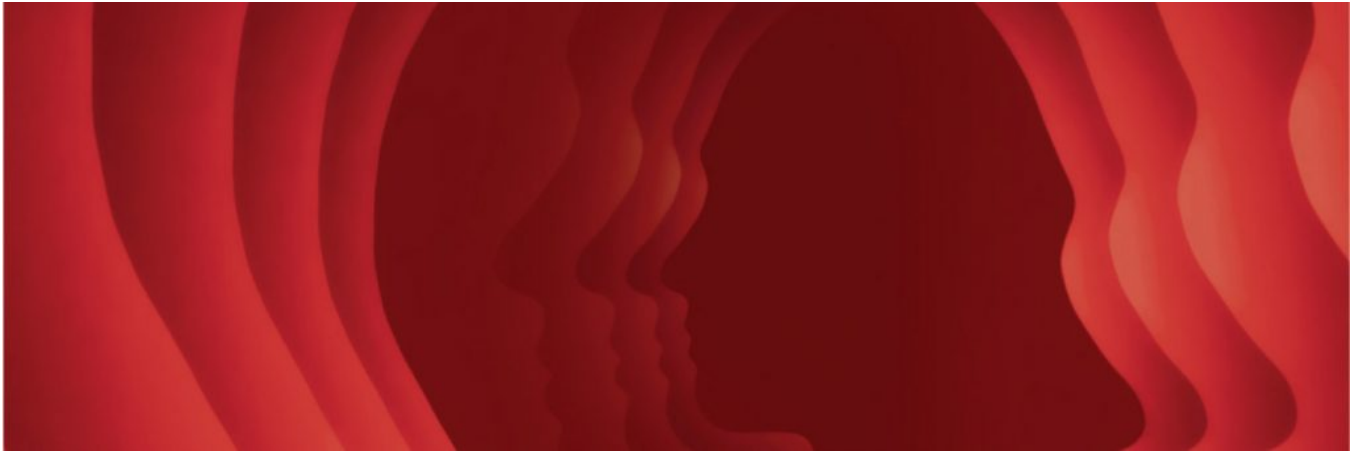


New Research From Psychological Science

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

[Eye-Movement Evidence for Object-Based Attention in Chinese Reading](#)

Yangping Liu and Erik D. Reichle

A central question in reading research is how attention and lexical processing guide our eyes during reading: Do we allocate attention to only one word or to multiple words at any given time? In two experiments, the authors tested the hypothesis that we attend to words in a serial manner. Native Chinese speakers participated in a lexical decision task – an experimental approach in which people quickly identify stimuli as words or nonwords. In analyzing their results, the authors examined four standard eye-movement measures: first-fixation duration, gaze duration, total viewing time, and fixation position (the location of the initial fixations on target words). Results showed that the speed and accuracy of participants' lexical decisions were influenced only by the frequency of the target word and not by a distractor word. The findings also showed that fixation times and positions during sentence reading were modulated only by target-word frequencies. Together, the results support the hypothesis that people attend to words in a strictly serial manner during reading.

[Human Information Processing Shapes Language Change](#)

Maryia Fedzechkina, Becky Chu, and T. Florian Jaeger

Human languages vary along many dimensions but share some basic similarities. The preferred order of words in sentences differs across languages, but researchers have long hypothesized that limitations in human information processing influence those preferences. This study explores the hypothesized human preference for shorter grammatical dependencies-asymmetric relations between the head (a word that licenses the presence of other words in the sentence) and a dependent (a word that modifies the head).

Monolingual native English speakers learned two miniature artificial languages in three 1-hour sessions. Both languages had flexible word order in sentence structure. When asked to describe events depicted in a video, participants tended to use whichever word order would result in shorter dependencies in the artificial language they had learned. The results provide direct evidence that the cross-linguistic preference for short dependencies originates from the constraints in human information processing.

[Graspable Objects Grab Attention More Than Images Do](#)

Michael A. Gomez, Rafal M. Skiba, Jacqueline C. Snow

The opportunities that objects present that allow us to act on them, called affordances, are thought to focus attention in specific ways. Previous research has primarily examined the cognitive effects of affordances using 2D images, but the authors hypothesized that actual 3D objects may exert a stronger competitive influence on both attentional processes and behavioral responses. In four experiments, participants completed a flanker task in which they saw a series of three spoons. Spoon-handle orientation varied across trials; on each trial, participants reported whether the middle spoon's orientation was congruent or incongruent with that of the top and bottom spoons. Participants responded faster to 2D and 3D images of spoons than they did to 3D displays of actual spoons; additional analyses indicated that the 3D objects elicited greater attentional interference. There was no evidence of increased interference when the 3D objects were not graspable, because they were too far away or behind a transparent barrier. The authors conclude that real objects lead to relatively greater interference because of the affordances they offer; as a result, images may not be appropriate proxies for real objects in psychological research.