New Research from *Psychological Science*

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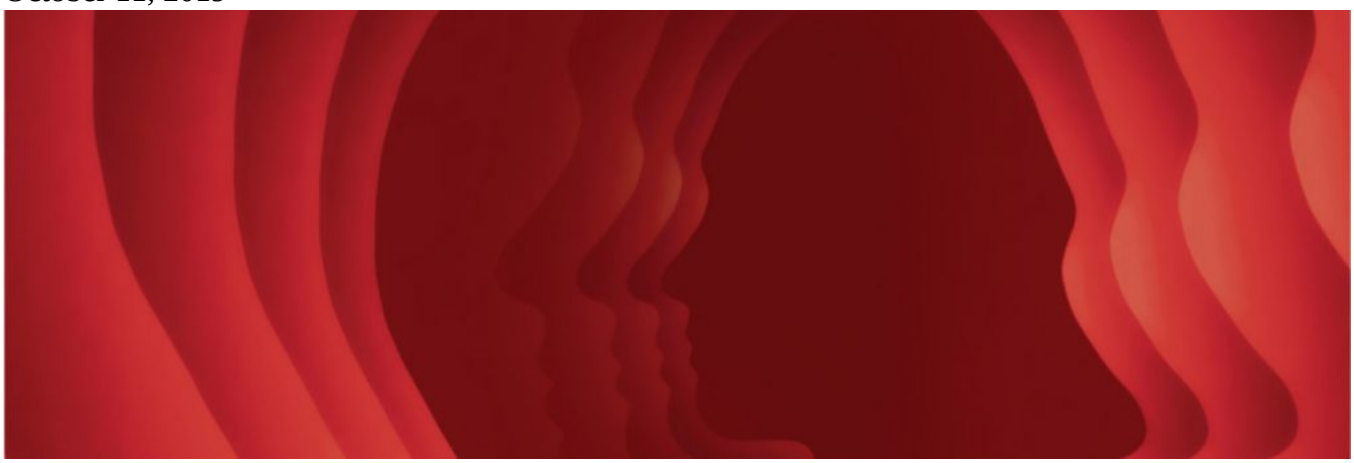

Read about the latest research published in *Psychological Science*.

Remapping Peripersonal Space by Using Foot-Sole VibrationsWithout Any Body Movement
Tomohiro Amemiya, YasushiIkei, and Michiteru Kitazaki

Can the mere sensation of walking even when one is not actually moving expand the spatial boundaries of an individual's representation of the space immediately surrounding his or her body (peripersonal space)? To investigate this possibility, researchers attached vibrating devices to participants' heels and chests and then delivered a walking-sound vibration, an asynchronous walking-sound vibration, or a non-walking-sound vibration to their heels. At the same time, participants pressed a button as quickly as they could whenever they felt a vibration on their chest. While performing this task, participants listened to white noise or to a looming sound that occurred in conjunction with the chest vibration and could be perceived at four different distances from the body (0.4 m, 0.8 m, 1.2 m, or 1.6 m). Participants responded more quickly to the chest vibration when the looming sound was 0.4 m away than when they heard white noise, except when they experienced asynchronous walking-sound vibrations. When the looming sound was farther away from the body, up to 1.2 m, only the walking-sound vibration facilitated the response to the chest vibration. In contrast, the non-walking sound vibration facilitated the response to the chest vibration only when the looming sound was 0.4 m away from the body. In another experiment, walking-sound vibrations applied to the forearms did not create the same facilitation effect. These results suggest that one's peripersonal space can be extended by simulating the sensation of walking. Amemiya and colleagues propose that the sensation of walking might automatically drive a motor program for walking, which in turn leads to a change in spatial cognition around the body.

Visual Search May Not Require Target Representation in Working Memory or Long-Term Memory
Zhi Li, Keyun Xin, Jiafei Lou, and Zeyu Li

This research suggests that when a visual target is presented alongside a search set, people might

compare each searched item with the presented target rather than with a working memory representation of that target (i.e., they perform *target reidentification*). Participants searched for a target letter in a visual array of letters. Some targets were presented only before the search array, some appeared at the same time as the search array and remained on the screen during the search, and some appeared before the search array but remained on screen. As the number of items in the array increased, the time participants took to identify the target did as well. However, whenever the target remained on screen, this time increase was even larger, and the search time per item increased from about 30 ms to 65 ms, suggesting that participants inspected two letters instead of one. Li and colleagues suggest that these findings support the idea of target reidentification. Two more experiments provided further support for this hypothesis. In the first, presenting the target mirror reversed or tilted increased search time when the target was present during the search but not when it was absent. In the second, the complexity of the search array did not influence search time when the target was present but increased it when it was absent. Li et al. also suggest that target reidentification might result in more search time but eliminate the time needed to consolidate the target in working memory.