GENERAL.

Ueber die Auffassung einfachster Raumformen. RICHARD SEYFERT. Philos. Stud., XIV., 4, 550-566.

This research was an attempt to discover some of the factors influencing the accuracy of reproduction (judgment) of simple geometrical figures. Various triangles were shown for a time under different conditions, and, after a few seconds, the subject attempted to reproduce the same.

The six following conditions were used: (1) Eyes fixed upon a point within the triangle; (2) eyes followed a point which described the sides of the (imaginary) figure; (3) the eyes were shut and the finger was moved over the sides of the triangle; (4) the triangle was looked at and the eyes were moved over its contour as in (2); (5) the eyes and finger were made to describe the sides of an imagined triangle; (6) the eyes followed and the finger described the form of a seen triangle.

Owing to the varied ability and training in drawing, this simple method (by drawing) of reproduction was not used. After the figure was shown or felt, the subject was given a card on which was drawn a base; on this he was instructed to mark with a pin the apex, and from this point sides were drawn to the extremities of the base and the angular errors were noted.

From the results of nine subjects the author concludes: (1) The decisive factor for accuracy of reproduction of simple forms is not the retinal image, but the sensation of eye-movements. The most exact reproduction of such forms occurs when the eye sees the figure as a whole and follows its outline. (2) Pure eye-movements without the image of the form, are next for exactness of the reproduction. With practiced subjects this kind of reproduction equals the first in exactness. (3) The perception with fixed eyes is very puzzling, and successful only for practiced individuals. With unpracticed subjects it is almost impossible to prevent the eyes following the outline of the object. (4) Simultaneous movements of the hand and eye ('und des Auges' not 'und des Armes', see pp. 558 and 560) as a rule lessen the accuracy of reproduction. Great practice of the muscles can increase the accuracy. (5) The least exact method is reproduction from pure hand and arm movements.

Horizontal and vertical errors in placing the apex of the figure would give similar results. These errors the author has not attempted to separate.

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