EFFECT OF CERTAIN TASK CHARACTERISTICS ON PERFORMANCE OF TWO NEUROPSYCHOLOGICALTESTS OF SPATIAL ABILITY

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Abstract:
Certain neuropsychological assessments of spatial ability assume that the processing of diagonality and nondiagonality of patterns is equivalent and that processing 2-D representations is equivalent to processing 3-D objects. The Stick Test and the Locomotor Maze Test also assume that successful performance requires the use of mental rotation. Normal adult subjects received either 2-D or 3-D versions of the Stick Test (n = 45) or an unlabeled or labeled version of the maze test (n = 25). Both tests used either nondiagonal or diagonal patterns. More errors were made on 2-D representations of sticks than on the 3-D sticks. Also, more errors occurred with the diagonal than with the orthogonal patterns on both tasks. When maze paths were labeled, fewer subjects made errors on the orthogonal paths than on the diagonal paths. Few subjects reported using mental rotation to perform these tasks. The performance of normal adults may violate the assumptions usually made about a test,s measure of spatial ability.