

How Do Younger and Older Adults Use Cues and Landmarks to Navigate?

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Abstract: Although robust age effects on human navigation have been demonstrated, age differences in cue-use is poorly understood. In this study, older and younger adults completed a virtual environment (VE) navigation task. The environment contained cues divided into 2 categories. 'Critical cues' (CC) were located at decision points, while 'non-critical cues' (NCC) were located at non-decision points. Following learning trials, all subjects were given a cue recognition memory test and a cue-direction associative learning test. Older and younger subjects were equivalent in their recognition memory of CC and NCC. However, there were large age differences (younger > older) in cue-direction associative learning. In addition, younger participants showed better memory for CC versus NCC, whereas, older subjects showed no difference. Older adults are intact in landmark recognition but have difficulty associating these same landmarks with the correct direction. In addition, human aging is associated with decreased ability to filter irrelevant cue information.