

New Research From Psychological Science

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Read about the latest research published in *Psychological Science*:

[Preregistered Replication of “Affective Flexibility: Evaluative Processing Goals Shape Amygdala Activity”](#)

Daniel S. Lumian and Kateri McRae

In a 2008 study published in *Psychological Science*, Cunningham, Van Bavel, and Johnsen found that the amygdala flexibly processes motivationally relevant evaluative information in accordance with current processing goals. Lumian and McRae conducted a preregistered replication of this study following, as closely as possible, the methods of the original study. Twenty-four participants rated the names of famous individuals in three different conditions while being scanned in an fMRI: In the overall-attitude condition, participants considered both positive and negative associations they had for each name before rating it; in the positive condition, participants were asked to focus on positive associations and ignore negative ones; and in the negative condition, participants were asked to focus on negative associations and ignore positive associations. After completing the fMRI portions, participants were asked to indicate whether they recognized each name and to rate each name for positivity, negativity, and emotionality. The authors replicated the results of the original study, adding evidence to the position that cognitive framing can alter whether the amygdala indexes positivity or negativity.

[Genomic Imprinting Is Implicated in the Psychology of Music](#)

Samuel A. Mehr, Jennifer Kotler, Rhea M. Howard, David Haig, and Max M. Krasnow

Theories of gene imprinting suggest that maternal genes are expressed in ways that minimize demands for maternal investment, whereas paternal genes are expressed in ways that maximize demands for maternal investment. In Prader-Willi syndrome (PWS), the paternally inherited genes from chromosome 15q11-q13 are unexpressed. Theories of gene imprinting suggest that this type of gene expression should

result in an exaggeration of traits that reduce maternal investment. Child-directed song has been proposed to be an indication of maternal attentional investment; consequently, those with PWS may respond to such stimuli in a nontypical way. To study whether PWS is associated with a distinctive musical phenotype, the researchers examined the psychological (heart rate) and behavioral (movement) responses of adults and children with and without PWS to singing. Participants were also assessed for pitch-discrimination ability. Compared with typically developing adults, participants with PWS moved more and had greater reductions in heart rate in response to music, and they had worse pitch-discrimination ability. These results suggest that those with PWS do have a distinctive response to music, characterized by a greater responsivity than their typically developing counterparts

[Representing Color Ensembles](#)

Andrey Chetverikov, Gianluca Campana, and Árni Kristjánsson

Research examining how color is represented in the brain often focuses on people's perception of uniformly colored patches or their perception of only a few colors. Less research has examined how the visual system represents color ensembles. Participants completed an "odd-one-out" visual search, in which they viewed a grid-like arrangement of 36 diamonds, each with one corner cut off. Participants were instructed to find the diamond with a hue least like the others and indicate which corner of that diamond had been removed. The colors of distractor shapes in the display were taken from uniform or Gaussian color distributions. On learning trials, distractor colors were randomly drawn from a specific color distribution range. On test trials, the target color was of various distances from the mean color of the distractors in the previous trial. Analysis of participants' performance on this task indicated a similarity between the physical distribution of colors in the display and their internal representations. This suggests that color ensembles are represented in a more complex way than previously thought and that coding takes into account the mean, the variance, and the shape of the distribution of colors in the environment.