illustrate a nonarbitrary relationship for all people between color names and color space."

Source: Association for Psychological Science

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