CREATIVITY: A NEURO-MYSTICAL APPROACH

The research literature on creativity studies is vast. There are several theoretical perspectives on this subject with the primary ones being the humanistic, psychoanalytic, and behavioristic. While the humanistic has the most explanatory power, its fundamental conceptual positions on "being", "self-actualization", and "peak-experiences" lack a rigorous empirical grounding.

This paper attempts to address this problem and proposes a Neuro-Mystical perspective which incorporates psychobiology, levels of consciousness, and key fundamental assumptions of mysticism.

The importance of creativity will be discussed and the characteristics of the person, product, and experience will be reviewed. The relationship among "being", courage, revelation, self-actualization, and cosmic consciousness will be explored. It is proposed that highly creative persons are those who more frequently resonate with or experience the pulse of what some call "God" or "pure consciousness".

The Importance and Characteristics of Creativity

Creativity is the bringing of something new into existence. Historical records show that many eminent persons, by their sheer genius, insight, creativity, and ingenuity have been instrumental in the progress of humanity at all levels of the arts, sciences, and humanities. The invention of the wheel and telephone, and the discovery of X-rays have all had a tremendous positive impact on humanity. Indeed, we would still probably be in the "Dark Ages were it not for these creative geniuses. This trait, or factor, has been

indispensable to us over the centuries and will certainly be responsible, to a great extent, for our future directions. Our thinking, creations, inventions, and solutions to world problems, all rely on the extent of our creativity or lack of it. Indeed, our creative powers will certainly determine our destiny.

Most creativity research can be classified according to:

(a) The nature and quality of the **product.**

(b) The creative **process.**

(c) The creative **person.**

and

(d) The environment.

Jackson and Messick (1965) state that there are four (4) criteria which we may use to judge a **product** as creative. These are: it is unusual; it is appropriate; it is transformed; and, it shows condensation and serendipity. May (1980) asserts that, in addition, it consistently displays a degree of "elegance".

The characteristics of the creative **experience** are: its suddenness; vividness; brevity; and, immediate certainty. May (1980) asserts that "the creative act is an **encounter** which needs a specific quality of **engagement** or absorption. It is characterized by the degree of intensity or passion ... that is the quality of commitment and enthusiasm". (pp. 39-41).

Harman and Rheingold (1984) propose that the **process** is characterized by four (4) stages that is almost always preceded by hard work, persistence, endurance, curiosity, and even an obsession with the issue prior to the breakthrough. The four (4) ~~states~~ stages are thought to be: (a) preparation; (b) incubation; (c) illumination; and, (d) verification.

LaViolette, in Briggs (1988), proposes a rather interesting process that is also necessary for the creative process to occur. He calls it "PRIMING", and asserts that priming keeps the nuances circulating in the limbic-cortical loop where they resonate with data from both internal activity of the brain (dreams, memories, events, thoughts) and from outside the brain (perception and information). The great significance of this will be discussed later in this paper.

Dacey (1989) says that research has identified several personal qualities strongly involved in creativity. These are, the person is:

(a) Tolerant to ambivalence

(b) Are not constrained by limits or paradigmatic lines, (such as a conceptual theorist)

(c) Show functional freedom, flexibility, risk-taking, preference for disorder, delay of gratification, and tend to show androgyny

(d) Furthermore, they:

  (i) engage frequently in solitary activities and have a high need for freedom

  (ii) have the ability to think both convergently and divergently in a non-polarized (unified) manner

  (iii) resists enculturation, are very autonomous, authentic (establish their own goals), self-directed, original, and show intellectual competence, cognitive flexibility and clarity

In addition, interestingly enough, Maslow (1954) and others have asserted that highly creative persons have traits **identical** to self-actualizing persons and healthy personalities. Some of these traits are:

(a) A high degree of acceptance of themselves

(b) Frequent "peak" experiences

(c) The sense of identification with humanity as a whole

(d) Democratic and self-actualizing characters

(e) Have an unique capacity to resolve dichotomies into unities

(f) They successfully integrate polar opposites into their personalities. Polarities and oppositional elements are pervasive in their thinking, yet it is their **unification** of these elements which allows for the creative product

Even more fascinating is the finding by Hood (1977) who tested Maslow's hypothesis, that "peak" or mystical experiences would be found among exceptional persons who could be considered self-actualized. He asserted that:

(a) Mystical experience has been shown to correlate positively with measures of health, psychological strength, and strong, not weak ego strength.

(b) That contrary to general opinion, mysticism is both normal and normative rather than regressive and psychopathological

and

(c) That mystical experience, but not necessarily religious mystical experience, was shown to correlate positively with self-actualization.

Indeed, sure enough, there is a relationship among creativity, self-actualization, and peak experiences or "Cosmic Consciousness".

The New Model and May's (1980) Assertions

May (1980) makes several extremely important assertions such as:

(a) The importance of "elegance" in creative products

(b) That an "unfinished quality" is a part of the creative process

(c) That "one cannot be in a vacuum. We express our being by creating. Creating is a necessary sequel to being" (p. viii).

(d) That courage is necessary to **create**. To make **being** possible, there must be an assertion of self

(e) That "if you do not express your own original ideas, if you don't listen to your own being, you will have betrayed yourself. Also you will have betrayed our community in failing to make your contribution to the whole" (p. 3).

(f) That "there is something in the act of creating which is like a religious revelation" (p. 75).

(g) That "when the problem at hand has been answered - that generally brings only a sense of **relief**. What is the **source** of this curious pleasure?" (p. 148). (My emphasis).

and, finally,

(h) That "the creative process is the expression of this passion for form. It is the struggle against disintegration, the struggle to bring into existence new kinds of being that give **harmony** and **integration**. (My emphasis).

This Neuro-Mystical model being proposed will attempt to explain why May's (1980) assertions are **correct** and the model will suggest possible mechanisms for these assertions. The importance of the spiritual perspective will be emphasized as a necessary guide to understanding creativity.

There are several key assumptions upon which this model is based. These are:

Assumptions of This Model

(a) That there is a fundamental frequency (F_1), a pulsating sea of energy pervading the Cosmos. The modern physicists call this 'vibrations', some (the mystics) call this 'God' or 'pure consciousness'. Furthermore, that this (F_1) comprises "hardware laws" or universal laws. Several scientists such as Bohm, Davies, and Capra propose the hold this view.

(b) That the universe in intrinsically beautiful. There is elegance, harmony, simplicity, and symmetry. Most interestingly both quantum physics and mysticism hold this view.

(c) That the material and immaterial aspects of a human (or a person's new wave form) is "bathed" by this (F_1). Here the holographic paradigm proposed by Bohm and Pribram support this position.

(d) That each human being has a unique personality and "Cosmic" mission or mission in life. Lewis (1976) proposes that "all things in life move rhythmically, and the normal and natural rhythm for each thing in its cycle is in harmony with cosmic rhythms. A person born at any rhythmic period of the year should have natural tendencies different from those possessed by a person born during a different rhythmic period. Furthermore, that **each person continues to vibrate in attunement with the rhythm established at the moment of birth.** He says that, "it would appear, therefore, that each one of us has special abilities and tendencies and is born to fulfill certain niches in life and to carry on definite missions in connections with certain lines of work and labor in our earthly lives" (p. 186). This is synonymous with May's (1980) "if you do not express your own original ideas ... to the whole". While there is

no empirical evidence for this concept of Cosmic Mission, it is a fundamental concept in mysticism.

(e) That being is not merely existence, rather it is an evolutionary process. All matter seems to persist in "being". Davies (1988) and Prigonine (a Nobel Prize Winner) talk about "matter with a will of its own - active matter". At the inorganic and cellular levels, in chemistry and biology we find considerable evidence to suggest that matter "strives to be" and to continually evolve with increasing complexity and to maintain/ensure continued being.

Ajaya (1983) asserts that "the individual ego has split off and established itself in apparent independence of this universal consciousness ... the final phase of a person's evolutionary process consists of recognizing his true identity as the self or unitary consciousness - until such time the ego experiences **alienation**, insecurity and anxiety" (p. 37). Maharishi, in Alexander (1990), also holds this position.

It would seem then, that striving to be, or becoming, exists at two levels.

(i) at the basic organic level where the cells and entire body is 'programmed' to resist any condition which threatens its continual being,

and

(ii) at the psychological (Ego) level, a person "becomes" to the extent that he/she fulfills one's mission in life, thereby self-actualizes, and re-unifies with the universal consciousness thereby experiencing "peak" experiences and eventually consciousness of the Cosmos or Cosmic Consciousness.

We find these two levels of "being" needs as instinctive, as an integral aspect of the wave form of an organism or person. It is manifested in the effectance, and exploratory motives, urges, and all intimately linked with the fundamental need for self-preservation and resonance with "pure consciousness"

and, finally,

(f) That conformity prevents "being", and that courage is absolutely necessary to break the shackles of conformity and so allow for "being". Krishnamurti (1969) suggests that conformity and conditioning is responsible for many social ills and mediocrity in people. That we have been socialized by fear to conform, and not be original. This stultifies our inner growth and prevents our unique personalities from self- actualizing. It is easy to see why it requires tremendous courage to be, or to walk on the path of self-actualization. A heretic, or person who does not subscribe to mainstream thinking or prevailing paradigms is very quickly ostracized by his/her colleagues, peers and even large segments of society. As a social being, this isolation has the potential to negatively affect us. In fact, the more contemporary social depression model asserts that it is lack of positive reinforcers in the external environment that causes depression with its associated problems. In addition, anyone outside mainstream thinking must be prepared for conflicts and losses in: social network, socioeconomic status, prestige and fame, concomitant with increased isolation, discrimination and even ridicule. Few people are able to withstand this onslaught -- this threat to self-esteem and being. Hence, they play it safe, tow the line, and fail to self-actualize.

Yet, interestingly enough, Mitroff and Killman (1982) suggest that the notion of conflict is central to the conceptual theorist's (CT's) world view. The CT depends heavily upon the conflict or clash between people and paradigms, and it is the CT's with their oppositional/unified thinking who are more likely to be the most creative.

In an extremely elegant work by Andrea (1960) he advises that "if he means to **progress** (spiritually) he must cultivate a cool indifference to criticism. He must not fear in the least being proclaimed a fool for his ideas. As he wrestles with divine facts, his thoughts will grow strong. His right to grow will be severely questioned. In the opinion of some this departure from the plain path of conformity will be rank heresy ... Well most of us on the path are heretics, and greater heretics have preceded us. Let him not hesitate to deal with these critics pre-emptorily, if need be, once and for all. Let the aspirant be a heretic and stand out. He has elected to be a light in the world, whatever the darkness he may have to pass through, and it would be unwise to retreat to the open arms of the majority for the sale of a **merely** ephemeral popularity and peace. Let the aspirant fear no criticism. Only when the critics realize that he possess a more precious gift will they receive a first hint of their blindness. Only then will they realize that all the accumulations of worldly knowledge are indeed a very little thing when compared with an insight which is divine" (p. 161).

This view is also quite similar to the Vedanta's position that each person should assiduously try to cultivate the state of non-attachment, which, incidentally, is NOT indifference. It is the condition where we

are not bound by the ephemeral standard of the material world and people and its products, rather one's **only** standard is the "divine".

Given these assumptions, we can now proceed to build our new neuro-mystical model of creativity.

Neuro-Mystical Model of Creativity

Sheikh and Kunzendorf (1990) state that: "the current consensus is that mind may be represented as a vast set of nodes and relationships among these nodes. It would seem reasonable to identify nodes with neurons or groups of neurons in the neocortex ... The nodes may be seen as being partitioned into various 'analyzers'. For example, there are separate analyzers for perception of printed words, faces, etc. The nodes in these analyzers are activated by the presence of the relevant stimulus. Consciousness corresponds to the set of nodes that is currently activated" (p. 92).

Let us assume that when the nodes (A) in the **sensory** cortex is activated we experience objective consciousness, (of those particular frequencies in that part of the spectrum, eg., auditory, awareness of external stimuli). When the nodes (B) in the **association** cortex is activated we experience subjective consciousness (awareness of mental processes eg., reverie, recollections, memories, images), and when the nodes (C) of the limbic system are activated we experience and/or access subconscious experiences, such as (dreams, noetic feelings, laws of life). See Figure (2). The additional assumption here is that the subconscious is intimately associated with and interacts with a higher energy level which I call 'Consciousness of the Cosmos'. Thus, indirectly, when we access the subconscious, we naturally access (at times)

the highest frequency of 'Cosmic Consciousness", the fundamental frequency (F). Let us further assume that:

(a) There are laws of life or universal principles

(b) That when each node is activated, a net "WAVE FORM" or frequency is created. F_a, F_b, F_c, representing the frequencies of the "levels of consciousness".

and

(c) That at any given time F_a, F_b, F_c, and F are all interacting and a certain degree of constructive or destructive interference of wave forms will exist. We can do a fourier transform and determine the net (resultant) wave form which exists in that person at that instant, and which constitutes one's mind.

It is important to note if we assume the existence of Glinisky's "cognons", then all the years of academic preparation, persistence, learning of facts, creating thematic ideas, collaborating, clustering, solitude, and having a passion for the subject, will serve to strengthen existing cognons and certainly create new ones (as our knowledge base in that subject increases). This results in F_b presumably, over a period of many years, getting in increasing resonance or a greater degree of constructive interference with F_c and F. Note also that as this process is occurring, the individual should be becoming INCREASINGLY involved in oppositional thinking, ambivalence, looking for the unity that exists in apparent polarities. This is so since, if we assume that complementary and natural/hardware laws exist in nature (and there is a lot of evidence from scientific findings and mysticism to support this), [see Capra, Bohm, Davies], then naturally we would become

increasingly sensitized to the dichotomy that exists within natural laws and all that exists.

Further, as we walk along the path of self-actualization, develop the courage to become increasingly fully functioning, and engage in more "peak" experiences, then there would be increased **resonance** among F_b, F_c, and F, one becomes increasingly aware of the laws of life, purpose and meaning of life, of the possible existence of a fundamental frequency and one's mission in life and "Magnum opus".

When relaxed, F_a will have minimal impact on F_b, F_c, and F. Hence, we now have access to the subjective consciousness, and to some extent the subconscious. This allows for a shift from concentration to contemplation which activates all related cognons and energizes F_b. After the process of contemplation, we leave the matter for a while and during incubation, F_b gets increasing energized and resonates more strongly with F_c. This is quite consistent with LaViolette's assertion that priming keeps the nuances circulating in the limbic-cortical loop where they can resonate with data. In this case with data from F_a and F_b/F_c wave form and F will become increasingly energized and engage in a greater degree of resonance. It is well known that the limbic system is involved in the display of emotions and possibly even "noetic" experiences. It is suggested that the fervent prayers, the emotional/ symbolic dreams, the petition to a higher force for illumination, the sheer passion and intense desire, the enthusiasm for a solution, **all** act as limbic stimulants, and when priming reaches its peak, the breakthrough process occurs, (F_b/F_c) and F resonate maximally, thereby filling any gaps in the (F_b/F_c) wave form or theory. Thus, the $(F_a/F_b/F_c)$ or F_n wave form becomes a

true reflection of F. This constitutes the sudden flash, illumination, instantaneous knowledge. It is as though the (F_n) for that thematic idea or issue were put in the crucible of fire of F. Thus, the refined product, the created product must have all those amazing properties, since it should be quite consistent with universal principles. Our reality (F_b/F_c) would then become an accurate reflection of actuality (F). In effect the software thematic ideas (F_b/F_c) which we had built, fostered, energized and nourished over the years would be in resonance with the hardware laws of life (F).

Importance and Implications of This Model

This model can serve as an excellent basis for explaining the many important assertions made by May (1980) on creativity.

(a) Elegance and the experience of a religious revelation would be expected since the person experiences the "pulse" of pure consciousness and gets insight into "hardware" laws, which are immutable.

(b) The sense of relief, even ecstasy and revelation, is experienced when at that instant the person resonates with the "Cosmic" and experiences harmonium or as the mystics say, "peace profound". The source of this pleasure is explained in the "Psychobiology of Transcendence". See Figure (1) -- by limbic kinding and stimulation of the M.F.B.

(c) May's (1980) view that creativity is not irrational, rather it's suprarational is easily explained as it brings together the three levels of consciousness, and by extension, the intellect, reason and emotions.

(d) The fact that creative insights come at a moment of transition between work and relaxation could be explained by a decreased functioning of

objective consciousness (node A) and an increased functioning of the subjective and subconscious levels of consciousness. Hence the importance of solitude.

(e) LaViolette's "priming" and the passion could be conceived as a limbic (node C) stimulant and a process whereby data in nodes A, B, and C continually interfere constructively with each other. This would fit in perfectly with Mandell's psychobiology of transcendence and the CA_3 cell's kindling.

(f) Harman and Rheingold's (1984) four (4) process stages can be explained by: preparation (objective); incubation (subjective); illumination (subconscious); and, verification (the adjustment or alignment of "software" laws with "hardware" laws or our reality with actuality.

(g) Courage, especially "social" courage, is crucial as it allows one to transcend prevailing paradigms, think the unthinkable, re-vamp, re-conceptualize and pave the way for possible khunian-type revolutions. Courage is necessary to resist enculturation and conformity which prevent creativity, "being" (self-actualization), and the attainment of Cosmic Consciousness.

(h) Finally, the creative process is always "unfinished" since the product is a reflection of the degree of one's resonance and understanding of the software laws or issue under consideration, and hard laws affecting that issue. Since a human is continually evolving his/her consciousness of the Cosmic and consciousness of hardware laws, the creative products will always be an approximation. We feel the "pulse" of the Cosmic rather than its anatomy.

(i) It readily explains why we find certain characteristic traits in self-actualizing and creative persons. Such traits as: love of solitude, autonomy, authenticity, unified thinking, etc. And we can better understand the intimate relationship among creativity, self-actualization and "peak" experiences.

finally,

(j) May's (1980) extremely important statement that, "the creative process is the passion for **form** It is the struggle against **disintegration**, the struggle ... **harmony** and interpretation" can be better understood since this passion for form can be a human being's need to create about him in material form the beauty that he senses within, while the struggle against disintegration can be the intrinsic need to be, to self-actualize, to attain illumination and Cosmic Consciousness. Not only is there harmony among the three levels of consciousness and pure consciousness, but in the process there is reunification of ego with universal consciousness, there is integration and harmonium, one's "**being**" becomes a reflection of Cosmic principles and rhythm.

Creativity can be envisaged as a condition or process **engendered** as we increase our ability to be, work towards self-actualization and the fulfillment of our cosmic mission and resonance with (F_1). Our work is creative to the extent that it resonates with or is a reflection of hardware/ cosmic principles. Courage to self-actualize is crucial to being and in fact, makes us human, fully functioning, and **authentic**.

This has extremely important implications to psychotherapy. We have seen the great importance of resisting enculturation and conformity. This spiritual

perspective is refreshing as it attempts to "ground" various humanistic views and provide at the same time a non-polarized or unified view of a person. One must realize the importance of "following one's own star", so that he/she can fulfill one's mission in life while at the same time follow the "will and wishes" of the Cosmic and thereby contribute to the evolution of humanity by our works.

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