

A PERSPECTIVE ON BEHAVIORAL OPTOMETRY (short version)

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VISION is deriving meaning and directing actions as triggered by light.

DEVELOPMENT and LEARNING (in the Piagetian sense) indicate the two basic routes through which VISION is acquired through the dual processes of development and learning.

DEVELOPMENT is the process during which new schemes are created or synthesized by the individual; it is usually associated with the "AH HA" phenomenon. LEARNING is the acquisition of facts or data, and knowledge. KNOWLEDGE is the information that is stored about things. New SCHEMES result from probing the outside world and recognizing conflict. Existing SCHEMES are the ways available to the organism to organize, store, retrieve and utilize the knowledge base, and to probe the outside world for meaning to direct actions. SCHEMES for VISION are developed and then used by the thinking person. Further elaborations of these schemes are constructed; they thereby expand the usefulness of vision.

A VISUAL PROBLEM is an unmet visual need of the patient; it may or may not be reflected in the optometric data. An OPTOMETRIC DATA PROBLEM is a deviation of a finding or set of findings from some postulated norm (or expected) that may or may not be related to a VISUAL PROBLEM. As optometrists, we are most concerned with VISUAL PROBLEMS whether or not there is evidence of such a problem in the optometric data.

STRESS is that which causes a dis-homeostatis on living organisms which facilitated change (either positive or negative). Stress is a response to a number of sources, such as the actual physical action of an outside object on an organism, the use of the organism itself by another organism, the use or abuse of the organism by itself in the course of living, or the perceived consequence of any of the above on the individual by the individual.

VISION is acquired through both overt and/or covert movements of the person to manipulate his/her environment.

POSTURE is the relative position of the physical parts of the body to each other and in relation to gravity, at any point in time. Posture is dynamic and always present. There is a relative homeostatic point of least resistance or maximum efficiency about which the person moves in order to act of the environment. MOVEMENTS are successive changes in relation to gravity and in the relative positions of the body parts to each other or in relation to another object.

The SPACE WORLD is the internal representation of reality that each person constructs within their mind. This representation is, by its very nature incomplete and includes the knowledge that the organism has along with the schemes to utilize that knowledge. Lack of coordination or correspondence between the measurable physical world and the representational world exists for each person. These areas of dis-coordination are the basis for inaccuracies or inefficiencies in performance. The diagnostic evaluation performed by a behavioral optometrist probes not only the direction and degree of the dis-coordinations between these two worlds but probes the current direction of adaptation and the level to which these discoordinations have been compensated for in changes in the actual structure of the patient.

Chronic postural and movement asymmetries are the results of intrinsic dis-equilibrium or dis-coordination which lead to warps or distortions of the space world. The person will direct action towards the spatial location of the object in their space world which may or may not correspond to the

actual position of the object in reality. Changes in the structure of the organism are mal-adaptations are attempts by the person to resolve inadequacies of equilibration between their space world and reality.

The directions of dis-coordination are inwardizing (centripetal), outwardizing (centrifugal), and the volume changes of compressions and expansion.

EMBEDDEDNESS is a measure of the level to which a discoordination between the space world and reality has been or is being adapted for in changes in the structure of the organism. When an adaptation is said to be less embedded, it is less so in structure and more evident in the space world dis-coordination. A more highly embedded adaptation is one that is more a part of the structure of the organism.

TREATMENT ALTERNATIVES:

A COMPENSATORY lens is a lens which restores standard visual acuity and merely compensates for the mal-adaptation which the individual has made.

A TREATMENT LENS is a lens used to either direct future changes in the visual status to a less adapted state, or to improve performance of the individual by decreasing the intensity of the visual stress acting upon the individual. It creates a better coordination between space world and reality.

VISION THERAPY is both a developmental and a learning experience for the patient. Conditions are arranged to create conflict between existing behaviors and that which is demanded of the task. The process of resolving conflict - assimilation and accommodation - for new behaviors is the outcome of the therapy. The patient will then have more behaviors upon which to call to serve them in meeting new demands. Vision therapy is a sequential program, building upon the schemes already available to the individual and/or trying to provide wholly different schemes in cases where the individual is using inappropriate ones. New schemes reduce, alter or embellish the actions of the person and, over time, permanently change the behavior of the person