

# New Research from *Psychological Science*

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## [The Sign Effect in Past and Future Discounting](#)

*Sarah Molouki, David J. Hardisty, and Eugene M. Caruso*



To evaluate to what extent people discount positive and negative events in the future and the past (i.e., the event loses its positive or negative value to the person), Molouki and colleagues conducted six experiments. Participants imagined gaining or losing money and chose whether they would prefer to do so in the past or in the future. In distant time decisions, they chose between 1 year in the future or 1 year in the past; in recent time decisions, they chose between 1 hour in the future and 1 hour in the past. They also reported how they would feel while anticipating or remembering the gain or loss. Participants discounted future gains more than future losses but discounted past gains and past losses to an equal extent. These differences were related to differences in participants' reports of the emotions associated with each event: Participants reported stronger contemplation emotions for future losses than for gains, but the contemplation emotion associated with past losses and gains did not differ. In the other experiments, Molouki and colleagues obtained similar effects when participants thought of nonmonetary events (e.g., massages and electroshocks) and when they actually experienced the events. Also, these effects could not be explained by factors such as individuals' loss aversion, uncertainty of events, thought frequency, and connection to the future and past. Thus, the tendency to discount gains more than losses (i.e., the *sign effect*) emerged more strongly for future than for past outcomes, and it seemed related to the mixed nature of the contemplation emotion of future positive events—positive emotions regarding the reward and negative emotions related to impatience.

## [Development of Holistic Episodic Recollection](#)

*Chi T. Ngo, Aidan J. Horner, Nora S. Newcombe, and Ingrid R. Olson*



Accurately remembering a specific place where an event occurred seems to be tied to remembering people and objects encountered during that event, providing a holistic episodic recollection. To address how holistic episodic recollection develops, Ngo and colleagues showed 4-year-olds, 6-year-olds, and

young adults images of scenes accompanied by a narrative describing a person, an object, and a place (e.g., “Alice went to the aquarium, but she dropped her wallet there; the wallet was lost in the aquarium”). Afterward, participants saw one cue relative to the scene (the person, object, or place) and were asked to recognize another attribute of the scene (e.g., they saw Alice and had to choose among a wallet, a guitar, balloons, and a kite). When participants accurately remembered one unit of a scene (e.g., wallet), they were more likely to remember another unit (e.g., aquarium), indicating holistic retrieval of the scenes. This dependency was higher for adults than for 6-year-olds and higher for 6-year-olds than for 4-year-olds. However, overall memory accuracy was not contingent on retrieval dependency, suggesting that retrieval dependency does not simply reflect overall accuracy but assesses the nature of holistic recollection. This research suggests that by the time children are 4 years old, their memories for complex events are not retrieved as separate pieces of information but instead as integrated recollections and that this integration continues to increase from age 4 to adulthood. Thus, the refinement of holistic retrieval might be one aspect of episodic memory development, the authors suggest.

### **Enhancement and Suppression Flexibly Guide Attention**

*Seah Chang and Howard E. Egeth*

When looking at visual scenes, observers can use their mental representation of what the target should look like (e.g., white dog in crowded park) to suppress salient but irrelevant objects (e.g., black dogs in the park). Chang and Egeth evaluated whether this is a case of only distractor features being suppressed or of target features being enhanced as well. Participants searched for a shape target (a diamond) in a display containing one diamond, one square, one hexagon, and one circle, each with a black dot inside. Participants indicated whether the black dot on the target was on its right or left side, and they made this judgment more quickly when one of the distractor items was a different color from the others. On other trials, participants saw four ovals, each with a letter inside of it, and had to say whether a target letter was present. Each oval was a different color: Three of them were neutral, and the fourth was either the color of the distractor or the color of the target in the trials in which participants had searched for the diamond. Participants more quickly identified that a target letter was present when it appeared on a target-colored item than when it appeared on a neutral-colored item, and they were slowest when the target letter appeared on a distractor-colored item. These results indicate that both suppression of the distractor features and enhancement of the target features contribute to guiding attention. The authors conclude that suppression and enhancement have independent contributions to attentional guidance and seem to flexibly guide attention as the task demands.