TESTS FOR DETERMINING THE SIGHTING EYE.

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There is considerable literature devoted to the subject of the sighting eye, but reference to specific tests for determining which eye is habitually used for sighting are difficult to find. This is probably explained by the fact that the act of sighting or aligning two objects is such a common experience in life that tests may easily be borrowed from this source. Few of these tests, however, meet the exact requirements of research work.

The possible coordination between the sighting eye and right- or left-handedness must be considered in selecting a test. Serious attempts have been made to establish this association between the dominant eye and the dominant hand in spite of the fact that no anatomic relation can be demonstrated. Until our knowledge on the subject is increased by scientific experiment, the possible influence of either hand should be eliminated from the adopted procedure. Tests made by pointing with either forefinger or with a pencil held in either hand or by sighting thru a ring held in either hand are open to criticism for this reason.

In another form of test the observer approaches a stationary object such as a vertical rod and aligns it with another object located some distance away. This procedure is free from the influence of either hand but it frequently happens that, in walking toward the first object, the nonsighting eye is carried in line with the two test objects by a mere accident of head position. Such a test is unnecessarily inconvenient in addition to being unreliable.

During a recent investigation of the influence of fixation on the measurement of heterophoria, on the relation of the sighting eye to the measurement of heterophoria, it was necessary to test each observer for his sighting eye. Experiments were made with various tests and a conclusion reached that the possible influence of either hand would be greatly reduced by holding the first test object in both hands. A 13x20 cm. card with a 3 cm. round hole in the center was employed instead of the customary pencil or pointer. The use of such a card compels the selection of one or the other eye for sighting thru the hole, thus eliminating a certain percentage of negative results which are obtained when the first and second test objects are aligned with some point between the two eyes.

The test is performed by having the observer grasp the short ends of the card with both hands and raise it slowly at arm's length while looking intently at a spot of light six meters distant. He is instructed to keep both eyes open and locate the light thru the hole in the card. The eye selected for this purpose is the sighting eye.

This test has been made repeatedly on the same observers with intervals of several days between trials. The eye that was selected the first time, whether the right or left, was invariably selected at the later tests.

The apparatus required for the test just described is both simple and convenient. It does not permit the selection of a sighting point situated between the two eyes but forces the use of one or the other eye for the act of sighting. The possible influence of the right or left hand on the test is greatly lessened by having the card held in both hands. The results obtained with it are consistent in repeated trials with the same individual.