The School of Psychology invites you to a Special Seminar with

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on:

Can Age-Related Sensory Degradation Account for Cognitive Slowing and Attentional Deficits in Older Adults?

Thursday, December 23, 2010, 10:00, Faculty room, IDC Herzliya Campus

Older adults often find it more difficult than younger adults to understand conversations in noisy situations and to maintain focused attention in cognitively-demanding tasks. These age-related deficits have been commonly interpreted as reflecting age-related impairment in selective attention or cognitive slowing. Three studies will be presented that support a third possibility, an age-related sensory degradation. In the first study, eye tracking was used to investigate age differences in real-time lexical processing in quiet and in noise. Twenty-four younger and 24 older adults followed spoken instructions referring to depicted objects, e.g., "Look at the candle". Eye movements captured listeners' ability to differentiate the target noun ("candle") from a phonologically similar alternative (e.g., "candy" or "sandal") in quiet and in noise. Having controlled for age-related differences in word recognition accuracy, by tailoring noise levels, similar on-line processing profiles were found for younger and older adults when targets were discriminated from alternatives sharing onset sounds. Hence, real-time spoken word recognition processes appear similar for younger and older adults in most conditions, once sensory demands are equated. In a second study, we tested an alternative sensory origin for the age-related increase in color-word Stroop effects, generally taken as a yardstick for reductions in selective-attention. Eighty-eight younger adults performed a Stroop test with two color-sets, saturated and desaturated, to mimic an age-related decrease in color perception. Color manipulation with younger adults was sufficient to lead to an increase in Stroop effects that mimicked age-effects. This result is consistent with our third study, a meta-analysis linking age-related sensory losses to Stroop declines documented in the literature.