New Research From Psychological Science

February 28, 2014

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

Far-Out Thinking: Generating Solutions to Distant Analogies Promotes Relational Thinking

Michael S. Vendetti, Aaron Wu, and Keith J. Holyoak

The authors examined whether inducing a general mindset using a verbal-analogy task would promote more abstract thinking on a subsequent unrelated reasoning task. Participants solved analogies with near or far semantic relations, either by indicating whether the analogy was valid or invalid or by generating a valid completion for an incomplete analogy. Participants then completed a picture-mapping task that used unrelated materials. The researchers found that generating a solution for distant analogies — rather than merely evaluating their validity — promoted abstract thinking on the picture-mapping task. This indicates that generating solutions to semantically distant analogies can enhance relational thinking on other unrelated tasks.

Nonaccidental Properties Underlie Human Categorization of Complex Natural Scenes

Dirk B. Walther and Dandan Shen

How are people able to categorize natural scenes so quickly and accurately? The authors compared computational scene categorization and human scene categorization of images that had been assessed for contour (length, orientation, and curvature) and junction (type and angle) properties. They found that junction type, junction angle, and contour curvature were most important for scene categorization. When junction and contour curvature information were distorted in images, participants relied on contour length and orientation to categorize them. This indicates that although contour length and contour orientation are useful for scene categorization, they are less important for categorization than contour curvature and junction properties.

A Visual-Familiarity Account of Evidence for Orthographic Processing in Baboons (Papio papio)

John R. Vokey and Randall K. Jamieson

In 2012, Grainger, Dufau, Montant, Ziegler, and Fagot presented evidence suggesting that baboons could discriminate words from nonwords and that this discrimination was accomplished through orthographic processing. In a response, Bains argued that the baboons could have simply discriminated words from nonwords by recognizing single letters in specific positions. In the current study, Vokey and Jamieson applied a neural-network model of memory to findings from Grainger's group and discovered that the behavior of the baboons could be explained equally well by familiarity-based visual discrimination or by orthographic processing.