Title: The Differential Effects of Presentation Rate and Retention Interval on Memory for Items and Associations in Younger Adults: A Simulation of an Age-Related Associative Deficit

In comparison to younger adults, older adults have poorer memory for pairs of items (i.e. associations) than for individual items. However, more work still needs to be done to better understand the underlying brain mechanisms that cause this associative deficit in older adults. While testing memory for face-scene picture pairs, the current study simulated this associative memory deficit of older adults in younger adults by either shortening the amount of time participants had to study and respond to the images (i.e. presentation rate) or by lengthening the amount of time between the study and test phases (i.e. retention interval). These manipulations are assumed to affect the frontal lobe and medial temporal lobe areas of the brain, respectively, suggesting that each may be equally--yet independently--responsible for the memory of associations. The current results are an important step towards better understanding the underlying cause(s) of associative memory decline in older adults.