The Role Of Stimuli Complexity And Handedness On Visual Symmetry And Asymmetry Preference

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Abstract.

Previous study results indicate visual information processing asymmetry of visual verbal stimuli. However, other studies that investigate nonverbal stimuli processing show inconsistent effect of laterality. Although differences between left and right handers can be found in task that involves letters, spatial attention stimuli and visuomotor control performance, the differences between the two groups almost vanish in several directional preference tasks, suggesting that direction preference is influenced mainly by writing and reading habits. Perceiving visual art involves visual attention, that is driven by the bottom-up aspects of the visual stimuli, therefore perception of nonverbal images, that contain geometrical forms, might be influenced by handedness. To assess the possible differences in visual symmetry- asymmetry preference, university students have been gathered (N = 65), and were distributed into two separate groups by handedness status, as a measurement we used stimuli based on Jacobsen and Höfel (2001). Our main result shows a significant effect of stimuli complexity on symmetry-asymmetry preference. The interaction effect between handedness and symmetry-asymmetry type was not significant. After conducting a pairwise comparison our results show that right handers evaluate simple and complex symmetrical forms as more preferable then simple and complex assymetrical forms. We also found that there is a preference for symmetry over asymmetry in both groups, however this differences are significant only in the right handers group. We conclude that preference for geometrical symmetrical forms is not influenced by handedness, however preference for complexity is affected by right handedness. To extend these results, further investigations are needed.

Keywords: handedness, symmetry-asymmetry preference, geometrical forms