

New Research From Psychological Science

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

[Orthographic Coding in Illiterates and Literates](#)

Jon Andoni Duñabeitia, Karla Orihuela, and Manuel Carreiras

Does literacy shape the way letter strings are visually processed? Literate and illiterate adults performed perceptual matching tasks in which they indicated whether a target string of symbols was the same or different from a previously presented reference string of symbols. “Different” character strings were created by changing the position of characters (transposed-characters condition) or by replacing one character in the string with a new character (replaced-characters condition). Unlike the illiterate participants, the literate participants made more errors in the transposed-characters condition than in the replaced-characters condition. This finding suggests that illiterate individuals are not sensitive to changes in characters’ within-string position and identity and that these skills may emerge during literacy acquisition.

[A Developmental Pathway From Early Life Stress to Inflammation: The Role of Negative Health Behaviors](#)

Elizabeth B. Raposa, Julianne E. Bower, Constance L. Hammen, Jake M. Najman, and Patricia A. Brennan

It has been hypothesized that stress negatively affects physical health by increasing chronic inflammatory responses; however, the role of health behaviors in this relationship has been largely ignored. In a longitudinal study, mothers completed measures of their children’s early environment several times during the first 5 years of their child’s life. The children themselves completed assessments of their own health behaviors between ages 20 and 21, and provided a blood sample between the ages of 22 and 25. The researchers found that early chronic stress predicted increased BMI and smoking in young adulthood, which in turn predicted greater levels of inflammation. These findings highlight the important role of health behaviors in the relationship between early stress and later inflammation.

[When Cognitive Control Is Not Adaptive](#)

Bruno R. Bocanegra and Bernhard Hommel

Cognitive control is known to be adaptive in unpredictable environments, but is it also adaptive in highly structured, predictable environments? Participants performed two tasks in which they classified stimuli on the basis of perceptual features. One task required high levels of top-down cognitive control (control

task) and the other did not (automatic task). Unbeknownst to participants, an additional perceptual feature not directly used in the classification task predicted the correct response in one condition of the tasks (predictive condition) but not in the other (baseline condition). Performance in the predictive condition was better than performance in the baseline condition only for the automatic task. This indicates that cognitive control can hinder automatic integration of information in predictive environments.

[A Perceptually Completed Whole Is Less Than the Sum of Its Parts](#)

Jason M. Gold

In this study, the author examined how efficiently people integrate image fragments that result when objects are partially occluded. Participants completed a series of discrimination tasks (bent-bar task, rotating-squares task, and shrinking/expanding-squares task) in which the objects appeared as either perceptually complete or disconnected fragments. In addition, the elements of each stimulus were presented in isolation or were combined. Integration efficiency for the perceptually complete versions of the stimuli was found to be worse than integration efficiency for fragmented versions of the stimuli. This finding indicates that visual completion does not promote superior integration efficiency.