

Public Abstract

Angela Kilb

M.A.

Psychological Sciences, Cognition & Neuroscience

Paying Attention to Binding: Is the Associative Deficit of Older Adults Mediated by  
Reduced Attentional Resources?

Advisor: Dr. Moshe Naveh-Benjamin

Graduation Term: Winter 2005

Previous research has demonstrated that older adults have poorer memory for associations than younger adults while there are small age differences in memory for individual components, indicating that age differences may be due to a binding deficit. One possible explanation for this deficit is that binding requires attentional resources, and these resources are reduced in older adults. In order to test this hypothesis, younger and older adults were presented with a secondary task while learning word pairs and were later tested over both the individual words and their pairings. It was predicted that dividing their attention between these two tasks would reduce their resources and elicit both groups to perform worse in the pair test than in the word test, but the results from two experiments do not support this notion. In a separate analysis, performance on the secondary task was examined to obtain the attentional costs of each age group for learning the items and their pairings (this was obtained by measuring the difference in performance between completing the secondary task alone and completing both tasks simultaneously). Although the reduced resources hypothesis predicts that older adults should show higher costs for learning the pairs than the items when compared to the younger adults, the results are not consistent with this prediction and suggest that the binding problem of older adults is not a result of fewer attentional resources. Determining the cause(s) of this binding problem is important so that it can be reduced or prevented in the future.