

# Cultural differences in the perception of geometric illusions

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Cultural Differences In Geometrical Perceptions The study chosen is called Cultural Differences in the Perception of Geometric Illusions. The research specifically focused on the psychological processes of depth perception and visual perspective. The first example is the Muller-Lyer illusion which is an optical illusion consisting of stylized arrows in which viewers tend to perceive one as longer than the other.

The second example used is the Sanders Parallelogram in which a diagonal line bisecting the larger, left-hand parallelogram appears to be slightly longer than the diagonal line bisecting the smaller, right-hand parallelogram, but it is in fact the same length. The last example used in the stimulus is the horizontal-vertical illusion, in which observers have the tendency to perceive the vertical as longer than a horizontal line of the same length when the lines are perpendicular.

All of these relate to how a subject is able to understand the spatial qualities. The researchers hypothesize that the cultural differences between the people tested affect their perception of the lines. The researchers dispersed the tests to 14 non-European countries including those in Africa, Philippines, and America. All in all this amounted to 1, 878 samples. The differences in these cultures can change from those of habitat, where some may be living in a dense, urban environment to those who live in rural land.

Language may also affect how one may perceive their surroundings, another factor that differs between the test samples is the school of thought between different cultures. The result of the research showed that on both the Muller-Lyer and Sanders Parallelograms the European and American samples made significantly more illusion-produced responses than did the non-European  
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samples. On the two horizontal-vertical illusions, the European and American samples had relatively low scores, with many of the non-Western samples scoring significantly higher.

All samples appeared to be minimally susceptible to the perspective drawing. These findings point to cross-cultural differences that perhaps can be attributed to ecological and cultural factors in the environment. For example, in the study they provide an explanation for the factor of spatial perception, they believe that if one were to live in a highly urbanized community, in which there is a high prevalence of rectangles, then the subjects are more inclined to interpret two dimensional acute and obtuse angles as representative of rectangles in three dimension drawings. This can also be the opposite, if one were to grow up in the countryside where they are exposed to large horizontal vistas, then their perceptions would change.

Works Cited: Segall, Marshall, Donald T. Campbell, Melville J. Herskovits. " Cultural Differences in the Perception of Geometric Illusions. " Science, New Series, Vol. 139, No. 3556 (Feb. 22, 1963), pp. 769-771