

P-363 - BRAIN ACTIVATIONS IN RELATION TO COGNITIVE-STYLE

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Background: Cognitive-style is a psychological dimension that represents consistencies in how an individual acquires and processes information. It is conceivable that some people are better in processing words, and other people are better in processing images. This basic idea has inspired theories of visual and verbal cognitive-styles. Recently it was shown that a specific pattern of cortex activity distinguishes these two cognitive-styles.

Methods: Nine young right-handed healthy adults completed computerized verbal categorization test during fMRI. The test includes three types of conditions: 'MIX': in which each stimulus included 4 word items. one of the four words is functional extraordinary and another one is visual extraordinary. In two other conditions ('FUNCTIONAL' and 'VISUAL') with 3 word items, in which only one of them consider as extraordinary (functional or visual). Participants were instructed to choose one extraordinary item as quickly as possible. Selections and response times (RT) were recorded. Participants were classified according to their selections as having 'functional' or 'visual' cognitive-style.

Results: Behavioral results show that 'visual' styled subjects responded slower than 'functional' subjects. Moreover, 'functional' subjects demonstrated unilateral activation while the visual cognitive-styled participant demonstrated activation in both right and left.

Discussion and conclusions: We hypothesize that visual cognitive-styled people are tending to use images during solving problems [more conscious features] and therefore it demands to recruit more brain resources and costs them more time. The bilateral activations of the 'visual' styled subject, opposed to the unilateral activations of the 'functional' styled subjects, support this assumption.