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The participation of vision in the perception of object with the variation shape

Losik George
Belarus

Statement of the Problem: The problem of visual-tactile perception of an object that has a variation shape is researched. Items with a variable shape are a human body, body of animal, birds, a tree, ball, balloon. Researcher have reported about the mechanism that the person perceives the elasticity, flexibility, plasticity of variable shape object when he perceptive it by touching object with hand and fixing visually. As objects with a variable shape in all experiments 12 metal springs were used, different in physical elasticity, length, diameter, material, color. Eight subjects participated in three experiments, in which they evaluated the degree of difference between the same pairs of spring objects for different combinations of analyzers.

Aim: The purpose of this study is to describe the mechanism of work of this specific analyzer.

Methodology: For the forming the image of objects with variation shape, an active touch of the hand to the object is necessary. We study the dimension of a psychological space by multidimensional scaling method (Torgerson, Shepord), received matrix scores, which were then processed on a computer.

Findings: The mechanism of evaluation of elasticity and variability is realized by hand together with vision. The coordinated works of the visual, tactile and kinesthetic analyzers shape a separate stand-alone analyzer. This analyzer is not the sum of the visual and tactile analyzers. This analyzer does not have its own receptors, it has the cortical part only. It uses the receptors of the visual analyzer and the kinesthetic receptors of the hand, fingers. It is formed in the ontogenesis to evaluate the variable shape of the object. People who are blind from birth can not, unfortunately, exist images of objects with a variable shape.

georgelosik@yahoo.com