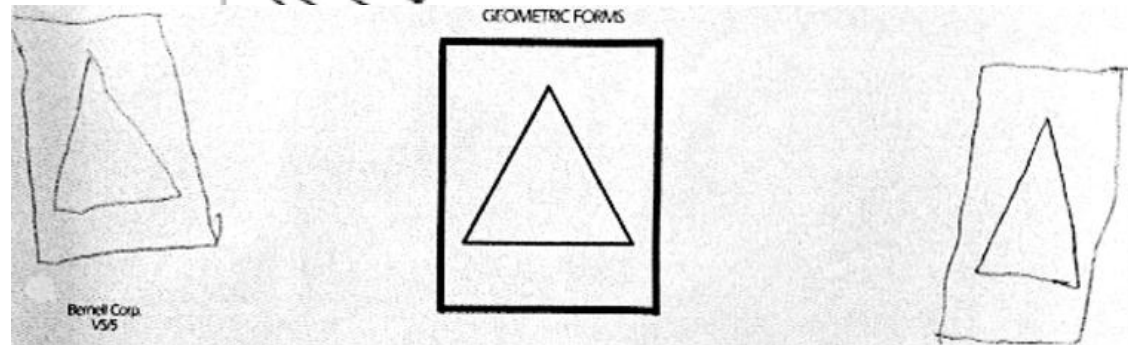
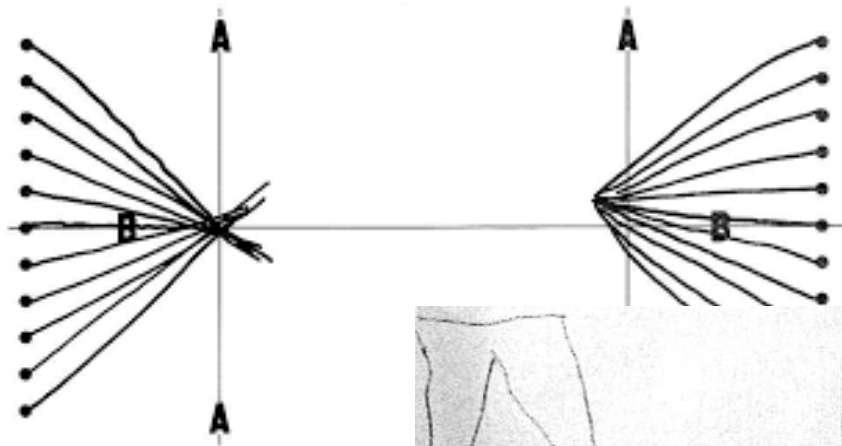


Van Orden Stars & Cheirosopic Tracing



“Vision is not merely a matter of passive perception, it is an intelligent process of active construction. What you see is, invariably, what your visual intelligence constructs.”

– Donald Hoffman

Van Orden Star

Millard E. Van Orden, one of the pioneers of the field of optometry, developed a stereoscopically drawn visual pattern to gain insight to the patient's binocular visual behavior pattern.



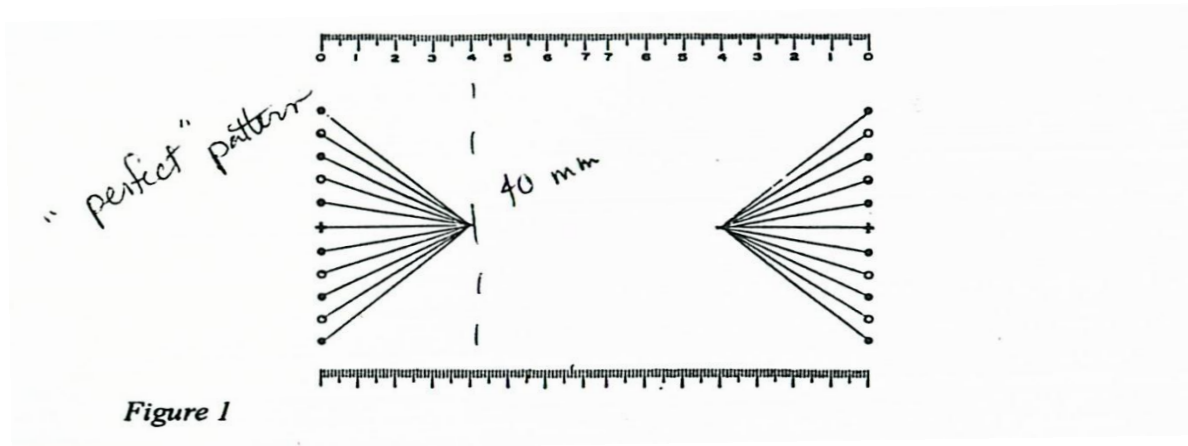
The VO Star investigates binocular posture and visual-motor integration abilities while performing a bilateral motor task. While the execution of the star pattern is fairly straight forward, it requires the patient to quickly and accurately interpret visual information, generate a motor response and maintain attention on the task. When used during vision therapy for training, the patient receives feedback on the reorganization of their visual space and the stability of their eye posture and binocular vision over time.



As seen in the picture on the left, the standard design of the diagnostic VO star is comprised of two columns of 11 figures each, printed on paper. The paper is attached to a stereoscopic viewer which uses a plus lens to place the object at optical infinity and a septum to separate what the right eye sees from the left and vice versa. If the patient is able to see both columns simultaneously (ie, they are not suppressing one eye), with a pencil in each hand, they are asked to draw a line from the center figure on both sides and to stop when the pencil tips appear to touch. The left hand is then moved to the top left symbol, and the right hand is moved to the bottom right symbol. The action of drawing lines until the pencil tips appear to connect is continued until the star pattern is completed .

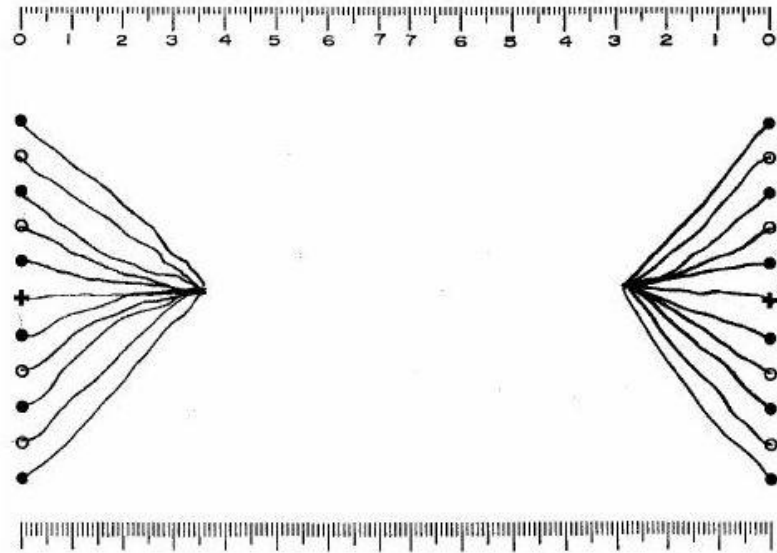
Examples of VO Stars

Below is an example of a well formed and symmetrical VO Star. The points of all lines drawn meet at 40 mm and the lines coming from the cross shape on the pattern are parallel.

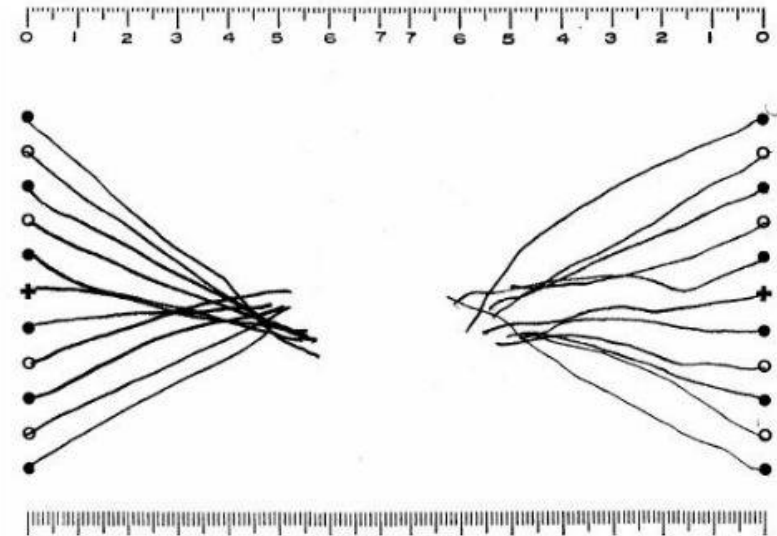


Examples of VO Stars

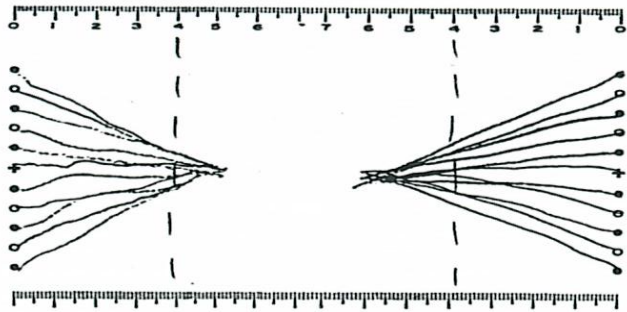
Top: An organized but asymmetrical star pattern. The left side extends further into the center than the right side does. This patient may make errors in spatial judgements laterally directing action further to the right in space than the actual object is.



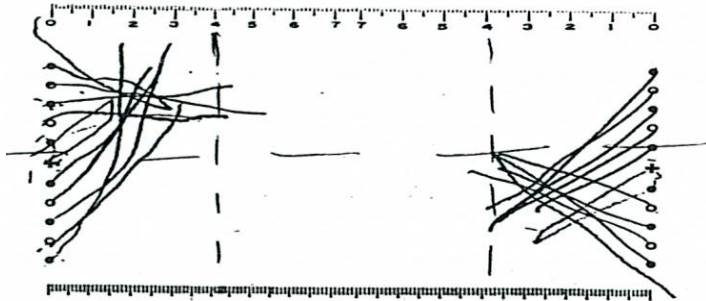
Bottom: An eso (inward) movement pattern seen by the star points ending closer to the center of the page than the top figure. The pattern also reveals this patient's unorganized perception of the world around him.



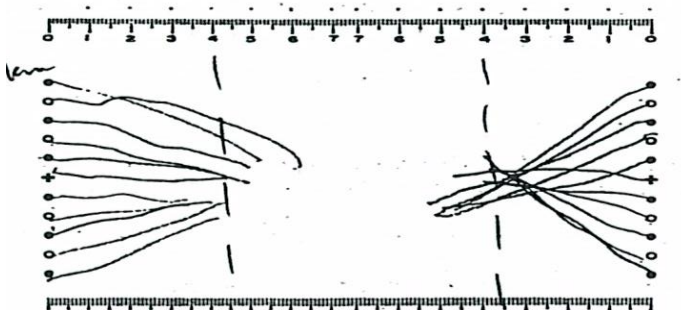
Examples of VO Stars



Top: Both sides come to a point beyond 40 mm indicating an eso posture.



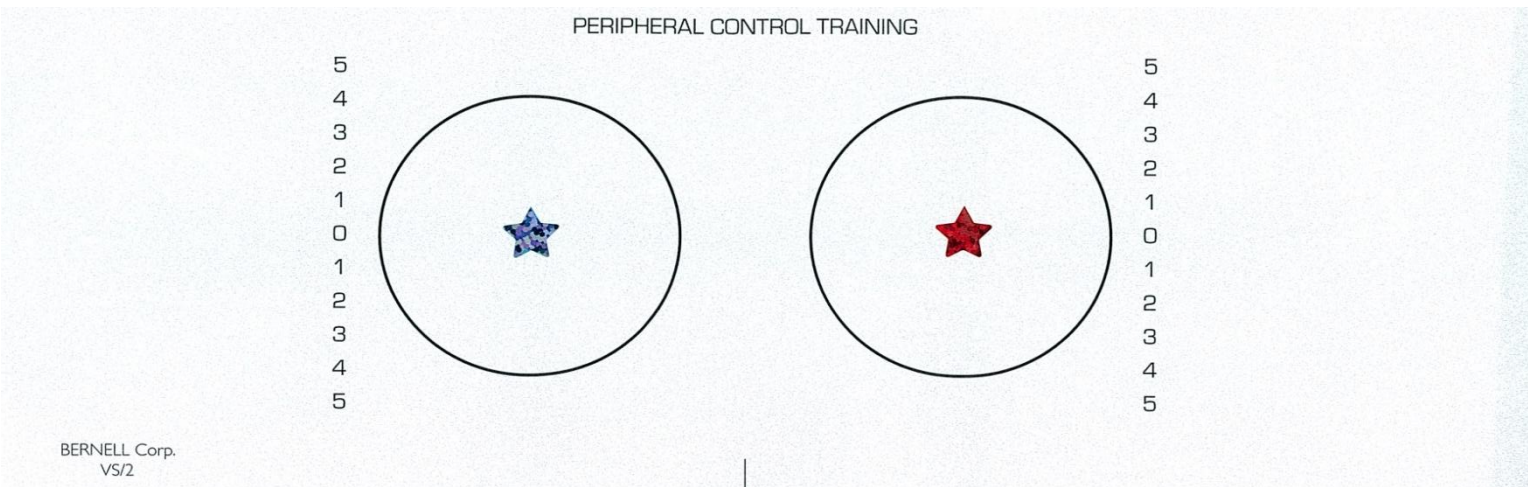
Middle: Point on one side is higher than parallel line and other is lower than parallel line indicates a vertical deviation.



Bottom: Central points poorly formed indicating a problem with central processing. Sometimes seen in amblyopia.

VO Star with CFL/PFL

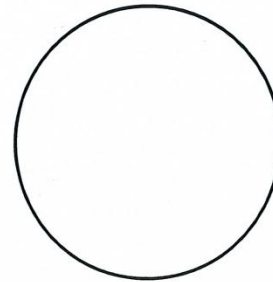
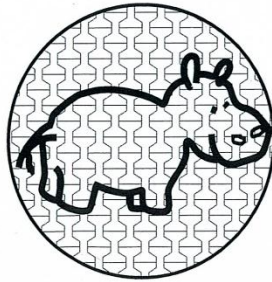
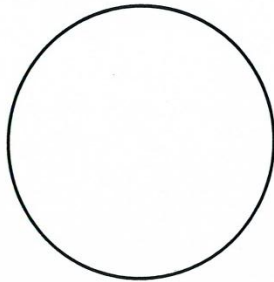
The sheet below may be used with patient's who display difficulty in completing the VO Star Testing Sheet. The star stickers act as a central fusion lock (CFL) and the large circles act as a peripheral fusion lock (PFL). Different colors are used for the stickers to allow the patient to observe luster. This serves to stabilize the image so the patient can complete the form. The stickers also serve the purpose of reminding the patient to stop their pencils once they hit the edge of the sticker like a speed bump.



Cheiroscopic Tracing

Place the cheirosopic target to be traced before the eye corresponding to the non-dominant hand. Instruct the patient to look into the instrument and trace the target.

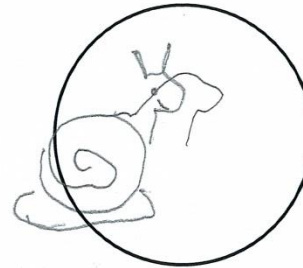
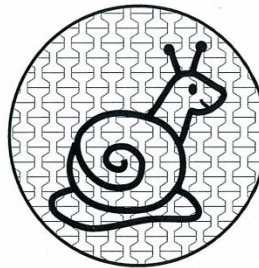
Name _____ Date _____ RX _____ Comments _____



Drifting of image

Below you will see an example of a cheirosopic tracing with circles on either side that act as a peripheral fusion lock. This can aid a patient who is experiencing difficulty with tracing into a blank area.

Name _____ Date _____ RX _____ Comments _____



Suppression

If a patient is intermittently suppressing it may be helpful to suggest a short pencil stroke, lift pencil and then make another stroke resulting in a dashed line. You may also suggest the use of a horizontal scrubbing stroke. An example of both strategies is shown below.

