On visual principle of object shape

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Abstract

Objective: explore/research the laws/principles of visual activities by mathematical methods. Methods: Drawing method and geometric analysis method. Results: Discovering the visual principle of perceiving or judging the shape of objects of straight shape (columnar shape); creating/finding new method of research life activity law, or even creating/establishing a new interdisciplinary subject–perceptual geometry. Conclusion: If the difference between the slope values of any two lines of sight that reflected from any equidistant adjacent two points on an object to the eye is the constant, and is consistently equal to i/m; this object must be the object that is perceived or judged to be straight shape (columnar shape), otherwise, perceived or judged as Fold or curve shape. This is the geometric visual principle of perceiving or judging the shape of object. The human body can perceives and judges the shape of object by perceiving the contraction activity law of the muscles supporting the activity of sensory organ. Obviously, action can not be perceived if it can not be encoded. Vertigo and some other symptoms are caused by the brain's ability to perceive movement weakened or disappeared.Some scientific questions can be answered by experiments. Some scientific problems can not be answered by experiment; How to perceive or judge object shape is a scientific question that can not be given an answer through the experiment.

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