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SUBJECTS FOR INVESTIGATION *

By Earle O. Sterzer, S. S. A. O., M. A. O. S.

The idea to be set forth in this paper developed as a result of reading a book entitled “The Principles of Light and Color” by Babbitt. Published in the (1800) seventies, the book sets forth an unusual theory of the nature of light, color, electricity, heat, etc., and deals a bit with the use of exposure to colored lights as affecting body physiology and pathology. The author discusses at length the theory of light as a substance having a material force and he gives some histories of cures of different ailments with colored lights, mentioning the specific treatment only briefly however. It is evident that Babbitt, who claims to have been a professor in a College of Fine Forces in Orange, New Jersey, was an ardent advocate of the use of color but he was reticent about describing his technique in the book except in general terms.

What is of interest to us, is that he characterized the Omega end of the spectrum as being a nerve sedative, cardiac depressant and metabolic retardant while the Lambda end is an irritant, stimulant and speeds up physiology. The portions in between have varying effects according to their proximity to these ends.

These things being in general agreement with the principles of Syntonics, we come to his citation of several cases in which stimulatory colors were used on the body, and he mentioned that the results were always better if blue or violet light was played on the head. Here we have the use of spectral extremes on the body in cases where stimulation was the desired result and it occurred to me that this principle might be adapted to Syntonic technique. I am using the terms of color blue, red, etc., in the broad generic sense as used by Babbitt and not to draw any parallel with specific Syntonic technique.

It is the purpose of this paper to discuss the probable reasons for Babbitt’s use of spectral opposites at one time and whether there are any anatomical and physiological grounds for our using this principle in Syntonics by means of split filters.

The greatest mass of the nervous system lies above the neck and the head contains important reflex centers. The organs of general physiology and metabolism are below the neck. Babbitt with his splitting of colors, applied an inhibitory action to the seat of nerve mass, and stimulation to the organ-mass area with the neck as the dividing line.

Our application being entirely through the visual system, we are not interested in the gross body aspects, but may we not raise the line of division between the colors from the neck to the horizontal median of the eyes and with split filters get effects not otherwise attainable.

To consider an example, we know that the combination Mu Delta if used in the late afternoon causes sleeplessness due to Delta being a motor stimulant and sympathetic stimulant and tending towards Lambda as a sensory stimulant. Muscular relaxation and cerebral quiet are necessary for sleep, a condition calling for Delta Omega, Mu Delta is known as the chronic alternative and systemic eliminator and is one of our most important combinations. If we examine the characteristic effects of this

combination as given us by Dr. Spittler, we note that they are primarily sub-thalamic. This being the case, why not apply them confined to the primarily sub-thalamic area and while avoiding its effects super-thalamically, apply the proper filter for the upper area? Have we any basis for belief that putting Delta in our instrument and using Omega to cover the bottom half of it, and Mu the upper half, would give a physiologic stimulation and cerebral hypnotic effect at one and the same time? You understand we must use Omega below because by projecting the energy passed would fall on the lower hemisphere. With the patient fixing the joint or line of demarcation between the two, filter the visual axes from point of fixation then nodal point would bisect the retina vertically into fairly approximate equal halves.

Does this seem far fetched? Let us consider the matter from anatomical, structural and philosophical angles.

Syntonic technic has as its basis the action of specific energies passed through filters and proceeding by means of the visual system to the thalamus. We know from our study that the thalamus is a body composed of gray nerve tissue and attached to the fore-brain in the third ventricle. The optic nerves are axons running from ganglia in the retina to the thalamus, ignoring for the time, the connections to the geniculate and colliculate bodies. Thalamic-cortical nerve radiations carry the visual impulses to the visual center giving us the well-known pathway of light from stimulation to interpretation – a sensory nerve reflex. We have been taught that all sensory paths and all motor paths with the exception of the crossed pyramidal tracts from the cortex, pass through the thalamus, so that efferent and afferent nerve trunks connect the thalamus with all parts of the body. The thalamus is located about in the geometrical center of the head so that generally speaking all nerve pathways above the thalamus which is connected directly to the cerebrum must have to do with raising sensory impulses to consciousness, while pathways below the thalamus carry sensory and motor impulses to and from the thoracic and abdominal organs and body frame. If our applied energies are not entirely absorbed in the thalamus, then the thalamus must be a dividing point geographically as well as reflexly, those impulses referred upward going to the areas of coordination and interpretation, and those going along the lower paths going to the instruments of body physiology. Composed of gray tissue which means cell bodies, the thalamus is a great ganglion composed of many small ganglia whose duties are to pass impulses along so that our specific energies according to the natural law must follow the pathways of least resistance. Since visual formally travel up to the cortical areas, it is to be presumed that syntonic energies will to a great extent follow those visual pathways, as a matter of course, leaving a problematical remainder to affect the autonomic nervous system centers, in the thalamus.

We may not have any basis for assuming that the optic tract divides its fibres equally between the upper and lower halves of the thalamus, assuming such a halving of the thalamus. Anatomies are silent on the question of optic nerve distribution at the thalamic border or even where the point of entrance is. But this need not be a premise for our theory because from our knowledge of nerve action, we know that the contiguous cell bodies in the thalamus would pass the impulses through according to the value of the stimulus and discriminate only according to syntonic control. If short pathways and accustomed reflex paths have anything to do with the matter, it is reasonable to expect that impulses in the upper cell bodies of the thalamus would travel upward and those in the lower cell bodies, downward.

Granting then an anatomical splitting of impulses in the thalamus, it is logical to assume that the different specific energies would follow the paths we desire, especially if of opposite or adverse character? I believe it is.

Most of the objects and phenomena of everyday life we view, lie below the level of our eyes. We habitually gaze at a downward level so that our visual impressions are most commonly received on the upper hemisphere of the retina, or at least from just below the macula on up. Surely then the synaptic resistance must be a trifle less in the paths from the upper hemispheres than from the lower. Admitting this, then applied emergencies if confined to the upper hemisphere would most likely pass to the cortex and energies confined to the lower part having to seek other pathways would find the autonomic system.

I am frank in saying that these are purely theoretical conjectures, brought to you for the purpose of causing discussion and research. It would appear that the question has important aspects and may reveal valuable information. It has been discussed only briefly with Dr. Spitler, the founder of Syntonics, but led to his assignment of the subject to me to bring it before you. Time has not yet permitted any laboratory experiments but I have Dr. Spitler's assurance that these will be performed and the results reported to you.

Reverting to Babbitt and considering what his reasons may have been for dividing his colors, we may find some meat in the following interesting points and parallels. In our study of syntonics we were taught that the brain may be considered as positive in charge, while the liver is negative. Babbitt divided the body into many sections giving each its electrical characteristic, but roughly he designated the head as plus and the body as minus. In syntonics we endeavor to bring about a balance between the two parts of the autonomic system to equalize the forces of physiology or harmonize them. Babbitt stated that physiology is governed by the natural law that like repels like and that unlikes attract each other. His theory was that in restoring normal physiology or even in promoting ordinary biological action, the procedure would be to apply the opposite or unlike, and that the law of attraction would aid in the restoration or promotion.

Babbitt considered the Omega end of the spectrum as both electrical and negative – negative in the force sense and the Lambda end as thermal and plus or positive. This gives an added significance to his application of negative Omega to a positive head, while applying positive Lambda to a negative body. Babbitt's system then was doubled barreled. While he was making a local specific application according to his principles he was also aiding in the general flow we believe takes place between the positive brain and negative liver, forming a complete circuit. Again, consider a local application, if we can presume the liver, normally negative, might by loss of potential become undercharged, the use of positive Lambda could attract minus to it. If it were over-charged, the plus Lambda would be attracted to neutralize the minus to the point of potentiality.

I have mentioned Mu Delta and Delta Omega. Others are Lambda Upsilon and Mu Upsilon, Lambda Delta and Lambda Omega. A brief consideration of the characteristics of these will indicate where the split-principle could be used, and it is now necessary to mention here.

I believe it is Dr. Spitler's purpose to make laboratory experiments with the ideas given and that he would like for us to study the points propounded and if possible investigate its truths through use. If the idea itself is impractical and will have to be abandoned, at any rate its investigation and study will assist us in the better understanding and use of Syntonics. I realize it is not scientific research to sketch an idea or theory as hazily as I have here, but time has not permitted a further study and there are advantages in explaining it to you so that you also may work on it.

It is difficult for the proponent of an idea to see its weaknesses and disadvantages and they may be many. In this subject we are faced with several possibilities that cannot be called absolute disadvantages until proved. First, the cell bodies of the thalamus being contiguous, impulses of opposite characteristics may neutralize themselves in the thalamus and excite the autonomic nerve centers and the cortex only slightly. Secondly, instead of a horizontal splitting of the retinal field, we may have a division into an acute central field and a less sensitive periphery. We will have to expand our ideas on the value of macula and secondary vision before we can come to any conclusions here. Third, the action of one part of a set may be too rapid and the other too slow to constitute an effective treatment in the usual given time. It seems plausible that research into these things would give much valuable information concerning present obscure points in our knowledge of physiology of vision, even though it proves our theory wrong.

In conclusion, let me remind you that as Optometrists we deal in the visual aspects of Syntonics only. It has been necessary in this paper to use the entire body as our background as we did in our study of technic. It must be distinctly understood however that our application of Optometric Syntonics is confined to that short inch and a half between the anterior surface of the cornea and the back of the orbit.

Dr. Earle O. Sterzer
216 W. Second St.,
Dayton, Ohio

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