International Advance Journal of Engineering, Science and Management (IAJESM)
ISSN -2393-8048, January-June 2022, Submitted in June 2022, iajesm2014@gmail.com

Psychological Approaches to Creativity: An Overview

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It is interesting to note that psychological literature on creativity is very rich in terms of the variety of perspectives from which the subject has been approached. One finds that within psychology creativity has largely been conceptualized as a property of the individual - in terms of S-R associations, cognitive operations, personality traits, or mental ability. At the same time, there has been awareness regarding overemphasis on the individual in the study of creativity (Amabile 1983a; Simonton, 1975). This has resulted in a shift in emphasis from personality characteristics of the creative individual to the social environment which he/she is a part of thereby regarding creativity as 'situational' rather than an individual endeavour. This paper presents major psychological approaches in creativity research.

Research on creativity has taken various theoretical approaches. However what binds these seemingly 'different' approaches is the focus on the individual which has characterized the discipline ever since it established itself as a field of enquiry. The various can be summarised into the approaches

The approaches discussed in this review are as under:

- Psychoanalytic approach
- Personality approach
- Cognitive approach
- Associationist approach
- Biographical approach
- Confluence approach
- Social Psychological approach

Psychoanalytic Approach

The very first psychoanalyst to write on creativity was Sigmund Freud himself. In fact Freud is the only psychologist to have written about the process of creative writing and the writer per se. He considers creativity as a result of the repressed infantile wishes that are expressed by the creative person via a process of sublimation. For Freud (1908), the first traces of creativity lie in early childhood play. He asks, "Might we not say that every child at play behaves like a creative writer, in that he creates a world of his own, or, rather rearranges the things of his world in a new way which pleases him?" (p. 126) By giving an interesting example of the "fort da" game played by the one-and-a-half-year-old-child, Freud illustrates the child's ability to gain mastery over his pain of mother's absence (Abramson, 1984, p. 88).

Further, Freud explains that as one grows, he/she loses the ability to link imagined objects and situations to the real tangible objects, and as a consequence loses the capacity to play. Thus, instead of playing, an adult now phantasizes. These phantasies bring him shame because the wishes that give rise to these phantasies are impermissible by the society and moreover, as a grown up he is not expected to go on playing and phantasizing. Art then becomes a means for the artist to overcome shame associated with his phantasy. By way of his artistic expression, the artist is able to overcome his shame. Freud further states that the phantasy of the artist is not limited to him rather shared by others too. Thus, the artist by means of his art relieves the audience too, of the shame associated with their phantasies. Later psychoanalysts such as Arlow (1986) have elaborated upon the artist-audience relationship first posited by Freud. Fairbrain (1938, pp. 288-303) defined artistic activity as "making something for fun". Fairbrain regards the destructive impulses as the chief sources of inner tension that are accompanied with the restitution phantasies that preserve the love object.

Greenacre (1957) has explained creativity in terms of the gifted infant's ability to have "collective alternates" – a wide range of experiences associated with the primary objects in an infant's early life. As an hypothetical example, Greenacre says that a potentially gifted infant finds the mother's breast (playing object) far much more intense – in terms of its warmth, smell, moisture, the feel of the texture of skin and the rounded of form, than a less potentially gifted infant. Thus one finds that in line with the basic assumption, psychoanalysis explains creativity by reducing it to the repressed infantile wishes of the artist whereas object relationists explain creativity by bringing it down to the infant's relations with the early objects in his life.

Personality Approach

The personality approach to creativity focuses on the exploration of personality characteristics or traits of creative individuals with the help of psychological tools. Razik (1970) gives an interesting analysis of socio-political processes dominant in America that provided impetus to creativity research in this direction, as against the earlier conceptualization of creative acts as chance occurrences of the genius. According to him, the Second World War demonstrated to man the powers of science and technology and more so, the human capacity as well as need to have control over the external world. The constant threat of Russia also paved way for the belief in individual agency as far as creativity is concerned. The earlier idea of creativity as a chance occurrence, property of only a few individuals no longer appeared plausible. There was a need to identify, support, and foster creativity in people. Razik (1970) states,

Through necessity, the basic concept of creativity thus changed from something heretofore soft and sentimental to something hard and realistic, closely connected with hardware and survival, as are the machines of war and industrial production. Research on creativity became legitimized as a properly serious concern of the military, government and industry (p. 156).

This shift in conceptualization of creativity as an identifiable characteristic of the individual, that can be cultivated with efforts, led American psychologists to take up research projects involving the creative personality. Guilford's (1950) address to the American Psychological Association explicitly called for a need for psychologists to focus on the creative personality.

The Institute of Personality Assessment and Research (IPAR), formed in 1949 at the University of California, Berkley represents this approach. Although originally formed for development and application of assessment techniques to study effectively functioning persons, it eventually turned into a place for the study of creativity. The research at IPAR included creative individuals belonging to various domains, such as writers, space scientists, architects and mathematicians. The assessments were done using personality tests measuring intelligence, interests, perceptual-cognitive functioning; projective techniques; interviews and observations by the IPAR staff.

MacKinnon (1975, cited in Helson 1999) conducted a review of IPAR's contribution to the study of creativity that comprised of studies done on the creative personalities belonging to both Arts and Sciences. The review resulted in the identification of the following characteristics of creative individuals:

1. Creative individuals thought good about themselves but were at the same time more frank and critical of themselves than were others.
2. Creative individuals seemed to have considerable amount of psychopathology but at the same time possessed adequate control mechanisms.
3. They tended to score high on femininity which shows openness toward feelings and emotions.
4. They are inclined towards complex and asymmetrical drawings.
5. On Jungian typological dimensions, they are significantly more intuitive than sensing, perceptive than judgemental and introverted than extrovert in nature.
6. They are less concerned about details or facts and are more concerned with their meanings and implications in a larger context. They display cognitive flexibility, interest and good communication, intellectual curiosity, and lack in monitoring of impulses either of their own or of others.
7. They tend to score high on theoretical and aesthetic values.

MacKinnon (1975) observed that IPAR conceptualized creativity largely in terms of the creative product with very little attention paid to how these products relate to the creative process, personality and the social context.

Lehman (1953, cited in Martindale, 1989) and Simonton (1984, cited in Martindale, 1989) found a curvilinear relationship between age and creativity.

Cognitive Approach

The cognitive approach conceptualizes the human being as an active agent that receives information from the external world, processes it and thus makes sense of his/her environment. The mind is conceptualized as a processor that performs certain operations on the information which it receives from the environment and this is how we are able to make sense of the world around us. The first cognitive psychologist to study creativity was Graham Wallas. According to Wallas (1926), the creative process consists of four stages namely preparation, incubation, illumination, and verification. Later on, other cognitivists have provided evidence for and elaborated upon the model proposed by Wallas (e.g., Hutchinston, 1949; Patrick, 1935, 1937, 1938; Weisberg, 1988).

Cropley (1970) attributed to the creative individual a style of cognitive functioning characterized by least censoring of information from the environment, flexibility, and openness to change.

Bruner (1957, cited in Cropley 1970) suggested mechanisms of coding and categorization that are necessary for people to be able to handle the vast amounts of data that they receive from the environment. Wallach and Kogan (1965, cited in Cropley 1970) examined the relevance of these mechanisms in the context of creative thinking and found that creative performance of fifth grade American children shares a positive relationship with performance on the category width test. In other words, highly creative children showed the ability to relate widely different pieces of information.

Another cognitive variable linked with creative thinking is risk-taking behaviour. McClelland (1963, cited in Cropley 1970) and Roe (1963) regard 'willingness to take risks 'as a critical attribute of any creative individual. Anderson and Cropley (1966) also provided evidence in support of this view.

Cognitive psychologists have also provided computer-based models of cognitive processes that lead to creative products (e.g., Langely et al, 1987).

Associationist Approach

The associationists conceptualize human beings as a collection of S-R connections that are primarily a result of learning. Hence they occupy themselves with the study of the phenomenon of learning in all its manifestations. Creative behaviour is thus seen as an association between stimulus and response bearing a unique character. Mednick (1962) defines creativity as formation of S-R associations that are unusual or unlikely to be formed otherwise. The creative individual is thus able to establish relationships among aspects of their environment that are highly unlikely to occur in others. Cropley (1970) extends upon this view and regards creative S-R associations as dependent on the differential reinforcement or punishment that the individual receives from the environment.

Biographical Approach

The origin of this tradition can be traced back to Freud's psychobiography of Leonardo da Vinci (1910/1957). Psychobiography in classical psychoanalysis has been more of a case study, being deductive in its approach. According to Pritzker (1999), biographical studies of eminent writers aimed to arrive at generalizations about them by compiling statistical data using their biographies. These studies have largely compared groups of people from different domains of creativity. Thus the biographical studies have been motivated by the nomothetic ideal. In this context, Baskin (1936) did a comparative study comprising of 123 eminent authors and 120 scientists and concluded that writers are usually belonged to poor homes, are susceptible to depression and poor health, and died slightly earlier.

Ludwig (1995 cited in Pritzker 1999) examined the biographies of 1,004 eminent people that included 180 fiction writers, 64 non-fiction writers and 53 poets. The findings revealed that 87% of the poets, 77% of the fiction writers and 72% of the non-fiction writers suffered from psychopathology at some point in their lives as against 28% of the total sample. Ludwig concluded that emotional problems enhanced the performance for 16% of the creative people.

Post (1996 cited in Pritzker 1999) studied biographies of 291 famous men. The findings revealed the presence of depression in 29% of scientists, 31% of artists, 26% of intellectuals,

30% of politicians and 31% of composers. It was also found that the prevalence of depression is double among novelists and dramatists.

Andreason (1987, cited in Pritzker 1999) studied 30 writers at the Iowa workshop over a period of fifteen years. A high prevalence of affective disorders was found. It was also found that writers had a greater number of first-degree relatives with affective disorders and high creative ability.

Jamison (1989, cited in Pritzker 1999) interviewed 47 British prize winning writers and artists. It was discovered that 38% had received treatment for affective disorder at least once in their life, 23.4% had taken anti-depressants and 6.4 % had been diagnosed as manic-depressive.

Confluence Approach

A recent trend in the study of creativity emphasizes a confluence of various factors in contrast to the earlier focus on either of the components such as the personality variables or the social variables.

Amabile (1983a) considers creativity as a result of the confluence of task motivation, domain relevant knowledge and abilities and creativity relevant skills. The creativity relevant skills include:

a. A cognitive style of problem solving.
b. Knowledge of heuristics for generating novel ideas.
c. A work style involving high concentration.

Sternberg and Lubart (1991, 1992, 1995 cited in Sternberg & Lubart 1996) proposed the investment theory of creativity. According to this, creativity is the result of a convergence of six distinct but interrelated factors including intellect, ability, knowledge, style of thinking, personality, motivation and environment.

Social Psychological Approach

This approach owes its origin to the perceived failure of earlier attempts to study creativity. There was a widespread awareness among psychologists that consistent focus on the creative individual has resulted in the exclusion of social, cultural or environmental variables conducive to creativity (Amabile, 1983a). This approach then marks a departure from the earlier approaches in its conceptualization of creativity as not only a result of individual processes but also dependent on environmental factors as well.

Amabile (1983b) examined evaluation, rewards, modeling and training as potential social factors affecting creativity. The findings largely suggest that expectation of evaluation undermines creativity and intrinsic motivation plays a greater role in creativity rather than any kind of external rewards. In fact the role of intrinsic motivation was found to be so strong that Amabile (1983a) regards it the foundation of a 'social psychology of creativity'.

In what he calls as the histriometric approach Simonton (1975) has studied the effect of social variables on creativity. Simonton (1975) has examined a variety of social variables e.g., political fragmentation, political instability, war, cultural persecution, role model availability and so on, as some of the potential social factors influencing creativity. The findings suggest that the epochs which were characterized by political instability produced more creative individuals. Simonton (1984 cited in Martindale 1989) found a high correlation between creative individuals in a given generation with that of the previous generation. Kroeber (1944, cited in Martindale 1989) has suggested that creativity in a given generation is largely dependent on the availability of role models suggesting the important role of 'emulation' in creativity.

Simonton (1976) found an inverted - U relationship between creativity and amount of education. Martindale and Armstrong (1974); Martindale (1977) and Rosen et al. (1983) have suggested that creative people are relatively more sensitive to sensory stimuli in the environment. Martindale (1989) further suggests that a usual response of creative individuals to over stimulation in the environment is the tendency to withdraw from the situation.

Ekvall and Tangeberg-Andersson (1986) studied work climate conducive to creativity. They concluded that a democratic work organization that permits freedom and autonomy to the workers results in enhanced creativity. Amabile (1983b) also found that work environment which offer a high level of stability of employment but calls for workers' responsibility for

starting new activities, along with less amount of interference from superiors results in greater creativity.

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