AN INTRODUCTORY STUDY OF GENDER DIFFERENCES IN SIS CORRELATES OF CREATIVITY

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**Abstract:** discusses the component creative activities (imaging, relaxation visualization sociodrama, and play) and how they sit together in the relationship between mental activity and physical well-being. Through play, people are free to explore alternatives that can give them insights into their personal temperaments, emotional reactions, and unconscious motivations. Perhaps the most valuable aspect of imaginative play is that it fosters creativity. As a person grows psychologically and copes with his/her changing environment and self, creativity is called into play. Creative activities offer people the opportunities to communicate with each other and themselves. Valuing and developing one's creativity raises one's level of wellness. Wellness involves the physical and mental health of an individual, positive future images and true communication with oneself and others.

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**Introduction:**

Since Galton (1883) Psychology has evidenced unbinding interest in creative acts. Much of the research has been carried out in the hope that around understanding of the phenomenon would lead to more effective use of the is precious social resource; In recent years this mission has become substantially more important because of the high premium placed on creative talent in a world of rapid social and technological chin. As a result, the description, prediction and understanding of creative behaviors have become a primary a concern of deferential psychologists. Until the middle of 20thcentury, creativity belonged more to the realm of philosophizing than empirical inquiry (Rogers, 1959). Early researchers (e.g. Hargreaves, 1927; Spearman. 1930) considered it to be a part of intelligence and thus remained indifferent to it . This view is also shared by other investigators (e.g Wll, 1964; Burt, 1962, 1964; Thorndike, 1963; Mc Nemar. 1964; walllen, 1964; Hildreth, 1966; Cattell,1971; Csnoderne, 1978 Simonton, 1987; MC Cabe, 1991) that creativity is an integral part of intelligence.

 The year 1950 is being regarded as a starting point for investigation into the aspect of creativity when J.P. Guilford presented his views on creativity in APA's convention. Many scholars (e.g. Guilford, 1950, 1959, 1963; Geezers and Jackson , 1965; Taylor and Barron, 1963; Taylor and Holland , 1964) have attempted to explore creativity in its own right and endeavored to depict the relative autonomy and fairly complex and multifaceted nature of this highly important psychic phenomenon.

 On account of the widely different contexts in which the term creativity has been used, it is difficult to involve a consensual definition of creativity, which could be all inclusive as well as exclusive of similar psychological characteristics. This lack of must agreed conception of creativity may be attributed to the fact that, like agreed conception of creativity may be attributed to the fact that, like intelligence creativity represents a highly complex and multifaceted construct. Since a person can behave creativity in many different ways, it is no strange that we have many definitions. The complexity of creativity is manifested in numerous definitions which Rhodes (1961) Mooney (1963), Kneller (1965) and Run co (2004) Endeavour to condense into four relatively distinct approaches: (a) As a product. (b) As a process, (c) As a process and (d) As a person. Similar description have also been proposed in a number of other studies and reviews (e.g. ,McKonon , 1978; Raven, 1984; Stein, 1968; Treffomger.1988, 1991; Treffomger et at , 1993)

**(a) Creativity as Product**

This is concerned with important haracteristics that distinguish more creative from less creatie products as perceived by different people for deferent purposes. In this approach the products considered creative are emphasized for the elements of newness, freshness and inventiveness they have.

The creative products can include behaciour performances, indies, things and all other kinds of outputs with any of the channels and types of the expressions. This criterion of creativity defines thetargets against which a predictor or batteries of predictors are validsted. A number of experimental studies of creativity have enacouorged a wide variety of quantitative analysis (Battoan, 1957, 18982; Hyman, 1964; Wallallch and KOGAN, 1970) as well as qualitative analysis (Gruber, 1974; Heller, 1979), as well as qualitative analysis ( Gruber,1974; Heller, 1979), which identify creative individuals through the products of their labours.

Based on lboth the qualitative studies and quantitative analysis , themost frequently described products of creative thoughts area asolution to problem, responses on creativity test and aaexp;anations for phenomenon. Technological innovations and artifaacts, novel ideas and new styles designs or pardingms have been emphasized as '' creative products'' by Barron (1988), Feldman (1986), Gruber andDavis(1988) Simonton (1984b), Sternber (1988) andTORRANCE (1981).

The creative products are novel. They are anoat imitations, nor are they mass-produced. Such products ar [powerful and generalizable , are valuable and useful to the society .

1. **Creativity as Press**

The press approach to creativity typically includes the total complex situation in which creative processes are initially articulated and sustained through completion. The environment situation can bean natural or typical environment. It can even be one in which deliberate attempts are made to design a total environment such as specially designed instructional media to initiate and sustain creative processes in one or more individuals . Creative potentials may best be actualized within favorable environment, whereas indifferent and hostile conditions may inhibit it.

There are three ways in which an environment or press can be though of as affecting creativity. First via the general contributions and resources available to individuals within the fields. Second through the special effects a particular field may have at its own domain and the nature of creative expressions that results and third by containing specific characteristics that either promote or inhibit creativity.

1. **Creativity as Process**

Work in the areas of process has delineated various steps , styles and strategies within the creative process. Creative thinking has been `regarded by nabs researchers as a process of seeing or creating relationships. Creative processes have been described in terms of the various the oretical perspectives. These relate creative mechanisms removal of repression or drive discharge ,preconscious fundtions gestalt mechanisms ,and cognitive factors or to perceptual openness and now metaconitions.

Under thisapproach Torrance (1966) defined creativity as process of becoming sensitive to problems, deficiencies gaps knowledge, missing elements and finally communicating the results''.

This many psychologists haveviewed creativity as a process existing in a single person at a partcular point in time. But some authors represent a new alternative view with the assertion that creativity exists in the larger system of social network problem domains and fiels of enterprises.

 Creativity has also been compared with the process of evaluation, in which the surveying products are determined through natural selection from a multitude of random variations. Thus creative processes may be seen as initiating form a previous failure to find explanations fro phenomenon to incorporate new ideas into existing knowledge or from a general drive toward self-organization through the reeducation or chaos.

While emphasizing the differences the products of creative processes, several authors (e.g. Gardner, 1988) claim that creativity is domain specific.

Creative through processes regardless of the problem on which theories are focused are claimed to involve the following: transformations of external world and internal representation by forming analogies and bringing conceptual gaps, constant redefinitious of problems and recognizing patterns and images to make the new familiar and the old new.

**(d) Creativity as a Person**

Attempts have also been made to identify many personality and motivational characteristics, cognitive abilities and behavioural or biographical events associated with individual's creativity. The research on personality and creativity relationship has tended to emerge in one of three ways: (i) Attempts by personality theorists to explain creativity in terms of comprehensive theories of personality; (ii) Investigations regarding the personality and biographical characteristics of eminent individuals and creativity in a variety of fields; and (iii) work narrowly focused on examining on or few specific personality dimensions for possible relationships to creative behaviour.

 Of course there is a great divergence across personality theories with regard to explanation of creativity. This divergence can be traced in part, to fundamental differences in perspectives regarding the nature of human beings and their behaviour that exists within various streams of psychological thoughts. Theorists with humanistic orientations (e.g. Muray, 1962; Maslow, 1968; Rogers, 1959) relate creativity to individual's striving for self-actualization.

 A second major area of research within the personality framework has been the study of characteristics of creative persons. Many researchers have focused on examining individual differences across more narrowly defined disciplines such as architecture, physics, mathematics, etc. In general, a fairly stable set of core characteristics continued to emerge as correlates of creative achievements and activity in many domains.

 Review of the literature clearly suggests that much of the current research focus seems to have shifted to explorations of cognitive ability creative behaviour relationships.

 According to Sternberg (1988) the cognitive characteristics that are shared by creative people, regardless of domain, can be grouped into three sets: traits, abilities and processing styles that creative individuals use and process.

 Still more controlled and empirical investigations are needed to explore more personal characteristics relevant in creative bhaviour and resolve the issues and controversies regarding the person approach to creativity.

 Earlier investigations that with multifaceted nature of creativity primarily by attempting to separate it into manageable areas of investigation. Thus reductionist approach allowed researchers to manage the dynamic nature of creativity efficiently and with some degree of operational precision this approach did not adequately reflect the multifaceted nature of the phenomenon of creativity.

 Now the recent efforts, tending to develop comprehensive understanding of multifaceted nature of creativity; are in terms of interactional approach. While discussing the nature of creativity different investigators have thrown light on different aspects of creativity in terms of various theoretical approaches.

**Psychoanalytic:**

According to Sigmund Freud, creativity originates from conflicts deep within the unconscious. Unsatisfied wishes and unfulfilled sexual fantasies become the mainspring of both neurosis and reactivity. For Ernest Kris (1976) the mainspring of creativity comes from the primary process "regression in the service of the ego".

**Humanistic:**

Humanistic theorists tend look not so much at the etiology of origin of reactivity but more characteristics or behaviour of creative personalities. However, he distinguished between primary and secondary creativity. Primary creativity is that which comes out of unconscious, which is the source of new discovery of real novelty, whereas secondary creativity is the natural logical productivity displayed in the behaviour of well adjustment mentally healthy individuals.

 According to Fromms (1958) autonomous persons are mentally health individual characterized by their creativity and transcendence. Only people with true ego strengths, that is those with sel-esteem can achieve high level of creativity.

**Gestalt**

 Gestalt psychologists have emphasized the recombination of ideas or the restructuring of "Gestalt" (Wertheimer, 1945) took creativity as "process of destroying one gestalt in favour of a better one". Keep (1957), viewed creativity as the intersection of two ideas for the first time.

**Genius Approach**

Puccio (1991) has attempted to trace the historical development of the conception of creativity. According to him Duff (1967) was the first person who attempted to account creativity in terms of 'Genius' which resembles to our more recent attempts to understand the creative mind.

 The earliest cited work on genius was conducted by Galton (1869). Galton hypothesized that genius was an inherited trait in the families of eminent individuals.

 Galton applied statistical analysis in the examination of individual differences. The statistical principles of regression and correlation developed form Galton's work on hereditary genius. He applied these statistics in examination of familial infomation available through biographical sources for judges, statesmen. Cox (1926) investigated the degree of relationship between outstanding achievements and intelligence by estimating the IQ's of subjects used by Cattell.

**Unified Field Theory**

Rose (1988) has integrated the consciousness and creation of physical world in his 'Unified Field Theory'. This theory has included many of the insights of ancient Vedic rishis on the nature of human creative potentials, which focus on direct subjective experience in the development of full human potentials. Since the unified filed has been identified as the source of all energy and matter all qualities in the universe have their origin in it.

**Transformational Activity Theory**

 In this theory Pickard (1990) assumes that creativity is an outcome of self-directed transformational activity. We might come to new conclusions about things by placing them in new relationship might add to them, remove parts, increase or change the sizes.

 Transformational activity is distinct from learning. It is a self-directed activity and it is the insights and perceptions of the individual, which might result in novel consequences. The unpredictable nature of creativity makes it resistant to traditional methods of learning though if does not imply that transformational activity be fostered or facilitated.

 Pickard (1990) is of the view that fantasy and imagination have significant role in creativity. Creativity is dynamic and ongoing as a process in that the insights and representations of one person may trigger transformations in another.

 Transformational ability develops through functioning and leads the individual to an increasing awareness of alternatives.

**Cognitive approaches to creativity**

 The cognitive approach concentrates on the mental processes and structures underlying creativity. Sternberg (1985a, 1985b) is of the view that creativity overlaps with other psychological phenomenon such as intelligence, cognitive style, and personality, but it is not identical with any of them. He presented a "three-facet model" of creativity. According to this model there are there basis aspects that interact to generate creative performance. The first aspect is strictly cognitive, involving those aspects of intelligence having interface with creativity. The second aspect involves matters of intellectual styles.

 According to this theory intelligence comprises three aspects: its relation to the internal world of the individual, its relation to experience and its relation to the external world of the individual. The relevant processes are of three types: (1) Metacomponents: (2) Performance components, and (3) Knowledge acquisition components.

Metacomonets are higher order executive processes used in planning, monitoring and evaluating one's problem solving.

 Performance components of intelligence execute the instructions in straightforward way. These help in drawing

creative inferences. Knowledge acquisition components are

involved particularly in specialzed form of creativity: insight. According to Sternberg and Davidson (1982) three knowledge acquisition creativity training programmes are successful because they provide the participants with metacognitive experiences knowledge and strategies. It is further hypothesized that self-regulation process can be enhanced or influenced through the cognitive-behavioural intervention of self-instructional training.

**Evolving System Approach**

Based on the data from lives of creative persons and using case study method, Gruber (1981) suggested Evolving System Approach to creative thinking. According to the evolving system view, creativity is not similar to the flashes of creative insight. Rather, it is something that involves over the course of life time, combining manifold minor insights with some major works and directed by a large scale evolving enterprise. Being heavily influenced by Gruber's concepts, Feldman (1980, 1986) mainly focused on Child Prodigies.

Feldman's concepts of prodigious performance seem to be practical in distinguishing children's creative behaviour from adults' creative performance.

**Ecological Approach to Creativity**

Creativity according to this approach is not a term that simply describes a category or kind of person. It views creativity as a multifaceted phenomenon, which results in the production of new and useful ideas.

Creativity involves the simultaneous interaction among elements of all the four themes. To investigate different dimensions of creativity. They employed reductionist approach.

The ecological approach is concerned with the interaction of several variables within a specific con text, very much like the ecologists who explore the interaction among living and non-living components within an ecosystem. So, more sophisticated and systematic methologies are needed to explore multifaceted conception of creativity more objectively.

**Meaning and Novelty Contexts of Creativity**

In majority of studies, creativity has been investigated by employing specific type of tests, namely, those psychometric in nature. Muller (1964), Stark (1959, 1965b) have blamed these psychometric tests based don a limited conception of creativity i.e. scientific creativity . This heavy emphasis on endeavor which has guided research activity and construction of psychometric test has limited the concept of creativity vis-a-vis the broad and multifaceted phenomenon of creation in this regard Guilford (1950) aptly addressed with remarks that follows concerning the nature of creative thinking has been derived with certain type of creative people in mind: the scientists and technologists, including the inventor". Similarly Torrance's conception of creativity on which he developed his famous tests of creative thinking seems to be clearly oriented towards recognition and development of scientific creativity.

Many investigators have further alleged that there is sharp contrast and discontinuity between the psychometric conception of creativity and the traditional and historical meaning of creativity. They believe that current psychometric tests are really ignoring the other form of creativity. It is essential to investigate this aspect to understand its nature appropriately. Credit goes to Stanley Stark (1965a, 1965b) who has attempted to develop this dualistic conception of creativity most systematically. These two contexts are (a) Context of novelty as in scientific invention (Barron, 1955) and (b) Context of meal1lng - as in dreaming (Demeiut, 1965). Roughly speaking this creativeness in the domain of science and arts respectively believed that these two contexts ultimately are related to two types of cognitions, temperaments or ways of knowing or looking at the world which are more or less determined constitutionally and are at the roots of various time honoured controversies in the history of ideas. Stark contended more strongly that the modern psychometric test of creativity are biased in favour of scientific creativity (novelty context) and are deficient in measuring the traditional type or meaning type of creativity.

Stark's meaning context is much near to Vedic conception of creativeness which has been largely artistical and spiritually oriented with heavy emphasis on the inner process of instruction and imaginativeness. The central tenant of Vedic science is that both consciousness and unified field of creation can be understood as the same unmanifest field of pure potential. The unified field, pure consciousness begins to create when it trifurcates as rishi devta (process of knowing) and chanda (known). Through the process of self of interaction the knower experiences the diversity of rishi devta and chandas within the unity of consciousness.

According to Vedic science, failure to comprehend the diversity In unity and unity in diversity causes incomplete knowledge. Thus to understand creativity comprehensively, we must understand all aspects of the individual creator the creative processes and creative area.

**Rationale of the Present Study**

The foregoing theoretical discussion of various aspects 0 l' creativity outlined in the first section of this chapter reveals the complex and multidimensional nature of creativity and divergence in viewpoints. Some early researchers (e.g. Gordon, 1961; and Koestler, 1964) have viewed creativity as unidimensional phenomenon. The later workers such as Guilford (1971), Harrington (1990), Isaksen el al. (1993), and Runco (2004) have suggested creativity to be multidimensional in nature. Despite sticking to a particular theme or approach they have observed that creativity involves the simultaneous interaction among all the four themes (product, process, press and person). They have also emphasized the need of more systematic and advanced multivariate methodologies to understand the nature and underlying processes of creativity.

The literature clearly reveals that empirical studies of creativity have been dominated by the use of psychometric measures i.e. either verbal or non-verbal measures. These psychometric measures are limited in scope i.e. they measure only 'novelty context of creativity' (Stark, 1965; Sternberg, 1986; Pickard, 1990). Very few attempts have been made to unveil other aspects of creativity i.e. "meaning context". Projective measures are considered important instruments to tap this context of creativity. Clark el al. (1965), Richter and Winter (1966). Minhas (1981), Jalodia (1995) have used projective measures to represent the meaning context of creativity.

Among the projective tests, the most frequently used are "inkblot tests, word association test and TAT Creativity has been studied rarely in relation to SIS responses. The present study is an attempt to explore the SIS correlates of creativity in males and females. Inclusion of both the male and female subjects in the sample has been made in the light of some findings revealing sex differences in creativity e.g. Yamamato (1960), Raina (1969), Ruth et al. (1985), and Richardson (1986).

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