New Research From Psychological Science

August 05, 2011

**Who Took the “x” Out of Expectancy-Value Theory? A Psychological Mystery, a Substantive-Methodological Synergy, and a Cross-National Generalization**

*Benjamin Nagengast, Herbert W. Marsh, L. Francesca Scallas, Man Xu, Kit-Tai Hau, and Ulrich Trautwein*

The dominant theory used for predicting human motivation is expectancy-value theory (EVT), in which people respond to novel information by forming beliefs, assigning values based on the beliefs, and creating an expectation based on those beliefs and values. In a cross-national study of 57 countries, researchers examined Expectancy × Value interactions by asking 15-year-olds about how they perceived their competency in science subjects at school (e.g., whether the subjects were easy or hard). The results showed that the interaction between science self-concept (expectation) and enjoyment of science (value) had a positive effect on participation in science as well as pursuit of science careers, which supports the predictions generated by EVT.

**Cross-Modal Training Induces Changes in Spatial Representations Early in the Auditory Processing Pathway**

*Patrick Bruns, Ronja Liebnau, and Brigett Röder*

People tend to use their vision to organize the spatial location of sounds, and when there is a disparity between visual and auditory stimuli, the brain will adjust. To examine the brain signals behind the adjustment process, volunteers received training with visual and auditory stimuli that had a 15° spatial disparity. After training, volunteers were asked to report the location of an auditory stimulus while researchers recorded event-related potentials (ERPs) using EEG. A shift in sound localization toward the visual stimulus was observed, and this shift was correlated with a modulation of auditory ERPs around 100 ms after the stimulus.