Report

COLOR: Its Therapeutic Power for Rapid Healing

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ABSTRACT

New breakthroughs in the use of color as a healing agent for rapid recovery of trauma, depression, physical pain and spiritual blockages have elevated the power of color for healing. These historical, religious and neurophysiological contexts of color are reviewed herein. Then factors of length of viewing time, brightness, saturation, visual depth perception, angle of viewing, hue, strobic emission and the emotional state of the subject at the time of viewing are elaborated as critical issues that amplify therapeutic effects. When these factors are combined with the recent findings of interpersonal neurobiology to facilitate processes with color a new synthesis for rapid transformation is achieved.

KEYWORDS: Color therapy, trauma, interpersonal neurobiology, color saturation, rapid healing

INTRODUCTION

olor may be the most potent therapeutic agent known to humankind. Recent breakthroughs in the use of visual brain stimulation by color within the new method of Emotional Transformation TherapyTM (ETTTM) have accomplished rapid recovery from trauma, depression, physical pain and spiritual blockages. The new "process color theory" focuses upon the moment to moment process of the interaction between color and human consciousness. This blend of quantum physics and interpersonal guidance is supported by research in both physics and psychology. Emotional Transformation Therapy (ETTTM) uses specific interpersonal guidance in conjunction with the new process color theory.

HISTORICAL AND POLITICAL PRECURSORS TO COLOR THERAPY

While artists revel in the impact of color, only a few renegades within scientific circles have recognized the therapeutic impact of color. For centuries color has played a major role in custom and religion. How did this division about color begin?

In 1665 Sir Isaac Newton stunned the scientists of his day by using a prism to show that sunlight (white light) is actually composed of a combination of numerous colors. An entirely new understanding of the nature of color began with this discovery. Newton postulated that light was composed of particles or what he called "corpuscles." These views possessed an "objectification" of light and color as substances that were separate and external to the human subjective experience. However, in the early 1700s the famous German playwright Wolfgang von Goethe protested against Newton's theory.

Goethe protested the elimination of the emotional and spiritual attributes of color in Newton's conception.⁴ Goethe's book *A Theory of Color* put forth a description of color and light that incorporates the subjective emotional and spiritual aspects of color in such a way that color is literally seen as an internal part of human experience.⁵ In later years Goethe's cause was taken up and

elaborated upon by Rudolph Steiner. His theories have been included in a greater philosophical system that is still used in many preschools today.⁶ There are entire "anthroposphic" communities that are presently active advocates of Steiner.

This pro-color sensitivity and affinity versus the neutral objectification of color is most often seen in several specific divisions of groups of people. In all nine countries I have visited there exists a general gender difference with women having a greater affinity to color than men. Then there is the scientist's versus the artist's division about color. When one white light researcher (S.A.D. and chronobiology scientist) was recently asked about the therapeutic use of color, he stated that he "wasn't interested in any of that California consciousness stuff." While this strong prejudice may warrant some merit because color has been proliferated as a "cure all" by many ungrounded aspirants, the messengers of this view should not be confused with the validity of color as a therapeutic tool.

everal people have developed different forms of color therapy and have undergone various forms of persecution. Darius Dinshah developed his Spectra chrome method that emits colored light directly onto the body. When I tried his approach, on myself, it did work on a portion of the trials but it was usually far too slow for my needs. Dinshah was prosecuted by the American Medical Association for fraudulent medical practice and was imprisoned in spite of his successful documentation of its effects. Harry Riley Spitler developed the "Syntonic" method that uses colored light into the eyes primarily for optometry patients. His approach still has active proponents but is largely discounted by most optometrists today. These political controversies are important to recognize because they partially explain why such a powerful therapeutic agent has been largely ignored by the scientific community.

THE ELECTROMAGNETIC NATURE OF COLOR

Color is a subset of wavelengths of visible light that exists between approximately 400 to 700 nanometers. A nanometer is equivalent to one billionth of a meter and is the standard unit of measurement used to identify wavelengths of light. Although we are affected by many other wavelengths that are invisible

to us, the greatest impact of vibratory activity appears to occur within the visible range of light. Each color occurs within a specific range of nanometers. For example, orange occurs roughly between 589 to 627 nanometers and blue between 436 to 495 nanometers. The sun gives off wavelengths of electromagnetic radiation primarily within the visible spectrum. For this reason almost all living things on earth appear to have systems designed to function with visible light. This may account for the natural potency of the visible spectrum as a therapeutic agent for humans.

COLOR AND RELIGION

olor has played a major role in almost all of the major religions of the world. In order to illustrate this concept, examples from two religions have been selected that illustrate the importance of color in religion. In Exodus 25 of *The Holy Bible*, God gives explicit directions regarding the building of the first sanctuary. In those directions are explanations that clearly state using the colors of blue, violet and scarlet. It would stand to reason that the inside of a church uses this array of color in the visual fields of participants for the purpose of enhancing spiritual states of mind. There are other evidences of color in the Bible but this reference is the most specific and direct.

Within Hindu adherents is a group called Siddha Yoga from which their most famous guru is Swami Muktananda. In Muktananda's autobiography *Play of Consciousness*, he describes the inner perception of specific shapes and sizes of color and their meaning:

- Red (the gross body)—"is eight hands high, the same length of the human body. . . . Equipped with five senses of perception, five pranas, and four psychic instruments, the individual soul inhabits the eyes and undergoes experiences in the gross body"
- White (subtle body)—"is the size of a thumb . . . is the state in which we sleep and have dreams"
- Black (casual body)—"is the size of the tip of the third finger"
- Blue (supra causal)—"is the size of a lentil seed . . . the blue pearl, pure sparking, radiant which opens the center of repose when it arises . . . is the great place of the conscious Self"¹⁰

The Siddha yoga concepts of color involve direct inner perception and appear to be somewhat universal. Several of my clients have reported seeing these colors and shapes but have no background or knowledge of the Siddha Yoga concepts.

THE NEUROPHYSIOLOGICAL RESPONSE TO COLOR

What most people are not aware of is the transduction of colored light from into the eyes and brain, to specific emotion-based neural networks as well as to specific bodily vicinities. There are well known studies that document the neural pathways initiated by light stimulation into the eyes, to the brain and ultimately throughout the nervous system. One route is referred to as the retinal-hypothalamic pathway. However, it has also been found that light travels through microtubules, and quantum non-local principles may explain other phenomena of the effects of light transduction. For example, the color red-orange (not red or orange) has been observed to stimulate the area just below the naval in front of the body, lumbar vertebras four and five in the back and secondarily the trapezius muscles between the neck and shoulders. In this case red-orange light stimulation enters the eyes and is transduced almost immediately to the aforementioned physical vicinities. Therefore, if a change in those physical regions is sought the use of red-orange activates the area and various means of processing often leads to powerful physical symptom changes.

ust as subtle energy has been used in acupuncture, documented in healing processes and shown in biochemical studies, light energy in the form of wavelengths of color can be harnessed to activate bodily processes. The activation can be precisely guided to stimulate, calm, or otherwise change specific bodily experiences often within seconds. In conventional healing systems there are specific fixed channels for carrying the healing agent. For example, Chinese medicine uses meridians or Western medicine uses the nervous system and/or the circulatory system. This author discovered a light system for transfer of energy that creates its own routes for energy transfer as well as quantum non-local functions that use no fixed routes at all and proceeds instantly to targeted physical symptoms. By using specific colors in conjunction with precise types of eye movements, it has been discovered that one can

rapidly affect any particular body part. This article is not focused upon the explanation of this new physical treatment system, but suffice it to say that color is an important component of this powerful new healing method.

ow can we account for the rapid speed of healing with color compared to conventional medicine? Electromagnetic signals such as color are far more efficient than the use of chemicals to facilitate healing. According to cell biologist Bruce Lipton:

In physical molecules, the information that can be carried is directly linked to a molecule's available energy. However, chemical coupling employed to transfer their information is accompanied by a massive loss of energy due to the heat generated in making and breaking chemical bonds. Because thermochemical coupling wastes most of the molecule energy, the small amount of energy that remains limits the of information that can be carried as a signal.¹³

McClare found that the electromagnetic frequencies, such as color, are a hundred times more efficient in relaying information to the cells than physical signals such as hormones, neurotransmitters and pharmaceutical agents. Light travels at 186,000 miles per second compared to diffusible chemicals that move at rates less than a centimeter per second.

SOURCES OF COLOR

Color can be emitted from a reflective surface such as fabric, paper or any object, or from a generated light source such as a light bulb or fire. Assuming that both a generated light source and a reflective light source are equal in brightness and saturation, the colors emitted can have a very similar effect. In terms of impact to the human system, the generated light source is the stronger stimulus. There are certain therapeutic advantages and disadvantages for each light source. The ETTTM method utilizes both reflected light in the form of a specialized spectral chart and emitted light in the form of the Chromapulse device that possesses twelve colors of light emitting diodes behind a specific filter that can both combine colors and alter the brightness. The spectral chart needed in ETTTM possesses extraordinary diagnostic capacity whereas the light device possesses many more treatment capabilities.

COLOR AND EMOTIONAL STATES

One of the key reasons color possesses therapeutic power is that each specific color strongly resonates with specific emotional states. This resonance activates specific emotions so that when appropriate interpersonal guidance takes place the emotional state can progress towards expression and ultimately completion. This is psychologically important because massive recent research in developmental psychology and cognitive sciences now make it clear that affect regulation is the primary source of integration in many brain functions necessary for the development of the formation of the self and almost all stress related conditions both psychological and medical.¹⁵ Therefore, through wielding precise activation of emotional states, the impact of significantly altering numerous psychological states, physiological symptoms and spiritual states can take place.

y selecting the color that resonates with the current emotional state as well as providing interpersonal support and guidance, a powerful synergy occurs in which psychophysiological changes can occur at a depth and speed previously unknown. There are several features of color that expand its therapeutic impact from minimal to maximal. Some of these aspects include the following:

- · Length of viewing time
- Brightness
- Saturation
- Visual depth perception
- Angle of viewing the color
- Emotional state of the subject at the time of viewing color
- Hue
- Strobic emission of color

LENGTH OF TIME VIEWING COLOR

While there are several factors that contribute to color that make it therapeutically significant, much of its impact may not be recognized on a conscious level. The fact that Fortune 500 corporations spend millions of dollars to

research and implement the use of certain colors to affect buying behavior suggests that these sophisticated corporations recognize the impact of color on the psyche. However, for color to yield many of its most potent conscious benefits it often requires an entirely different way of looking at color. A common observation that leads to questioning the potency of color is that we are continually surrounded by an environment of color, yet significant therapeutic changes appear to rarely occur as a result of this exposure. In most daily activities color in one's environment is simply glanced at for a fraction of a second. However, in many therapeutic endeavors the subject is encouraged to view specific colors for an extended period of time. This "length of time" factor is substantially different from one's typical exposure to color on a daily basis. The differential factor of length of time of exposure would explain why painters report experiencing so much more with color than people who simply glance at a color in one's environment.

On a physiological level there are several factors that contribute to the length of exposure as a factor. One factor concerns exposure to the circulatory system. The muscles of the eye move more in a 24 hour period than any other muscles of the body. One estimate is that the eyes move at least 100,000 times each day. This muscular activity requires frequent replenishment of blood through the eyes. The capillaries in the eyes at some points are closest to the surface of the "skin" (eyeball covering) than anywhere else in the entire body—one cell width. This allows incoming light to directly affect the blood in a more impactful way than in other parts of the body. It is known that the entire amount of blood in the body circulates through the eyes approximately every forty four minutes. Therefore, long exposure to a specific color provides a greater physiological impact through the circulatory system in addition to other systems.

Color exposure time can be used as a means to control dosage. Anything as potent as color can be misused by overexposure. Typically this can easily become identified by negative symptoms which usually results in the viewer simply looking away from the color. On the other hand, too little exposure often results in little or no therapeutic benefit. Ultimately one can find the ideal time of exposure for each person. This is determined by moment to moment feedback in the interactive process of ETTTM. As a psychotherapist my sessions are usually fifty-five minutes long which limits the possibility of

overexposure. However, this author has found that when a client appropriately processes emotions that correspond with specific colors, the interaction between the person and the light actually changes the risk of hazardous exposure to much less than simple exposure of color to the person without relevant interaction. It has been consistently observed that color serves as a catalyst to draw forth emotional and physical responses. When these responses are not recognized or processed these symptoms are often attributed to the colors as causes rather than to the dormant issues that the color brought forth.

BRIGHTNESS

Another factor that relates to the therapeutic impact of color is brightness. It is important to distinguish objectively measured brightness and subjectively perceived brightness. There are known ranges of measurable brightness that are harmful to the eyes, on the one hand, and so dim on the other hand that light cannot be consciously recognized.¹⁷ If brightness is held constant and is within a safe range, there are enormous variances of perceived brightness that this author has discovered to have a direct correlation to the degree of intensity of emotion. The more intense one's emotion is, the brighter the color will appear. The consistency of this phenomenon suggests that it may be more than a correlation.

This concept would be of minimal therapeutic value if it were not for the finding that people often lack awareness of their own emotional intensity at a given time. When a color is suddenly perceived to be too bright without conscious recognition of one's emotional intensity, brightness provides diagnostically valid information about dissociated emotionally intense experience before the subject is conscious of his/her own emotional intensity. This provides facilitators an opportunity to predict and then therapeutically prepare the client for affect regulation. The degree of perceived brightness is often attributed to the color intensity of the visual target by the client before the client's own emotional intensity is known. When emotions undergo progress, changes in perceived brightness often take place which provides diagnostic feedback to validate the degree of progress. For example, when perceived brightness decreases to a very low level this usually becomes a means to ascertain the completion of emotional progression. In addition, if a facilitator wishes to increase the intensity of an

emotional state, such as a positive emotion, an increase in the actual brightness tends to intensify the emotional state. Conversely, lowering the actual brightness tends to lower the emotional intensity. Of course mismanagement of brightness risks unnecessary emotional distress and all the consequences that may imply. Therefore, the correspondence between brightness and emotional intensity offers both diagnostic and therapeutic opportunities of precise affect recognition and regulation.

COLOR SATURATION

Saturation of color is a third factor that provides therapeutic value. According to Webster's dictionary "saturation" means "the impregnation of one substance with another until no more can be received." In terms of color, there are, for example, some greens that appear greener than others because there is less white mixed with the green. There exist measurable degrees of color saturation as well as subjectively perceived variations of color saturation. If one uses a near maximum saturated color as the visual target and the degree of color saturation is held constant, perceived saturation will vary according to one's degree of awareness of one's emotional state. My findings have been that the greater the degree of conscious awareness of an emotional state during color exposure, the greater is the degree of perceived color saturation (assuming that the color viewed matches the theme found to be associated with the present emotional state).

This principle can provide moment to moment diagnostic information regarding degrees of dissociation and engagement of awareness of emotional states as they change, disappear from awareness or progress. Increased perceived saturation can not only correspond with increased awareness of the nature of an emotion but, when coupled with extended time of exposure can evoke depth awareness of the scope and origin of the emotional state. On the other hand, reduction of perceived color saturation diagnostically indicates a split between cognitive and affective functions which means that emotional awareness is reduced at that moment.

This concept provides diagnostic information for facilitators who need to understand client reports of varying psychological states within a single session

or over time. Reports on changes in perceived color saturation can provide facilitators of the process information to increase the precision of empathic attunement with the client's emotional state as it changes. Research in interpersonal neurobiological aspects of psychotherapy suggests that this attunement plays a powerful role in facilitating therapeutic improvements. My own finding in clinical observations based on variations of perceived color saturation and associated emotional states revealed suggest that: there are many more types and degrees of dissociation than previously recognized and; dissociation from emotion occurs far more frequently in more people than has previously been recognized.

These diagnostic principles of color saturation can be used in therapeutic maneuvers. Most clients often report variations of color saturation within a visual target. By directing the client to view the more perceived saturated color within a visual target, an increase in emotional awareness is encouraged. This capacity to increase emotional awareness provides a means to rapidly reverse symptoms of adhedonia found in depressed clients who report an absence of emotion or interest in life. During extremely depressed states people report that everything looks drab or "colorless" which can be understood as less saturated. Conversely, if one wishes to decrease awareness, directing the subject's visual attention to the less perceived saturated color areas encourages a decrease of awareness of emotion. Therefore, the feedback from the client regarding perceived changes in color saturation provides precise ongoing information about the status of one's emotional awareness.

PERCEIVED DEPTH

Another factor in a colored visual target that provides psychological impact is perceived depth perception of color. Research on a related phenomena called the "Ganzfeld effect" provides findings related to depth qualities of visual targets to be of profound psychological impact. "Ganzfeld" is a word meaning "homogenized field" coined by German scientists in the 1930's. ²⁰ The initial experimental work was done in a uniform fog environment but the Ganzfeld effect can also take place in a snow environment or any visual environment that looks the same and in which there are no depth visual reference points. Psychologists Donald Hebbs and Robert Ornstein both separately found that

subjects experienced altered states of consciousness, intense emotion and/or hypnogogic images in Ganzfeld visual environments. The general effect was that in an absence of external focal points mental attention refocuses inward allowing new levels of depth psychological awareness to emerge. A modification of this principle is to provide a visual target of reduced surface reflection that increases a perception of depth. This "modified Ganzfeld effect," when composed of a specific color dramatically enhances one's internal psychological awareness related to whatever the present psychological issue may be in that moment.

It is best to provide a visual target that provides this depth perception quality. However, perceived depth perception can also vary from one person to the next. The more perceived depth a person reports seeing, the more psychological depth of awareness of an issue is also likely to be occurring. Therefore, intuition, creativity, memory retrieval and affective awareness are enhanced by this phenomenon, particularly if color is used.

PERIPHERAL VIEWING ANGLE OF COLOR

Another factor that affects the impact of color upon the brain and body is the angle at which light enters the eyes. Peripheral eye stimulation pioneered by this author has been found to elicit specific neural networks of psychophysical information almost instantly. When color is used as a peripheral visual stimulant, very precise neural networks can be elicited, often to the exclusion of all other psychological material. This mechanism possesses profound value in breaking down emotional overwhelm or physical pain into less intense component parts within seconds. The entire range and nature of peripheral eye stimulation is not the focus of this article and can be found elsewhere.²¹ However, suffice it to be known that the angle of the entry of color into the eyes is a significant factor in the therapeutic potential of color.

EMOTIONAL STATE AND THE OBSERVER EFFECT

A sixth and highly significant factor concerning the therapeutic impact of color

upon the viewer concerns the psychophysiological state of the viewer at the time a color is seen. It is this factor that has not often been taken into consideration when scientific studies about the impact of color have been conducted. Therefore, most scientific studies do not adequately reveal the impact of color. One of the essential features of the emotional transformation therapy method is the selection of the color that matches the moment to moment state of mind of the viewer. It is when this appropriate match takes place that resonance between the color viewed and the viewer promotes powerful emotional shifts and numerous sequalae such as rapid physiological, behavioral, cognitive and spiritual transformations. For example, the color green when used during a moment of blocked grief may result in crying that releases physical tension, frees restricted behavior, promotes new understanding, and may shift grief into transcendent states of universal love. Whereas, viewing green at other times may have only a minimal impact.

In psychological testing there is a well known phenomena called psychological projection. For example, in the Rorschach Ink Blot Test it is known that when a subject is asked to describe what is seen while viewing ambiguous ink blot shapes, people will project information from their own minds onto the pictures. There are many other projective tests that are known to consistently reveal accurate meanings about clients' psyches. This phenomenon also occurs when people look at color. This author has repeatedly observed that each specific color draws forth different projections. However, if we go beyond psychological projection theory and take quantum physics principles into consideration, the process takes on new meaning.

In quantum physics the "observer effect" indicates that by the very act of observing or attempting to measure the nature of light results in the observer potentially changing the nature of the light being observed.²² This concept extends beyond sympathic vibratory resonance and beyond psychological projection. The following describes how the interaction with color appears to operate:

- 1. As the person observes color, if the resonant color that matches one's state of mind is used, one projects one's psychological issues on to the observed color.
- 2. This psychological projection may make the color appear more saturated if awareness of the emotion at hand is high, more bright if the intensity

- of the emotion is high, or there may be a change in the perception of the hue if emotions outside the range of the themes related to the color are present.
- 3. Then the perceived change in saturation, brightness or hue evokes a new response to the color which may change the appearance of the color yet again.
- 4. These changes are simultaneously stimulating emotional states to activate progress or dissociate, which again potentially alters the visual target itself.

This overall interaction forms a continuous loop of exchange which bears a strong resemblance to an interpersonal encounter between two people. In the ETTTM method of color therapy a triadic relationship involving the client, the color and the facilitator is believed to exist. Facilitation of the process involves the facilitator managing or guiding the relationship between the person and the color. Many clients report subjective experiences in this visual interaction with color that are much like a hug, a look, or annoyance that one feels with another person. An ultimate bonding occurs when people report an experience they describe such as "I am one with this color." Painters, stained glass workers or other artists that use color often report these experiences but scientists tend to limit the recognition of color to its objectified realm apart from the observer.

COLOR AND BRAINWAVE ENTRAINMENT

A seventh factor that influences the impact of color on the psychophysiological condition is brainwave entrainment. In 1949 it was first published that when light entered into the eyes and the light was strobbing at a rate of 10 cycles per second, for example, one's predominate brainwave pattern would quickly change to 10 cycles per second to align with the light.²³ This phenomenon is referred to as entrainment or photic driving. Through controlling the strobe rate, facilitators can now quickly elicit the brainwave pattern most conducive to a given therapeutic task. When specific colors are selected to combine with certain strobe rates, one can elicit very specific states of consciousness. A contraindication for using strobic light is that it could over-stimulate people and in rare cases provoke photosensitive seizures.²⁴ Through careful medical and psychological history taking one can rule out the strobe option

when it risks seizures. However, strobic light is not a risk for the vast majority of clients. Photosensitive seizures are so rare that this author has yet to have a client who had an epileptic seizure in thousands of subjects that have been exposed to strobic light all over the world, yet trainees of ETTTM are taught to handle seizures if they arise. When strobic colored light is appropriate for use, its capacity to pinpoint precise states of consciousness provides a dramatic ability to quickly access relevant memory, emotion and physical states as well as to rapidly relieve distress.

The continuous loop of exchange between the color and the person viewing it has important treatment implications. Many people want to use light in a similar way that medications are used in conventional medicine. For example, if one is stressed use a violet light to reduce this stress. This approach fails to tap the enormous potential of color although it may provide temporary remediation of symptoms. However, when optimal colors are used while appropriate psychological processing is taking place color "A" may change a person to the extent that moment to moment decisions often need to take place in order to select the next color to match the changed person. Therefore, color remedies often cannot be pre-planned if the most effective outcomes are sought.

In recent years there have been colored light devices with pre-programmed formulas for treatment and computerized biofeedback that uses colored light. While these devices do yield certain benefits, their omission of the interpersonal portion of treatment significantly limits speed, precision and effectiveness of treatment according to abundant research in the neurobiology of brain development.

HUE VARIATION

The eighth factor regarding the therapeutic value of color pertains to its hue or type of color such as whether it is red, green, blue, etc. Observations of hundreds of people, each viewing color during individual therapy, have yielded a rich diversity of responses. However, a content analysis of responses to color stimulation indicates that specific emotional themes are evoked by each color. The expression of these themes occurs along a continuum of the degree to which each person has progressed toward the ultimate expression of that theme.

For example, the color orange has been found to relate to emotional themes related to self-perception. Orange would evoke a sense of invisibility or worthlessness at the least progressed level. Next a more actively expressed position evoked by orange might be feeling rejected, rebellious or self-hate. Further visual exposure to orange along with appropriate interpersonal guidance leads to positions of confidence, independence, or individuation. Ultimately the fourth or transcendent position might be represented in an awareness of one's authentic self, identification with the divine or whatever one's highest sense of self might be. The color orange functions as if it brings forth an entire "file" of information related to self-perception. The file of information for a specific color may possess memories of developmental phases of one's self-perception, specific traumas related to self-perception or significant positive contributions to self-perception.

The first three phases of this sequence of emotional unfolding matches almost exactly with Dr. Steven Porges polyvagal theory of trauma recovery. His theory explains that when a person is in the most compromised phase of traumatization they are in the "primitive parasympathetic" phase that involves the dorsal vagal branch of the tenth cranial nerve. This phase is withdrawn, "frozen," or is generally inactive which is common in states of shock. Then through visual color stimulation and either self-help, interpersonal support or therapeutic maneuvers, the first phase gives way to the second phase of trauma recovery that accesses both the Reptilian and limbic brain functions. This phase is referred to as the sympathetic phase in which disturbing emotional expression becomes expressive, often as fight or flight oriented reactions. Various forms of fear or anger expressions are prevalent in this phase. As the person progresses through these emotions and their accompanying physical and behavioral sequelae with further color stimulation, the person emerges into the third phase of recovery. This phase is referred to as the "modern parasympathetic" and concerns the activation of the prefrontal lobe of the neo cortex; ventral vagal part of cranial nerves V, VII, IX, X and XI. This third phase yields more appropriate social engagement and in many cases completes emotional recovery.25

With the use of color stimulation to assist rapid progress through emotional recovery, a fourth transcendent phase is often likely to occur. Porges does not elaborate on this phase much at all. Therefore, the work of Andrew Newberg

has been selected to represent this phase.²⁶ I refer to this fourth phase as the brain sequence of transcendent function. Through brain scans and biochemical mapping Newberg has mapped exactly how the brain processes transcendent experiences.²⁶ In his description of the process of brain activity in transcendence there is a sequence that bears some resemblance to Porges' three phases before the transcendent events occur.

What Porges has not done is to describe in detail the varieties of expression of each phase and differentiate them according to emotional theme. This author has described each of twelve different themes that occur in the primitive sympathetic phase according to each color's emotional theme. Then the twelve modes of expression as they occur in the limbic phase are identified and finally the twelve emotional themes as they occur in the modern parasympathetic phase. Therefore, process color theory further elaborates on the specific emotional expression of Porges' three physiological phases. For example, in Porges' primitive parasympathetic phase one can either experience depersonalization (far red), rigidity (red orange), powerlessness (yellow), emptiness (green) or a variety of eight other forms of primitive parasympathetic responses. In Porges' second phase red stimulation activates the desire to run, yellow the desire to fight, green the desire to cry, blue the desire to verbalize, or eight other responses that combine Reptilian and limbic brain functions. A detailed description of how each of the twelve basic colors correspond to specific emotional themes has been identified through years of observation with hundreds of clients. This elaborate mapping of color is too comprehensive to include in this paper but is taught in the formal training of ETTTM. Instead selective examples will be used to portray these concepts.

Visual color stimulation serves to resonate with each of these precise emotional themes in such a way as to activate emotion progressively through the phases of recovery. In this manner appropriate color stimulation coupled with optimal interpersonal guidance encourages the natural recovery system to take place at a speed and depth not usually occurring without assistance.

There is an interesting conflict regarding hazards and side effects of visual color stimulation in scientific trials versus psychological processing. Viewing a specific color can produce eye discomfort, headaches or a variety of other symptoms. However, when appropriate processing of issues and emotions takes

place, the physical symptoms rapidly disappear. For example, this author often conducts live demonstrations with people who report that fluorescent lights feel oppressive, agitating and produce physical tension. There exists research that has produced evidence that these lights damage the eyes. However, when people who possess these symptoms are asked to describe any relationships in their present or past that also made them feel oppressed or agitated, subsequent to their verbal expression about these relationships, symptoms regarding reactions to the fluorescent lights reduce or become eliminated within minutes. What appeared to initially be a reaction to the fluorescent lights turns out to be a surfacing of unresolved distress that the light simply brought forth. The fluorescent lights are simply a catalyst not the cause of the distress. The same principal is true for any color light. If the issues brought forth by the light are processed to fruition, the physical "hazards" become eliminated. Therefore, scientific studies that simply expose people to a colored light without any appropriate processing reveal hazards that do not continue to occur during appropriate processing.

The predominate issue in this scientific versus therapeutic exposure to color light relates to the effects of blue light. For example, one study reported that "high levels of exposure to blue or visible light may cause ocular damage, especially later in life and may be related to the development of age-related macular degeneration." Okuno and Saito reported that high levels of blue light may cause a photochemical injury to the retina. Gasyna, Rezaei, Mieler and Regai found that blue light induces apoptosis in human fetal RPE cells. On the other hand, Brainard and associates found that blue light has four times the effect of other colors on the circadian rhythms as measured by the secretion of melatonin. It must be taken into account that these researchers are using significantly bright lights and extended exposure which is not used in ETTTM. However, the scientific trails did not take psychological processing into account when conducting these trials. Therefore, the findings regarding high risks involving blue colored light has been found to be a non-factor in ETTTM processing.

While each color is a potentially powerful therapeutic agent, precise combinations of colors of generated light emitted into the eyes has been observed to possess an even greater potential. Each of the basic colors resonates with specific emotional themes and specific bodily regions. However, in actual practice more than one emotional theme tends to occur simultaneously. This author discovered that one can use multiple colors simultaneously to match multiple emotional themes that occur simultaneously. When this matching of colors to emotions occurs, the resulting resonance creates an even more substantial impetus for progression through unwanted emotional fixation than the use of single colors for single emotional states. This type of multiple resonance often yields more rapid, in-depth and longer-term changes than previously thought to be possible in psychotherapy. For example, a person may not only feel sad about a divorce but angry and frightened about potential intimacy with possible future partners. These three emotional states, when stimulated to progression simultaneously, allows for a greater, more rapid change than attempting to shift each emotion one at a time.

In most cases the appropriate application of a single color at the time an unwanted or fixated emotional state arises is enough to facilitate constructive change. However, in more complicated cases in which the affect has become buried into implicit memory all of the aforementioned strategies may be necessary for resolution. The following case illustrates how this method can facilitate change that is typically elusive to other techniques.

CASE STUDY

Barry is a 60 year old married man who presented with a preoccupation with death in conjunction with breathing constriction and tension in the throat and face. He reported having seen the movie *The Cider House Rules* in which one scene included a physician sniffing ether to get high.

When I saw this scene I immediately became extremely uncomfortable. I wondered how the doctor could sniff that ether without being terrified of dying. All I could think about was the fear of dying. My whole body was shaken for several hours after seeing that scene.

During a brief history intake it was found that Barry had experienced a tonsillectomy when he was three years old. He hypothesized that the tonsillectomy was related to this experience but after numerous therapeutic attempts he was unable to access the memory or change the symptoms. My initial techniques

were also unable to access these issues and emotions related to this experience. Then I dialed the flicker rate to different strobe rates until I found one in which his body reacted. Specific colors of visual stimulation of were systematically brought forth until the combination of far red, blue and indigo provoked the precise response to his symptoms. At a delta brainwave state of 1.2 cycles per second, viewing these three combined colors, Barry reentered the exact state of consciousness in which the ether-tonsillectomy experience took place. After the initial awareness of the death fear, his experience progressed to a profound ecstatic state of joy within a couple of minutes. Barry reported a sense of being bathed in love. He called it a near-death experience.

As Barry attempted to explain his experience it became clear that he was fixated in fear from the trauma of the ether mask. When this trauma was reentered, it progressed into the realm of ether intoxication and ultimately to a freedom from his long-held fear. This ecstatic state was later repeatedly recaptured by using the same light combination of colors and flicker rate again.

In this case, several attributes of the therapeutic use of color illustrated how it was beneficial in a case that was previously therapy-resistant. When factors of depth perception and strobe rate color can become the ultimate means for retrieving implicate memory and buried emotion. This case also showed how specific colors could be used to resonate with the exact emotion and physical experiences to progress a previously fixated experience forward in time. Specifically far red activated the death fixation while blue and indigo activated the physical experience of the ether mask on his face. Barry was fixated in a primitive parasympathetic phase when color catapulted through all of Porges phases into the transcendent phase.

THERAPEUTIC APPLICATIONS OF COLOR

What can color stimulation accomplish therapeutically? When color is used in various combinations, our clinical trails have yielded benefits that apply to a broad range of applications. Breakthroughs primarily in terms of speed of treatment but also as long-term changes have been consistently observed and are awaiting scientific trials. These include:

- Rapid long-term relief of long-term major depression.
- · Rapid long-term relief of posttraumatic stress disorder.
- Rapid long-term relief of panic disorder.
- Rapid long-term relief of seasonal affective disorder (SAD) within one to ten sessions.

More specifically relief of overwhelming affective flooding takes place within seconds as does relief of cognitive "racing" or confusion. Powerful changes from worthlessness to worthiness can occur within minutes. Symptoms of adhedonia are often alleviated within a single session.

The relief of physical symptoms has become one of the most dramatic findings, particularly in the realm of chronic physical pain. Typically physical pain that has endured for years often ceases by the end of the first session. However, long-term relief usually requires a series of sessions. Medical conditions such as osteoarthritis, rheumatoid arthritis, chronic fatigue syndrome and fibromyalgia are often rapidly changed by resetting the brain pattern associated with these conditions through visual color stimulation. However one of the most extraordinary findings pertains to the profound spiritual phenomena that are consistently observed. Through the use of color in ETTTM we can literally activate transcendent experiences upon demand. However, there are protocols for making sure the client has resources to tolerate such euphoric states.

While color itself possesses enormous potential for healing, its potency is rarely utilized. Then when factors of viewing time, brightness, saturation, depth perception, angle of viewing view, and the emotional state of the subject are optimally utilized, an amplification of its effect launches its capacity to extraordinary levels of healing. Color is no longer just an outside stimulus applied to acquire an effect but instead a portal into exceptional healing and higher states of consciousness.

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