

“VISUAL NORMALIZATION IN MATURITY”
PREVENTIVE GERIATRIC APPROACH TO NORMAL VISUAL ACUITY

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Part I
Introduction

Dr. C. Stuart Gager states that, “A scientist is not so much a man who knows, but a man who is continually striving to learn. For a competent investigator to be mistaken, however, only emphasizes the profound difficulty of trying to explain the phenomena of the functions of life.” Let us keep in mind the wise comment of Claude Bernard; “science does not consist in proving that others are mistaken ----- and it can be a profitable work for science only in so far as we know how, and show how he was mistaken.”

It is with the humble attitude of the man who is continually striving to learn that I make assumptions that are based on many years of clinical observations, with results continually repeated until they become fact. Nor do I consider myself competent to show how any one is mistaken in visual investigation, but the recognition of those recorded errors have been most profitable in the progress of all Visual Science.

This work has a definite purpose to stimulate further investigation and research in the normalizing of, and maintenance of, good and useful vision during that critical period of active adult life covering a span of years from thirty or thirty-five to seventy (or even more). Corrective and preventive ocular procedures instituted in adult life constitutes the practice of Visual Geriatrics.

Why is our vision as it is? Why the loss of critical visual identification at distance or near points, at a time in life when leisure use of vision would add such to the cultural, social and personal value of the individual? Why the direct and immediate changes in vision, often showing great improvement; and often a loss of, or failure in vision?

These and other factors pertaining to the impairment of vision, and the recovery of normal and comfortable vision will be discussed; including the neuropsychiatric or psychosomatic aspect of Visual Training (syntonic orthoptics, etc.).

William Sadler, (1947) states, “More than seventy-five per cent of all persons examined at the larger medical centers of this country are found to be suffering from some functional nervous disorder or emotional conflict.”

Is it any wonder then, that these emotional states anxiety, embarrassment, irritation, anger, rebellion, inadequacy, grief, insecurity, humiliation, despair, and excitement, tend to bring on or cause many functional eye disturbances? Some of these emotional states cause temporary ocular disturbances and some disturbances seem permanent until corrected.

Nor is it any wonder then that the specialists in the field of applied Visual Science often have occasion in clinical practice to entirely correct these neuropsychiatric or psychosomatic visual disturbances of cases of ocular dysfunction.

Today we must consider the over-all, or mass concept, of seeing; this concept of wholeness encompasses the physical (structural), physiologic, sociologic, psychological, or “molar” pattern-like, vision in its entirety.

Ralph Barstow distinguishes the molar concept of vision from our older ideas of seeing and function of vision, by the terms sectional, classificatory or analytical concept for the older ideas. Renshaw calls this analytical concept, the “molecular concept: of seeing.

In thinking of the molar or organismic concept of vision we still often fail to place an equal importance on the various factors making up the wholeness or molar plan. Modern psychologists in explaining behavior always endeavor to maintain a balanced formula. Thus Philip Seisenberg presents this formula, **STRUCTURE + ENVIRONMENT + EXPERIENCE = BEHAVIOR**; and points out that should either the structure, or the environment, or the experience be changed, then the behavior would be (become) different.

In presenting an orderly statement of a plan in visual normalization, I will give you this formula (adapted from Eisenberg) Structure (body or eye, etc) plus Environment (situation, society, racial culture) plus Experience (habits of vision, training, etc.) equal Normal Visual Function. We must keep this formula in balance, but I will endeavor to present a different approach to the field of corrective and preventive ocular procedure; placing emphasis on a hitherto little thought of positive factor, the psychosomatic aspect of visual training and visual well being.

“The Hierarchic Structure of Life” by Goethe (Schriften – ‘Psychologie’) translated is “In the human mind, just as in the universe, there is no top or bottom. All parts have an equal claim upon a common center which manifests its hidden existence in the harmonious relationship of the parts of it.”

Thomas G. Atkinson states that, “Vision and visual reactions are an affair of the mind.” Visual Science is young, the neuropsychiatric aspect of corrective eye procedure is truly a new phase of our work.

To clarify the “reality of intellect” and its power, let us think of these several examples before continuing the body of the paper. Later we will examine these cases in detail:

1. Consider the case of the patient with severe chronic hordeolum completely cured by a pair of plus .25 spheres.
2. Then, think of the case of the woman who because of fright failed to pass the driver’s license test of visual acuity; letter vision now is a mental hazard, and it seems impossible to read even 20/60, while by several other tests she has 95 per cent acuity or 20/25 O.U.

3. Again, consider the case of the elderly man with failing vision, who when finding that he could expect visual help immediately (within twenty-four hours) received a gain in vision of 15 per cent. Also, the patient having high blood pressure had a drop in pressure of 50 mm., and a further decrease in pressure of 30 mm., when told by his physician (physical examination at my insistence) that his heart was in good condition.

Thus we find, mental or emotional stress frequently is the main contributing cause of ocular dysfunction.

CASE REPORTS

Case No. 1

Let us consider the case of Bob, the man with the persistently recurrent hordeola, a condition that had developed into chronicity. Recall the formula, Structure (or body) plus Environment plus Experience equal normal visual function or performance.

Bob, age 45, had returned from army service, having held, during the war, a high rank as an executive officer. Now he must enter the business position that he had left and which had been filled by a younger man, and also, he had certain domestic relations to adjust. He said that he "suffered from styes only since his return to civilian life." We must always remember that modern psychology does not attempt to understand an individual without seeing him as a member of his society.

The first part of our formula STRUCTURE includes the visual analysis and optometric diagnosis. This diagnosis was essentially negative and showed an acceptance of not over a plus .50 sphere O.U., neurological findings normal, chromographs normal, etc.

As a point of interest Tassman (1946) suggests underlying factors to consider in hordeola, chronic constipation, anemia, faulty nutrition, some irregularities of glandular function (or of menstruation) as well as refractive conditions at fault. The Optometric Specialist recognizes the presence or absence of these conditions.

The second part of our formula ENVIRONMENT (situation, society, over-all culture) certainly presented an entirely different problem than army life. The business position wasn't altered greatly from a similar position in the army, but now he must compete with a younger man in an enlarged business after an interval of absence of several years. The marital situation seemed to be that of insecurity that could be adjusted with time.

The third part of our formula, EXPERIENCE (habits of vision, training, etc.) differs only slightly in requirements in civilian from army visual performance, no additional near problem is involved. Binocular localization or convergence is quite normal both for distance and near vision.

The fourth component of our formula, RESULTANT VISUAL PERFORMANCE OR FUNCTION, indeed, points to a psychosomatic problem. As Adler would say, "This individual was manifesting fear of an inability to meet the demands of normal civilian society." Psychosomatic defense mechanisms had been set up against the conscientiousness of inferiority. Something of a materialistic nature must be given him to cling to while the adjustments to society were being made,

A lenticular prescription of plus .25 spheres were prescribed, and a psychological approach of Visual Geriatrics instituted; namely, an aid in orientation, by pointing out that years of experience given a background that becomes an asset and advantage in meeting the demands of the pressure of post war business, etc.

Thus, a pair of plus .25 spheres and a little guided conversation brought about complete recovery. This eye condition was a psychosomatic effect to compensate inferiority.

The patient has been under observation for two years with no recurrence of hordeola.

Case 2.

Mrs. E., the patient in whom letter vision is a mental hazard. For background of environment we shall go back to about 1930, when at that time Mrs. E. consented to appear as a clinic patient before a meeting (convention) of ophthalmologists, for her vision was failing rapidly due to cataract and retinitis pigmentosa. Mrs. E. (in her late thirties) received as a severe shock the diagnosis of this august body of physicians that she would be blind in eighteen or twenty months. The physicians in session were quite a large group and the opinion of the combined group seemed authoritative and final. Therefore, fear of blindness became akin to panic.

Further, think of this exaggerated sense of inadequacy of social position, as the wife of a non-commissioned army air corps officer, even with a high financial standing (in her own name); her social position seemed fixed and showed a complex of inferiority.

When this patient was referred to me early in 1938, the chromographic diagnosis revealed foci of infection. A severe dental oral infection was removed, necessitating surgery on three occasions; there remained a chronic sinus infection which has been controlled over the years. As pointed out, "Follow through work in chromography definitely proves that the removal of dental oral infection in patients over 35 years of age raised resistance to a point of tolerance in the great majority of cases of foci of infection, and that sinus infection is secondary to dental oral infection is being proved by an increasingly strong chain of evidence." (Mayer, American Journal of Optometry, 1936.)

A reading correction in lenses was prescribed, and a noviol C (plano) prescription to be worn outdoors. Thus, the first part of our formula STRUCTURE (body, eye, etc.) was cared for.

When corrective procedure is instituted, we consider and discuss it under the third part of our formula EXPERIENCE (habits of vision, training, etc.) for we must remember that if any part of our formula is

changed, then visual function or visual performance is changed (becomes altered). Syntonic applications with some orthoptics were prescribed. Vision increased from 42 per cent to 95 per cent, although the skeleton structure of the lenticular opacities remained.

THE SPAN OF VISION ON THE HORIZONTAL (visual field) increased considerably showing the pigmentary retinosis was satisfactorily under proper management. Tassman, in speaking of pigmentary retinosis states, (1946), "It is considered that contraction of retinal vessels caused by action of sympathetic system resulted in the degeneration." In 1936 I called attention to this, "As infection takes place and the sympathetic nervous system becomes dominant; it does so by inhibiting the parasympathetic, causing a collapse of the color fields."

We have discussed environment, and we have the resultant visual performance, therefore, our formula and our case has been completed. The patient moved to central California with comfortable, and very practical vision. Several years later when applying for a driver's license, the license examiner was heedless and perhaps a little rash, at least not sympathetic; and the memory pattern stored in mind again became dynamic memory, resulting in failure of the vision test of acuity.

Mrs. E. immediately started the journey to my office (several hundred miles) to see if I could help in this emergency. After talking to her, I insisted that her vision was adequate and equal to all requirements; further, she must dictate her own environment and immediately take the driver's license examination again. Mrs. E. set up an offensive of the extrovert and the result was successful; she obtained her license, but the mental hazard is so great that never since has she been able to again read letter vision better than 20/60 (59 per cent).

Perhaps, some day, she will recognize this memory experience and disregard it as being "irrelevant to the facts of the case"; if not, this psychosomatic aspect will break her health, and the sense of visual wellbeing that she has had for the past number of years.

Case No. 3

The elderly man with failing vision and vascular hypertension. Diagnosis revealed retinal degeneration, lenticular opacities, and probably an essential hypertension resulting in a moderate arteriosclerosis as manifested by the retinal vessels. According to Tassman (1946), "in many older patients with hypertension, arteriosclerosis moderate of advanced is present, and cataract is prone to develop." This gives another possible explanation of opacity in the senescent.

The patient was informed that in my opinion his vision could be improved, and there was certainly a possibility of practical restoration of vision. Vision as recorded was a poor 46 per cent (Ives Screen). Blood pressure was over 230 mm. systolic and had been very high for the past year following severe influenza and pneumonia.

The next morning when my examination was continued, the patient's vision was good 20/60 (60 per cent), and his blood pressure had been reduced to 180 mm. systolic. No change in lenses was advised for the present time.

I insisted upon an immediate heart check up by his physician for he feared his heart had been affected by his illness. With the reduction in both systolic and diastolic pressure, I felt he should have a re-evaluation of the mental picture of his health. Physical examination revealed that his heart was quite good; further reduction in blood pressure resulted.

So much for the first part of our formula STRUCTURE, with the exception of a consideration of the posture, carriage of the body, and physical action. This man (in his seventies) walked, carried his body and looked, like a broken man. A great physical change took place and soon the patient looked, acted, and walked as an individual fifteen years younger. Thoughts and emotional conflicts have a tremendous influence upon physical action and posture, just as the reverse is true.

Environment and Experience in this case need little discussion. The cataract changes probably had been present before his illness, and probably because he had a tendency toward hypertension. During convalescence because of low vitality, there awakened an awareness of “failing vision and heart trouble”, for he had been told that his blood pressure was very high.

Finding that he could be helped, gave him assurance, the memory record of “fear” was disregarded and his mental pattern reshaped or normalized. Syntonic application further improved his vision to 85 per cent acuity, and the proper reading correction increased his happiness.

Now, visual performance functioned at quite a high level, and the demands placed upon the entire organism were adequately met. Corrective ocular procedures brought about stabilization and relaxation (a mental requisite) and interest in new activities acted as a positive curative factor, and our case is completely under control.