New Research From Psychological Science

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

Neural Discriminability of Object Features Predicts Perceptual Organization

Emily J. Ward and Marvin M. Chun

In this study, participants viewed objects that varied in color, shape, and orientation while undergoing functional magnetic resonance imaging (fMRI). Participants then performed a perceptual grouping task outside of the scanner, using the same objects as in the fMRI task. The researchers found that activity patterns in the lateral occipital cortex — an area of the brain involved in high-level vision — discriminated between the different object features. The distinctness of the neural representation for each feature was related to the grouping for that feature in the behavioral perceptual-grouping task, indicating that variations in neural feature representations can be used to predict perceptual organization.

Print-Speech Convergence Predicts Future Reading Outcomes in Early Readers

Jonathan L. Preston, Peter J. Molfese, Stephen J. Frost, W. Einar Mencl, Robert K. Fulbright, Fumiko Hoeft, Nicole Landi, Donald Shankweiler, and Kenneth R. Pugh

The ability to process spoken language serves as a scaffold on which children can learn to process written language. In this study, the authors examined whether convergent activation for print and speech in areas of the brain involved in printed-language processing predict later reading achievement. Children between the ages of 6 and 10 were assessed for reading skill and they performed a picture-identification task while fMRI data were collected. Two years later, children were again assessed for reading skills. The researchers found that patterns of activation in the bilateral inferior frontal gyrus (IFG) — an area of the brain involved in phonological coding for speech and print — predicted reading achievement. More coactivation in the left IFG predicted better reading achievement and greater coactivation in the right IFG predicted poorer reading achievement.