ART EDUCATION AND THE ENERGY
DYNAMICS OF CREATIVITY

THESIS

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The energy dynamics of creativity are the metaphysical foundations upon which the theory of holistic aesthetics was built. Traditional inquiry into creativity has been concerned with the isolated issues of either the process, technique, product, creator, or environment in which creation occurs. The aesthetics presented herein provide the art educator with an alternate approach and attitude.

The absolute presupposition from which the theory develops states that "there is naught but energy, for God is life." The resulting model which incorporates the rationale of the physics of light is designed to illustrate relationships between the creator and the energies of creativity. Educational applications and significance of the model are described in terms of light and color; these practical implications lend themselves to empirical testing.
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PREFACE

The Theory of the Evolution of Light is a basic postulate of my theology. Alice A. Bailey states that the Evolution of Light is "the object for which life takes form and (that) the purpose of manifested being is the unfoldment of consciousness, or the revelation of the soul." She continues to say that:

When it is realised that even the modern scientist is saying that light and matter are synonymous terms, thus echoing the teaching of the East, it becomes apparent that through the interplay of the poles, and through the friction of the pairs of opposites light flashes forth. The goal of evolution is found to be a gradual series of light demonstrations. Veiled and hidden by every form lies light.

The conceptual understanding of light or radiation as an affect of the interplay between a life and the environment is paramount to metaphysical inquiry. The metaphysical perspective from which the theory of holistic aesthetics evolves results when certain basic material and spiritual concerns are combined. Will Durant aptly describes this position wherein the core of all things is more akin to mind than to matter, where life and mind are inextricably bound with matter, and all higher or more complex structures have evolved from lower structures of less complexity.

The esoteric science upon which the metaphysics of this study builds includes the following assumptions:
a. The human being is an aggregation of energies and forces, emanating from or working through his immediate state of consciousness.

b. Consciousness is the evolutionary principle in life.

c. Energy follows or conforms itself to thought.

d. A living continuity between that which humankind calls God and Man exists, and Man because of his innate divinity is able to become increasingly aware of that basic relationship.

e. And, that the soul exists.
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Welcome, O Life! I go to encounter for the millionth time the reality of experience and to forge in the smithy of my soul the uncreated conscious of my race (4, p. 17).

The energy dynamics of creativity are the metaphysical foundations upon which the theory of holistic aesthetics is built. Energy consciousness is not a traditional concern in art education, and yet,

... in any consideration of the human being - whether we regard him simply as a man or as a spiritual entity - we are in reality dealing with a most complex aggregate of differentiated energies, through which or among which the consciousness plays (2, p. 411).

These energies are externalized and recognized as the differentiated goals and general objectives of conventional art education: 1. perceptual development in order to recognize relationships, with emphasis placed on visual perception, 2. participation in art related activities for the sake of enhancing human experience, 3. technical production of art work which includes the knowledge and application of design concepts through a variety of media, 4. academic inquiries into historical content and concepts of art through knowledge of vocabulary, stylistic trends, major figures, and 5. artistic evaluation, criticism and aesthetics.
Each individual is a vital focus through which the energies and forces of life, humanity, and environment become clarified, intensified, and synthesized. A conceptual understanding of such holism is intended to assist the average classroom teacher at the level of individualized instruction within the classroom. It is not necessary that the instructor believe in my theological perspective in order to apply the concept of energy dynamics in the classroom, nor does the student need to be taught the theory in order to realize the individual benefits. It is necessary that the educator be concerned with producing a total person who is an integrated individual.

To the extent that all human life is a product of the ultimate creative act of conception, creativity and the resulting implications are primal to the nature of the human race. "Man's consciousness of himself as a creative being is a primary, rather than a derived consciousness. Doubt of man's creative power is a self-conceited reflection, a morbid egotism" (3, pp. 13, 103).

Man appears to be most completely fulfilled within the definitions of a purely spontaneous experience that results in a creative statement; it appears to be mentally, emotionally, physically, and spiritually satisfying. Because of the interrelationships of the body, mind, and spirit of man, as well as their common element of a life force, creativity is a
perceivable expression of the source of all physical, mental, and spiritual potentials.

The holistic relationships of creativity, artistic process, and production may be synthesized and represented as a system through the dynamics of energy. There are energies and fields of energy to which humanity responds, to which man is attached in some subtle way, and from which the vitality of life comes. These are the forces that are proposed to be the energies of creativity and those with which the educator works in order to instruct the student.

The scientist is announcing the fact that there is naught to be seen and known save energy, and that all forms are composed of energy units and are in themselves expressions of force (l, p. 315).

Thoughts, emotions, words, and sounds are kinds of energy. The individual is a biophysical aggregation of energies and forces. The artistic product is energy; the artistic technique is energy manipulation. The environment of creative experience is an assimilation of all energies present, and so on. All components of the artistic process may be described in terms of energy.

Art education is, in my opinion, directing the human potential for self-realization through sensory discrimination; it is absolutely critical to the evolution of man. If all that exists may be described in terms of its energy, sensory discrimination is the perception of energy. Perceptual development is a conventional emphasis in art education;
perceptual development with the intention of energy perception is a qualifying of the same artistic tradition. If creativity is the actualization of human potentials for self-expression through a process of energy discrimination on the part of the creator, then a theoretical understanding of such energy dynamics is critical to any theory of art.

The sensory apparatus of the human being is going through subtle and yet radical changes that are establishing a definite channel between man and that which comprises his environment. Such sentient awareness occurs in "two directions: outwards toward the environment... and inwards toward the higher progressive impulse, which leads to the definite expansion of consciousness" (2, p. 321). Sentient response to these conditions which exist is creative response through energy discrimination which results in the acquisition of knowledge. With this more expanded definition, sensory response to any and all stimuli may be recognized for what it is, creative growth.

As educators, we are concerned with the total sensory response of the body, mind, and spirit of a student. We are obligated to extend ourselves in order to understand what the trigger mechanisms are for sentient response, and are, therefore, committed to exploring numerous explanations for the phenomena of creative growth.

Traditional inquiry into creativity has been concerned with the isolated issues of either the process, the product,
the creator, or the environment in which creation occurs. Contemporary aesthetic concerns continue to deal with such separation and specialization of purpose. This approach has limited the effectiveness of aesthetics and art education in general by misrepresenting the synthetic purpose of its own existence. The resulting misunderstanding of creative intent has issued forth a demand for holism. Those who isolate the elements of creative growth must recognize the urgency toward synthesis in creative learning and production. Conventional wisdom concerning aesthetic inquiry and creativity must be expanded to include the total being, the body, mind, and spirit of humankind.

The issue of holism is critical to all education and applies especially to the arts and their place in contemporary education. There exist chasm after chasm between the concepts of 'the basics' and that which is 'cultural enrichment'. It is essential that the ways in which mankind learns, knows, and expresses himself be synthesized, and that education embody the forces of integration. Creative learning, knowledge, and the resulting expressions are paramount evolutionary concerns. Although its application is not limited to a particular academic sector, the theory of holistic aesthetics is focused through general education in the arts. Synthesis in art education is the conceptual concern which is developed and presented at length in this study.
Art education is designed to stimulate the human receptors for maximum awareness. If all that exists is some form of energy, the educator should be concerned with the dynamics of energy. In order to illustrate some of the relationships between the individual and the energies of creativity, a model has been developed which at best is a theoretical framework around which to build scholarly curiosity. The resulting system of energy discrimination is reinforced through philosophical literature and the physics of light. (See Chapter III.)

The following facets of building and applying a theory of holistic aesthetics will be explored in this paper:

1. Does a reasonably believable system of energy integration to and through an individual exist; and, if so, how, if at all, does it relate to art education?

2. To what extent, if at all, are energies absorbed, synthesized, and transmitted from person to person, creator to creation, environment to individual, and so on?

3. Can energy be dealt with in terms of light and color within the classroom environment in order to apply the theory of holistic aesthetics?

4. Is there any physical rationale for my belief that additional considerations of the subtle creative environment are needed for optimum student receptivity?
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CHAPTER II

THE DEVELOPMENT OF A THEORETICAL MODEL
OF THE ENERGIES OF CREATIVITY

The Philosophical Premise
of the Model

The absolute presupposition upon which the model is built is, "There is naught but energy, for God is life" (3, p. 585).

The roots of such physical, metaphysical, and occult concerns may be found in antiquity and the world view of the Egyptian School of Ancient Wisdom, the Essenes, the Tibetan Masters, and the Rosicrucian Order. (Occult refers to the hidden forces of being.) Contemporary Occidental awareness of these traditionally Eastern thoughts was initiated by Helen Petrovna Blavatsky in 1888, when she completed writing The Secret Doctrine.

The aim of this work may be thus stated: to show that Nature is not 'a fortuitous concurrence of atoms,' and to assign to man his rightful place in the scheme of the Universe; to rescue from degradation the archaic truths which are the basis of all religions; and to uncover, to some extent, the fundamental unity from which they all spring; finally, to show that the occult side of Nature has never been approached by the Science of modern civilization (8, p. viii).

The Cosmogenesis and Anthropogenesis of The Secret Doctrine presented the West with an Esoteric Buddhism that
was followed and expanded to become the theology of Theosophy. The impact of the words of Theosophists Annie Besant and Charles Leadbeater greatly altered many schools of religious and philosophical thought in England and the United States during the early part of the twentieth century. A unity of spiritual thought established the foundation upon which the Esotericist, the traditional Christian, the Spiritualist, the Vitalist, the Easterner, and the Mystic could build. And, build they did. During the past ninety years since the publication of The Secret Doctrine, numerous schools, religious groups, sects, institutions, and individuals have felt the effect of Blavatsky's words. Much of what has been termed 'New Age' thought, religion, and education is a descendant of the Occultism of the late nineteenth century.

The Theory of the Model

The forces of temporal-spatial existence are apparently accelerating changes in the sensory apparatus of the human being. These 'changes' relate to extra-sensory perception and are creating a definite channel between humankind and its collective environment. Perceptual education of human sensitivity involves a reorientation of our faculties and a new vision concerning materials, energies, tensions, and their social implications (12, p. 81). The theory of holistic aesthetics builds a synthesis in art education through sensory
discrimination and encourages a perceptual alternate to traditionally experiential art education.

A flash of light breaks through to the aspiring mind; a sense of unveiled splendour for a moment sweeps through the aspirant, tensed for revelation; a sudden realization of a colour, a beauty, a wisdom and a glory beyond words breaks out before the attuned consciousness of the artist, in a high moment of applied attention, and life is then seen for a second as it essentially is. But the vision is gone and the fervour departs and the beauty fades out. The man is left with a sense of bereavement, of loss, and yet with a certainty of knowledge and a desire to express that which he has contacted, such as he has never experienced before. He must recover that which he has seen; he must discover it to those who have not had his secret moment of revelation; he must express it in some form, and reveal to others the realized significance behind the phenomenal appearance (5, p. 248).

The accumulation of experience is synthesized through creative expression as are the influences of culture, environment, family inheritance, individuals, and other physical worlds realities. Each individual is a vital focus through which the energies of life, mankind, and environment become clarified, intensified, and integrated. In order to illustrate this synthetic relationship, a model has been developed. Graphic illustrations are being used in order to facilitate an understanding of the theory of holistic aesthetics.

Referring to Figure 1, page 12, the model is a sphere which contains all existing energies, known and unknown. This sphere of conditions which exist contains infinite points of extended energy which constitute the whole.
In the very center of the sphere is the point source for the energies which exist; it is a radiant source and expresses an energy field. The outer most shell of this sphere is the limit of its influence.

The Sun is the heart of the Solar World (System) and its brain is hidden behind the (visible) Sun. From thence, sensation is radiated into every nerve-center of the great body, and the waves of the life-essence flow into each artery and vein. . . . The planets are its limbs and pulses (8,p.541).

The first energy aspect or primal element for consideration is simply called the source for conditions which exist. No attempt is being made to infer an awareness of all conditions which exist, it is merely a statement to acknowledge the existence of conditions which exist and their source. This source is also viewed as the ultimate source and most perfect potential for creative expression. Within the model, the source for conditions which exist will be the point from which to begin the process analysis, although, it is understood that this is not a theological Beginning, but simply a point from which to begin.

The term energy is being used in its most liberal interpretation to mean any and all of the infinite forces, fields of influence, physical energies, and subatomic substances. Energy is further defined by the illustrative use of light in the model. The use of light per se relates directly to the educational applications of the theory, to the physics of light, and the relationship between the energy of light and the energy of matter.
The sphere of conditions which exist contains infinite points of extended light which constitute the whole.

A cross section of one's life experience, the outer most ring is the 'now'.

Fig. 1--The individual within the sphere of conditions which exist
For the model to exist in time and space, it is being represented as an ever-expanding point of light. Traveling through time and space, the continuous motion of the sphere is seen as a cone. The outer shell is the 'now' of experience. Between the 'now' and the point source are all of the infinite combinations of human experience. (See Figure 1, page 12.)

Each point of light contained within the sphere of conditions which exist is equal to one individual's life experience. The spheres of experience which are unique to each human accumulate at the rate of the speed of light. The symbolic representation of Picasso's life experience in Figure 1, indicates a random choice of experiential spheres for the sake of graphic illustration. A more accurate diagram would show a continuous ring of experience from his birth in 1881 to and through 1973 when he died. In cross section, the center point is the energy source and the outer most ring is the 'now'.

The sphere of conditions which exist is a collective representation of the universe. The source expresses three major influences from which all lesser energies are derived; each influence within the whole has the same volume and potential. Referring to Figure 2, page 14, the core energies immediately surrounding the source are called the life force. This influence is the pure energy of potentiality. The middle band of influence within the whole is the energy of human-kind. The outer most band is that of the environment.
The sphere of conditions which exist is subject to three major influences:

a. The life force energy band,
b. The humankind energy band,
c. The environmental energy band.

The relationship between one's life experience and the influences of the whole is illustrated as interpenetrating parts contained within a sphere of light.

Fig. 2--The three major energy forces
The relationship between one individual's life experience and the influences of the whole is also illustrated in Figure 2.

Each of us is immersed in a sea of sentient forces which have their effect upon us because - under the Law - we have appropriated for our own use a portion of that universal energy, through the medium of which we are en rapport with the whole (7, p. 321).

The energy progression from the point source to the individual and the environment indicates that the nearer to the source, the more rapid the rate of energy vibration. Conversely, the slower vibrations or frequencies that are realized at the limits of the environmental energy band are furthest from the source. In order to color code these various frequencies, the spectrum is represented as two rainbows bridged by the band of humankind.

The Model and Cultural Groupings

The collective human being is viewed as the apex of planetary life and is represented as a spheroidal field of energy. A point source exists within the sphere and is the energy source from which humankind evolves. Contained within the sphere of humanity are infinite points of extended energy each of which represents one individual life.

The individual does not exist as an island, but is a part of and strongly affected by his cultural inheritance. Unique to each culture is the amount of influence which it expresses not only within itself but in exchanges with other cultures. The variables of cultural impact are illustrated
in Figure 3, page 17. The point source of cultural origin and that of humanity is extended in time and space and the limits of cultural influence are represented as spheres of influence. Cultural interaction between two or more cultures or subcultures is also viewed as interpenetrating rings of influence.

These spheres of cultural experience which are unique to each group accumulate at the rate of the speed of light. In cross section, the center point is the source of origin and the outer most ring is the limit of its planetary impact since its conception.

Cultural contributions are viewed as radiations of energy that are being expressed and absorbed, to some extent, by those individuals contained within the limits of its influence. Interactions and cross-cultural groupings are represented as intricate patterns of energy integration. This radiant activity of the planetary life, cyclic in nature and eternally present, is closely related to subtle levels of radiation. These spherical radiations "set up rings of interference as the individual absorbs the sum total of the available radiant energy around, within, through and beyond him" (3, p. 245; 15, p. 50).

The cultural inheritance of any group may therefore be illustrated as overlapping rings of influence; the ebb and flow of cultural contribution is explained through their interference with one another. The wave pattern formed by two
Cultural interaction is represented as rings which interpenetrate each other.

The limits of each culture are equal to its effective influences in time and space. The outermost ring is the 'now'.

Fig. 3--The energies of cultural influence
pebbles that have been thrown into a still pond clearly illustrates this concept. One pebble thrown into the pond distorts the water forming concentric rings around the point at which it enters. In cross section, these radiatory waves are seen to have sequences of crests and troughs. Undisturbed, they propagate across the water. If two pebbles are simultaneously thrown into the once again still pond, the wave action is begun at two points, each expressing its own pattern of crests and troughs. As these waves propagate across the water's surface, they converge at certain points where they will cancel or reinforce one another. Through analogy, the areas of interference account for the cyclic patterns of cultural production or inactivity as well as cross-cultural activities and subcultural groupings.

These radiations continue with each subculture expressing the sum total of each regional influence which expresses the energies of each family's influence and so on. Every symbol of the culture, such as vocabulary, music, dance, science, philosophy, and art, radiates influence. The creative contributions of each culture and the planetary whole may thus be attributed to these intricate patterns of interfering energies. The universal influences of life force, humankind, and environment interplay as constants; the effects and impressions of the individual are the eternal variables.
The Model and the Individual

Realization that our whole knowledge of the universe is simply a residue of impressions clouded by our imperfect senses makes the quest for reality seem hopeless. If nothing has existence save it being perceived, the world should dissolve into an anarchy of individual perceptions. But a curious order runs through our perceptions, as if indeed there might be an underlayer of objective reality which our senses translate (1, p. 21).

The brain is responsive to the seven senses of hearing, touch, sight, taste, smell, the mind (the common sense), and intuition or the synthetic sense (3, p. 132). The sensitivity of one individual to these various energy impulses occurs as a result of the interaction of multiple rings of influence. The momentum of myriad energies and forces actuates areas of intensity as well as relative voids. A representation of wave interference most clearly demonstrates the idea. Each symbol, individual, action, experience, and expression has a ring of influence which is an expression of its intensity and limits of impact. These influences create patterns of interference as they interact, blend, fuse, or negate one another. While one individual may be in a cycle of intense sensitivity to these rings of influence, another individual might be in a trough or space of negation and therefore, insensitive to the rings of influence. Such a phenomenal representation accounts for the various ways in which perception and creative manifestations differ. These cycles of influence are in conjunction with the three major influences of the whole and account for the individuality of persons and their respective creative expressions.
The Model and Creative Process

The band of human energies is divided into the three traditional aspects of spirit, mind, and body. The spiritual nature is closest to the life force and the body aspect is closest to the environmental influences of the physical world. The mind aspect is seen as the integrating focus through which all energies pass from the life force as well as the human and environmental energy bands. (See Figure 2, page 14.) No particular color is assigned to any aspect of the human field of influence. Each individual expresses energy in terms of his own aura which is unique and constantly changing with that individual (9).

When we speak of energy there must be that which energises, that which is the source of energy and the origin of that force which demonstrates in matter (2, p. 38).

At the level of the individual, the pre-creative phase of the creative process compliments the spiritual or higher nature. During this cycle, the creator responds in a sentient manner to conditions which exist with the resulting effect being the acquisition of knowledge. Such awareness is a perceptual sensitivity that is a knowing beyond that of a mental process. These rings of experience are expanding from the point source to the moment that precedes a conscious, subconscious, or superconscious knowing of creative intention. Once the creative intent is realized as a thought, a mental pattern for the physical expression is built; this is the
creative phase. The post-creative energies are the radiations of production which are synthesized as soon as the individual decides to externalize the pattern in a physical way. This phase compliments the body aspect of man. The creative process is the result of sequences of energy stimuli which are received, absorbed, and expressed to a greater or lesser extent by the individual.

The Creative Spirit, though it is working in and on all men at all times, is not always at uniform pressure.

In keeping with the wave-like texture of the universe we may expect rhythmic motions—culminations and depressions. At the culminations we may expect an intoxicating ecstasy of delight, and in the trough a divine tranquility. But all will be pulsing with the Creative Spirit of the universe. All will be surrounded and permeated by the air we breathe. And every activity will derive its significance from the highest culmination (15, p. 263).

The phase factors of pre-, during, and post-creative activity are behavioral constants. The pre-creative energies are drawn principally from the life force. The creative phase of mental activity draws energies from the realm of humankind, the collective spirits, minds, and bodies of the race. The product aspect of post-creative energies relates to the environmental band of influence.

These three phases of cyclic activity are also recorded as rings of influence and relate to the individual, his family, cultural group, and so on. The pre-creative energies are those extremely subtle causal experiences that occur prior to the ring of conscious recognition of the pending experience.
Foreknowledge and its recognition are experiential aspects of mental process. The energies of creativity are present in the rings of experience that precede the moment of actual completion of the art product. The post-creative phase of creative experience is within the physical environment and exists from the point of completion through the ring of past influence or the 'now'. These rings are basically contained within the cultural group experience and its influence.

The alchemy of self-expression is the magic of energy discrimination and manipulation through the vehicle of man. There are simultaneous actions of energy that occur in conjunction with the mind aspect of externalization. These energy patterns compliment the spirit and body aspects of humankind's septenary nature. This evolutionary pattern toward complexity is seen in man's seven bodies or vehicles of vitality, the seven corresponding planes of consciousness, and the seven major centers or chakras through which energy is received, assimilated, and transmitted to the physical body. (See Figure 4, page 23.)

The seven vehicles of vitality are separate but interpenetrating energy fields of vibratory influence. It is a direct result of the rate of vibration that does or does not enable the physical eye to visually perceive each body. The eye's sensitivity is limited to the frequencies of visible light only; there are many energies that exist beyond those
Fig. 4--The seven major energy centers

Crown Center
Brow Center
Throat Center
Heart Center
Sacral Center
Solar Plexus
Base Center

Fig. 4--The seven major energy centers
of light and color, but the eye does not respond to their vibrations (13, pp. 24-31).

The physical body is the dense sum of that which composes the organism (the atoms, molecules, organs, and systems, each with its own individual vibration, activity, and ring of influence). The etheric body is the subtle half of the physical body; it is the energy field which supports the physical systems and without which the physical body would be formless and lifeless (10, p. 6).

The emotional or astral body is also one of the subtle bodies and is composed of a collection of atoms vibrating at high frequencies that occasionally emit visible light and color. The astral body is created by the individual's desires as well as emotions and is for the majority, the quality determining factor in life. This body molds the physical body by guiding it toward fulfillment of desires. This is the body of expression and experience that responds either by sensations surrounding the person or the reactions and feelings of the physical senses (10, p. 10).

The mental body is one mechanism and expresses both concrete and abstract mind which correspond to the respective left and right hemispheres of the brain. The individual produces his own mental energy field from the energies of the material world that he uses in his mental process. The mental body forms the areas of intelligence, formative reasoning, volition, and the basis for learning (10, pp. 13-14).
The body of intuitional awareness is the quality of Universality; it is the energy form of the prerogative of the soul to express illumination, understanding, and love (14, pp. 222-226).

The spiritual body is the externalization of the soul (14, pp. 376-379, 386).

The monadic body or monad is the consciousness of the theological One functioning in Its Own Awareness (7, pp. 40, 119).

The Divine Body encompasses complete Fusion with That Which Is Divine and is beyond conscious comprehension (7, pp. 240, 278, 403-404).

The seven planes of consciousness to which the seven bodies correspond are: The dense physical or etheric plane, the emotional or astral plane, the mental plane of concrete and abstract knowledge, the plane of intuitional awareness, the spiritual plane, the plane of the monad, and the Divine Plane (6, p. x).

The seven major centers or chakras through which energy is received, assimilated, and transmitted by the physical body are representative of the creative action of energy. (See Figure 4, page 23.) Each center has a specific organ of the endocrine system to supply, and a specific function to perform (11, pp. 3-13). At the physical level, these centers relate closely to those focus points being used in acupuncture. In relation to the physical body, the chakras are
sited as follows in the etheric body and are generally as-
sociated with the color noted: The base of the spine center
energizes the adrenal glands and is associated with the color
red. The sacral triad which energizes the gonads is associ-
ated with the color orange. The solar plexus which energizes
the pancreas is associated with the color yellow. The heart
center which energizes the thymus is associated with the color
green. The throat center which energizes the thyroid and para-
thyroid is associated with the color blue. The brow center
energizes the pituitary body and is associated with the color
indigo. And, the crown of the head center which energizes the
pineal gland is associated with the color violet (10, p. 15).

With the choice to externalize the mental or etheric
pattern, the energies of personal will are activated within
the physical and etheric fields. According to the individual's
evolution of consciousness and the energy center through which
the increased forces flow, the quality of the creative 'energy
product' is determined. This transference of energy from the
lower chakras to the higher centers is a function of the per-
sonality. During this activity (See Figure 5, page 27.), the
energy of the base of the spine center (the organ of personal
will) must be raised and carried up the spinal column to the
head center via the brow. The energy of the sacral center
(governing the sexual life and the organs of physical crea-
tion) must be raised to the throat center, which becomes the
organ of creative activity of a non-physical nature. The
Fig. 5--The creative energies of personal will
energy of the solar plexus (the organ of self-conscious personal desire) must be raised to the heart center and there transmuted into service (4, p. 523). This ritual compliments the body aspect of the trinity of mankind.

At the level of spirituality, the individual's receptivity to the inflowing energies of Divine Will or Purpose determines the motivation for creative expression. The channel of approach through which these energies flow to the physical body is recognized as the following ritual of light (See Figure 6, page 29.): The Energy Source of Divine Will radiates to the conscious level of abstract cognition. It then flows to the knowledge aspect of the soul at the level of intuition. The energy continues to the vortex of concrete cognition and on to the astral energy field (the vehicle for collective emotions). The Will Force then passes to the throat center and immediately thereafter to the sacral center. From the sacral center, the energy is raised again to the throat center where the urge for physical creation is transmuted into artistic creation in some form or another (4, p. 388). This ritual compliments the spirit aspect of the trinity in man and completes the energy dynamics of the individual creator.
Fig. 6--The creative energies of Divine Will.
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CHAPTER III

THE PHYSICS OF LIGHT

According to the laws of physics, the rationale exists for building the theory of holistic aesthetics based upon the physics of light.

Light or visible energy describes only a small portion of the entire electromagnetic spectrum of physical energy. The radiations that are emitted from a luminous body, such as our sun, travel throughout space in a rhythmic vibration in the form of waves. The word wave is used when the physicist "has in mind one particular type of process by which an influence reaches out or is transmitted from one body to another" (3, p. 1). The point or distance from crest to crest of these vibratory waves is called the wavelength and the 'beat' or rate of vibration is known as the frequency. The wavelengths of various energies differ greatly; each rate of vibration determines the type of electromagnetic energy and its corresponding properties (5, p. 20).

The group of electromagnetic radiations in order of decreasing wavelengths are as follows: Alternating currents, radio or Hertzian waves, micro-waves, infrared radiations, white light, ultraviolet radiation, x-rays, gamma rays, and secondary cosmic or space rays. White light, the phenomena
of visible electromagnetic energy, lies within a region of wavelengths between approximately 4000 and 7000 Angstrom units (One Angstrom, A, equals 10^{-8} centimeters.) Sensitivity to light is dependent only on each individual human's eye. Beyond these wavelength boundaries, ordinary human vision becomes insensitive to the vibrations of electromagnetic energies (2, p. 22).

The eye's sensitivity to light stimuli varies with their wavelength. . . . The energy of radiation being equal, green light of 5550 A registers the brightest. Sunlight contains all the possible visible wave lengths as well as others far beyond the range of visibility, but the peak value of energy in the spectrum lies in the green band, the point at which the eye of man . . . is most sensitive.

Almost 40 per cent of the total radiation of the sun consists of visible light (6, p. 135).

According to a widely accepted theory, the reflected light that comes within our field of vision passes through the cornea and crystalline lens of the eye to stimulate three distinct nerve receptor systems which lie in the retina. Each of these is sensitive to wide ranges of the spectrum but has greatest sensitivity to red, green, or blue wavelength regions. As each receptor system is stimulated, it develops its own special response to light (4, p. 12). The three sensory responses then converge by way of the optic nerve at the brain, where the sensations of light and color occur. The quality of the color of light, its hue, lightness, and saturation depends upon the relative proportions of the various wavelengths in the entering light or stimulus. When the
longest wavelength of light about 7000 Angstrom units enters the eye, the sensation of red occurs. The shortest wavelength of light, about 4000 Angstroms, produces the sensation of violet, with the wavelengths between accounting for the intermediate colors of orange, yellow, green, blue, and indigo (2, p. 22; 4, p. 119). A spectroscopic study of a colored light can provide information on the component radiations of the light which the human eye is unable to recognize or analyze (6, pp. 119, 120).

The spectrum of visible light really has no end, it only appears to due to the way in which a prism forms it. It is actually a closed entity, for red and violet are adjacent; their mixture results in purple which lies outside the spectrum but fills the gap between red and violet. The spectrum is most accurately imagined as a continuous ring that merges to form a sphere of light (8).

The distinct particles of energy of which light is composed are usually called photons. Photons are energy units of light just as electrons are energy units of matter. When matter absorbs or emits light, the energy of a photon is described as a quantum of light. Usually, photons are used to describe the actual physical units of light while quanta are used to describe light in terms of energy exchanges during the interaction of light and matter (2, p. 30).
The information about the particle's state of motion is contained in the wavelength and frequency of the wave. The wavelength is inversely proportional to the momentum of the particle, which means that a wave with a small wavelength corresponds to a particle moving with high momentum (and thus with a high velocity). The frequency of the wave is proportional to the particle's energy; a wave with a high frequency means that the particle has a high energy. In the case of light, for example, violet light has a high frequency and a short wavelength and consists therefore of photons of high energy and high momentum; whereas red light has a low frequency and a long wavelength, corresponding to photons of low energy and momentum (1, p. 141).

The energy content of one quantum of light is called the photon energy. One quantum of electromagnetic energy, that is, the energy of a photon is related to the frequency of the radiation and the equation $E = hv$ (h equals Planck's constant of $6.6 \times 10^{-34}$ joules per second; $v$ equals the frequency of the radiation). According to the relation $E = hv$, the energy of a photon is directly proportional to the frequency of the electromagnetic radiation (2, p. 30).

The subatomic units of matter are very abstract entities which have a dual aspect. Depending on how we look at them, they appear sometimes as particles, sometimes as waves; and this dual nature is also exhibited by light which can take the form of electromagnetic waves or of particles.

This property of matter and of light is very strange. It seems impossible to accept that something can be, at the same time, a particle -- i.e., an entity confined to a very small volume -- and a wave, which is spread out over a large region of space. This contradiction gave rise to most of the . . . paradoxes which finally led to the formulation of quantum theory. The whole development started when Max Planck discovered that the energy of heat radiation is not emitted continuously, but appears in the form of 'energy packets.' Einstein called these energy packets 'quanta' and recognized them as fundamental aspects of nature. He was bold enough to postulate that light and every other form of electromagnetic radiation can appear not only as electromagnetic waves, but also in the form
of these quanta. The light quanta, which gave quantum theory its name, have since been accepted as bona fide particles and are now called photons (1, pp. 55-56).

The energy inherent in matter, any atomic system, is relative to the mass of the matter and the speed of light as demonstrated in the famous equation: \( E = mc^2 \) (2, p. 31).

At the subatomic level, matter does not exist with certainty at definite places, but rather shows 'tendencies to exist,' and atomic events do not occur with certainty at definite times and in definite ways, but rather show 'tendencies to occur.'

Quantum theory has thus demolished the classical concepts of solid objects and of strictly deterministic laws of nature. At the subatomic level, the solid material objects of classical physics dissolve into wave-like patterns of probabilities, and these patterns, ultimately, do not represent probabilities of things, but rather probabilities of interconnections (1, pp. 56, 57).

When the two energy relations of matter and light are combined, the equivalence of matter and light in terms of energy is obvious: \( mc^2 = hv \). Because of this energy relationship, the mass of matter can be described in terms of its frequency of vibration. Also, the frequency of a photon can be described in terms of its mass. What this implies is that the physical energy, which is matter, is simply the same energy as light energy except that it vibrates at a lower frequency. Matter is a humanly perceptible energy pattern that appears to be more or less stable at the moment of perception (2, pp. 30-31).

Quantum theory thus reveals a basic oneness of the universe. It shows that we cannot decompose the world into independently existing smallest units.
As we penetrate into matter, nature does not show us any isolated 'basic building blocks,' but rather appears as a complicated web of relations between the various parts of the whole (1, p. 57).

Modern physics has shown that the rhythm of creation and destruction is not only manifest in the turn of the seasons and in the birth and death of all living creatures, but is also the very essence of inorganic matter. According to quantum field theory, all interactions between the constituents of matter take place through the emission and absorption of virtual particles. More than that, the dance of creation and destruction is the basis of the very existence of matter, since all material particles 'self-interact' by emitting and reabsorbing virtual particles. Modern physics has thus revealed that every subatomic particle not only performs an energy dance, but also is an energy dance; a pulsating process of creation and destruction (1, p. 232).


CHAPTER IV

THE EDUCATIONAL SIGNIFICANCE OF THE ENERGY DYNAMICS OF CREATIVITY

Of what significance are the physics of light to art education and the theory of holistic aesthetics? Beginning with one atom and building mankind cell by cell by organ by system, we find that not only is the energy of light conceptually integrated to and through an individual, but that the absorption and emission of particles of light physically occurs as an aspect of livingness. The interesting information is that this same process also occurs in inorganic matter, implying, an essential oneness between the human race and its collectively organic, inorganic, and subatomic environment. Light is the "virtual particle" which flows throughout conditions which exist thereby permeating all learning experiences, all acquisition of knowledge, and all levels of human expression.

The types of energy expressed by one human being are so numerous that a basic knowledge of human radiations is essential to the theory presented herein. Within man's biophysical nature, there are thermal radiations which are emitted by every material system by virtue of its temperature alone. There is the radiation produced by electrical charges or even
chemiluminescence which includes radiations emitted as the result of chemical reactions. And, there are radiations which are produced by high local energy fields and include such subtleties as the emission of light by atoms or molecules (14, pp. 22, 23).

The types of energy absorbed by the human being are principally electromagnetic and described in terms of light.

The absorption of light by a biological system and the emission of light from excited molecules are quantum phenomena, and therefore a proper description of the light either absorbed or emitted during a reaction should contain the number of photons per second per unit wavelength interval (14, p. 5).

It is not intended that these highly complex systems of energy absorption and radiation within the vital body of mankind be investigated at length, but that the primary baseline of human functioning be recognized as an energy process. Biological science says that the most efficient system is that in which absorption of radiant energy is most efficient (14, p. 41). In the laboratory or art studio, the educator must consider the vitalities of the individual. Ideally, education would embody the life principle so completely that all instruction would be "based on a few fundamental formulas which concern life as it makes itself felt through its three differentiations or aspects: energy, force, matter" (2, p.29).

The potential for such holistic vision lies within the theoretical understanding of the energy dynamics of creativity. Herein, the educator approaches the life within the form with the conscious intention of developing the total being, of
instructing the human potential for self-realization through sensory discriminations of energy. "Self-realization" is intentionally ambiguous allowing for unlimited creative expression by those who are engaged in sensory discrimination for the sake of some self-fulfilling experience.

The classroom model for holistic aesthetics stresses perception over production with each student being viewed as a receiver, assimilator, and transmitter or energy impulses. The superimposed rings of energy influence evoked by the presence of each student are the cause and the effect of the classroom environment. Consciousness is the effect of intelligence reacting to these patterns of wave interference.

Within the classroom, each individual is physically controlled by dual factors: "a. The sum total of the energy which is the individual quota of vital energy (and) b. The energy of the environment in which the individual finds himself and within which he has to function and play his part" (2, p. 19). Referring to the model in Figure 2, page 14, "vital energy" is the collective energies which have been designated life force and those of humankind. The "energy of environment" is the sum total of all physical realities and their fields of influence.

When introducing Pablo Picasso's painting "Guernica" into the classroom model, we find that its physical world reality exists within the band of environmental energies and radiates its influence toward each student. The influences that
"Guernica" expresses are interpenetrating and complex. The materials, colors, imagery, symbols, texture, size, and so on each express a ring(s) of influence. In conjunction with the painting itself are additional rings of influence contained within the cultural and subcultural groupings of not only the artist, but also the collective and individual cultural groups and sub-groups of the students and instructor. These multiple energy fields color the quality of the energies that are being received by each student. Each individual's combination of influencing energies is unique to that individual and determines to a large extent the synthesizing process of the student.

Within the classroom model, the students and teacher(s) exist in and express the energies of humankind. Herein, each individual absorbs, assimilates, and transmits the energies of one's own physical structure, mental process, and spirit or higher nature. Mass consciousness is also an aspect of the energies of humankind with its collective body, mind, and spirit expressing a field of influence. The life force is viewed as the pure possibility of each individual to synthesize the experience in terms of his own potential consciousness.

A conceptual understanding of the effects of energy on humankind is possible through a brief review of a few reports concerning light and color. It is only recently that
technology could accommodate such inquiry. The importance of these findings is in their implications for man.

For example, in 1970, the Kline Chinchilla Research Foundation announced the results of five years of light research wherein the sex ratio of a litter could be predetermined. According to the results,

when ordinary incandescent light was used in the breeding rooms, the litter would average 60 to 75% males and, when 'daylight' incandescent bulbs were used, the ratio of males to females would be reversed and average 60 to 75% females (12, p. 144).

The use of light in order to stimulate the pituitary gland and increase egg production in chickens is a known fact. The pituitary is the master gland of the endocrine system and balances the glandular systems, not only in chickens, but also in other animals and humans as well. The implication is that the entire glandular system can be affected and altered into action by light received through the eye (12, p. 41).

In 1939, Dinshah P. Ghadiali's color studies revealed that certain specific colors of light do stimulate the pituitary gland as well as other glands of the endocrine system. According to Ghadiali, the following stimulant wavelengths influence the following glands: Red colored light stimulates the liver, orange light the thyroid and mammary glands, and yellow light the choroid. Lemon colored light influences the pancreas and thymus while green light affects the pituitary body. This aspect of Ghadiali's research is especially interesting because the pituitary is the master gland of the
endocrine system and green light is the stimulus to which the human eye is most sensitive. Continuing, he found that blue light influences the pineal, indigo the parathyroid, and violet the spleen. A magenta light stimulates the suprarenals and prostate whereas a scarlet light stimulates the testicles and ovaries (8, p. 67).

Along similar lines, John N. Ott announced in 1973 that the chloroplasts within the cells of Elodea Grass respond to varying wavelengths of light in a manner corresponding to the spectrum. Under conditions of natural sunlight, the cells behaved in an established pattern of chloroplast movement. When different filters were used in the microscope light, however, they broke the established pattern and displayed many variations. According to Ott, he could make the cells travel in different directions, cause some of them to stand still while others began new patterns, increase their metabolic activity, or kill them through the use of light. It is interesting to note that the red light was the most detrimental to the grass, especially, when it is remembered that red light has a low frequency and a long wavelength, which corresponds to photons of low energy and low momentum (6, p. 141).

The influences of light and color on the human mind, emotions, and body have been a topic of speculation throughout history. Several investigators have made significant discoveries.
Red light has been used effectively in erysipelas, skin diseases, and in offsetting the burn produced by ultraviolet. Blue has been found to have bactericidal properties. The muscular tension of the body (tonus) has been found to increase under the action of red light and decrease under the action of green and blue light. Metzer observed that the illumination of one eye produced a tonus condition on the same side of the body. Ehrenwald has demonstrated that under the influence of red light there is a definite bodily attraction toward the stimulus, while under the influence of green light there is a withdrawal from stimulus. Daitsch and Kogan have written of yellow and purple as having the best effect upon human metabolism (4, p. 327).

In 1950, Robert Gerard completed doctoral studies in psychology at the University of California. According to his research, blood pressure is most frequently increased under the influence of red light and is decreased under blue light. Respiration increased during exposure to red light and decreased with blue illumination (4, pp. 272–276).

Various resources suggest numerous relationships between light and color and the individual. According to Faber Birren, an environment of yellow, peach, or pink stimulates the tendency for increased activity, general alertness, outward orientation, and is especially conducive to muscular efforts, and cheerfulness. Whereas, a grey, blue, green, or turquoise environment encourages concentration at the visual and mental levels (4, p. 279).

When a room is empty, it feels a certain way; when someone walks into the same room, it is different again. When an individual uses one room for multiple purposes such as eating, reading, or creative activity, it feels differently
with each experience. This "feeling different" is the conscious awareness of an instinctive synthesis of all light, colors, energies, and forces present within the physical limits of the room.

As in the classroom model, "Guernica" radiates its influence toward the class. Each student absorbs and transmits all of the energies present and in doing so instinctively synthesizes the conditions which exist. The experience of exchanging and integrating influences varies in intensity from person to person, and there are occasions when energy imbalances can be experienced. This phenomenon of potential imbalance accounts for the infinite codes of personal aesthetics that are expressed by the viewing public.

For example, all but one of the students viewing Picasso's "Guernica" were able to integrate the influences, forces, and symbols in a positive way. There are numerous explanations for the one relatively negative experience. Consider for a moment the possibility of the energies being received with such clarity that the rings of influence were perceived by the viewer. For a fraction in time, the student sensed the destruction of mass bombing. The sentient awareness of a tragedy on May 26, 1937 became integrated with the personality, and "the German air force, acting under the orders of General Franco, bombed and almost completely destroyed the defenseless city of Guernica on a crowded market day" (5, cover).
Reacting to the horrors of Guernica's devastation, Picasso painted his most intense response to the terrors of war. The intensity of Picasso's momentum cannot be ignored as an aesthetic influence. The question then arises as to whether or not, the quality or quantity of the inpouring energies determines to any extent, the response of the viewer? The theory of holistic aesthetics implies that they do.

When directing his own momentum toward his art, the artist is a high local energy field which expresses waves of influencing energies. This momentum, his creative power is self-sustaining and referring to the model, draws impetus not only from itself and the source, but also emits large amounts of influential energy that frequently encourages and excites to activity those around the creative focus.

In order to induce and maintain a similar atmosphere for optimum creative sensitivity and activity, selectively constructive processes of energy analysis must be made. Before such empirical testing is possible, a theoretical foundation upon which to build scholarly curiosity should be established. At best, the ideas, beliefs, human potentials, and energy system model presented in this study are organized for the sake of illustration, and a point from which to begin empirical inquiry.

Biometric testing of the creative process has the potential to explain creativity at a level of interdisciplinary
awareness and may, therefore, be a potentially critical stance to be taken by educators. The following research findings are presented with the belief that through continued empirical testing of the biophysical energy fields of a creator, a pattern of energy integration and expression will be noted and that these energies may be intensified through the use of artificial or natural light and color in order to induce and sustain a spontaneous creative experience.

J. H. Seipel (1971) has suggested that the electro-static and electromagnetic fields arising from neuron impulses may represent "methods of direct information transfer or signaling which avoid the usual sensory channels" (10, p. 21).

J. B. Beal (1972) describes humankind as "an intangible synergistic higher order of mental and psychic patterns." And, O. L. Reiser (1972) stresses attuning human consciousness to "the galactic wave field." Man is appearing to be "a human gyroscope who maintains both an internal and external balance with a series of forces and energies" (10, p. 22).

Thomas and Ward researched the human force field and found that "a person's force field detects the frequencies of other people at a distance and is affected by them" (11, p. 395).

Semyon and Valentina Kirlian developed electrophotography wherein a photographic record of the energy body of living or dying life forms is made. Many Kirlian photographs of the human aura have been published showing "beautiful
colored lights flickering on and around the human body." According to the Soviets, they were able to document the energy or life field of man (11, pp. xvii, 216-217).

Accounts of sensing and seeing colors and lights around living bodies were largely responsible for empirical research in parapsychology. Edgar Cayce described having always seen colors around people, "I do not remember a time when the human beings I encountered did not register on my retina with blues and greens and red gently pouring from their heads and shoulders" (7, p. 5). The Kirlian aura is now visible through the use of modern technology. This technique which is being used worldwide, may offer visual confirmation of the theory of holistic aesthetics.

The educational significance of art education directed toward energy consciousness and energy manipulation through the use of light and color is potentially monumental. The model of creative energies is a vibrational body, or system of particles that are propagated as waves in an extended three-dimensional space. The educational applications of this theoretical model relate directly to the vibration of the system's component parts which are transposed into a color code.

Color is "that which does conceal. It is simply the objective medium by means of which the inner force transmits itself; it is the reflection upon matter of the type of influence that is emanating" (1, pp. 211, 228). Color is
differentiated light and "much of the light that strikes the surface of our everyday environment is absorbed" (9, p. 117). The phenomena of light being absorbed into matter is described as follows by the physicist:

If light of a certain frequency penetrates a substance, oscillation of the same frequency is set up in the small electrical oscillators. This oscillation reaches peak intensity when the frequency of the light equals the natural frequency of the oscillators (13, p. 173).

Radiant light does set up responsive vibrations, and it is appreciated that:

... those various frequencies of color vibrations, affecting, as they do, human tissue, induce effects relative to their wave lengths and frequencies. Under varying conditions it will be readily appreciated that the judicious employment of the wide range of vibratory radiant energy will be in a large measure capable either of restoring or inhibiting the vibratory energies or activities of the animal or human organism (15, p. 52).

The practical applications of light and color which compliment the system model begin in the classroom with the deliberate intension of balancing the wavelength energies of the student and the environment through the use of full spectrum lighting. The spectral proportions of the energies of the individual are not yet known, it is therefore reasonable to try to establish a universal balance. It appears as if this balance may be approximated through the use of a light source which represents all of the wavelengths of natural sunlight. Remember, all opaque surfaces, which includes the human being, absorb and reflect all of the wavelengths of the incident light. Within a controlled environment such as a
classroom, the light source is the sunlight and the employed artificial light. There are learning environments void of sunlight and for these, it is even more critical that steps be taken to balance the energy level of the student and his environment. Areas that are geographically deprived of large amounts of natural light or where sunlight is minimized with seasonal changes, are also critical considerations. The educator can provide a ninety per cent equivalence to natural sunlight through the use of commercially manufactured full spectrum lighting in the learning environment.

A second application of light and color is achieved with a conscious effort to radiate a particular kind of energy; this technique may be used as an alternate to full spectrum lighting in the event that it is not available. The instructor visualizes, or mentally duplicates the circumstances of full spectrum lighting, a crisp, white light flooding the room, penetrating and stabilizing all energy fields present. A similar effect may be achieved through the visualization of a rainbow of light that surrounds the room and/or the students with the vibrational stimulants of red, orange, yellow, green, blue, indigo, and violet.

A third technique which is more specific, relates directly to balancing any disharmonies within the classroom or one particular student. Remember, the classroom teacher is the high local energy field of that experience and by expressing a field of influence, can influence the expression. A
soft and radiant shell pink light or visualized radiation is the most effective single color when working with people. This color conveys the "feeling" of love or concern and is clearly effective in situations of disharmony. The visualization technique is the same, wherein the instructor imagines a bubble of pink light around the classroom or the individual in distress.

Visualization is not a new technique and has been taught and employed throughout the world in association with healing, meditation, and self-help. It is presently being taught to the teachers of the Robert Garden School of Art who come from various formal educational and philosophical backgrounds. These teachers are building pink clouds with their imaginations, and are realizing the benefits with their student who usually work in groups. According to teacher Mary L. Isham, "Visualization of a specific color helps me to create an environment around my students which promotes the learning process and is conducive to creative expression." The application of such mental discipline to the classroom environment offers great potential for optimum student awareness.

Colors other than those specifically mentioned may also be mentally or physically projected into the classroom with each inducing a different response on the part of the student. For example, on gray and lethargic days, the use of the vital colors in the red, orange, and yellow bands in teaching materials, special lighting, or clothing would, according to
previous research, induce activity. On days that are already super-charged with the natural vitalities of the sun, the use of these same colors may compound the situation and induce chaos and disorder from the apparent imbalance. Conversely, when energy is high and a more subtle environment is required for effective learning, deep blue or indigo may have a quieting effect on the class. The use of a yellow on such days might further the mental excitation and cause disturbances. Much reading material is available on the psychology of color, and additional resources are surfacing that explore the physical effects of light and color. It is strongly suggested that this knowledge be applied in the classroom.

Biophysical considerations of the student might also be satisfied through color choices in association with the day's program. The physical, mental, and emotional aspects of a student are unique to each student. It is not infrequent to have a mentally alert student working next to a student who is physically active and mentally still. Then there is the excessively emotional student who compliments neither of the first two. One possible consideration is that color coded exercises be made available to each student thereby offering greater, and yet teacher designed, opportunities for more harmonious self-expression. A review of color effects might indicate correlations between physical, emotional, mental, and spiritual attitudes and student performance.
The subtleties of the classroom atmosphere, the aura of creativity may also be a color consideration. The teacher might set up learning stations where the activity is limited to an environment with one particular colored light source. For example, one station might be illuminated with red light, another with blue, and a third with green (the primary colors of light). A fourth station with a full spectrum light source should be available for balance. It is anticipated that each colored light will set up the same frequency as the light source in the learning environment which will be reflected in the student's art production and behavior. A time control should be set up for each station with the first alternate to any colored station being full spectrum lighting. There are additional concerns which relate to each student's sensitivity to a color, and these needs must be met with great care and consideration. There is the possibility of establishing an imbalance within the student and therefore a justification of empirical testing.

Reviewing the model for holistic aesthetics (Chapter II), ponder these possibilities: The color predominately expressed in a student's art work may indicate the energy center through which a major portion of the creative energy is flowing. The energy expressed as color may indicate the subtle body which is most strongly influencing the individual, or the aspect of the personality which dominates. Motivation, productivity, and quality may be apprehended through as association with
electromagnetic field frequencies. A color coded energy identification system may allow for self-analysis, and objective evaluation of artistic production. An individual's progression within the spectrum might serve some therapeutic purpose, and ultimately, the creative atmosphere might be determined. The possibility exists that with empirical testing of the creative process, the data collected will provide the arts educator with the information needed to artificially induce the genuine creative experience through the conscious use of energy, light, and matter manipulation.

All forms of life, including the human, stand at some point of awareness within the vast continuum, and all are in process of evolving towards greater and more inclusive areas of understanding and vision. Consciousness is the evolutionary principle in life (3, p. 210). Creative expression is the symbol of one's consciousness reuniting with its self in an effort to blend and fuse with its will to be, and to express its origin through the vehicle in which it functions. The acquisition of knowledge through its own response to conditions which exist, reinforces the consciousness of the creator. The effect of this interplay between the consciousness of the creator and the environment evokes light, or the radiation of those synthesizing energies which are expressing influence. The body, mind, and spirit are beginning to function as a whole when the creative essence of the personality seeks recognition through form.
The alchemy of self-expression is energy directing, focusing, and synthesizing through sensory discriminations; the creative use of energy is the true art of the artist. A knowledge, if only in theory, of the energies of creativity and its process is critical to art education.
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