CHAPTER II

THEORETICAL VIEW POINTS OF CREATIVITY, COGNITIVE STYLES, NEEDS AND VALUES
CREATIVITY

Creativity has been a topic of some interest throughout man's history but it is in recent years that systematic and scientific interest has been shown in the subject. Scientific investigations in the area were hindered for long for reasons of attaching different meanings to them by different workers. Literature is replete with terms like imagination, originality, insight, adventurous thinking, ingenuity, discovery, intuition, problem solving and invention, which have been used synonymously with creativity. Yet, there is no complete unanimity among those studying creativity as to what it really means (Freeman, Butcher and Christie, 1971). It is too flexible a phenomenon to be easily defined.

Hallman (1963) makes a mention of two reasons, namely: the tendency to emphasize separate interests by a wide variety of disciplines to investigate the creative process and secondly the complex nature of creative experience, which seem to be mainly responsible for the disorganised state of research evidence. The tendency to assign different meanings to the term creativity by different workers in the field has been

The complexity of the creative experience is manifested by the numerous definitions which Rhodes (1961) attempts to condense into four roughly discriminating strands, namely, (a) Person, (b) Process, (c) Product and (d) Press as embodiment of ideas. Likewise, the variety of definitions led Torrance (1965) to classify these in terms of (a) newness as criteria, (b) creativity versus conformity (c) creativity as a process, (d) creativity through the approaches of mental abilities (e) levels of creativity, and (f) approaches through studies of creative persons.

While summarizing research evidence, Hallman (1963) came across tentatively five major components of creativity definitions (a) it is a whole act, a unitary instance of behaviour; (b) it terminates in the production of objects or forms of living which are distinctive; (c) it evolves out of certain mental processes; (d) it covaries with specific personality transformation; and (e) it occurs within a particular kind of environment. He abbreviated these components as the act, the object, the process, the person and the environment. Basing his discussion on Rhodes (1961) classification of definitions of creativity, Kneller (1965) observes
that (a) creativity through the approaches of person may be considered in terms of physiology, temperament, personal attitudes, habits and values of person who creates; (b) explaining it by way of mental processes involves motivation, perception, learning, thinking and communicating the way the act of creativity calls into play; (c) press implies understanding of creativity by focussing attention on environment and cultural influences; and (d) products of creativity include elements such as theories, inventories, paintings, carvings, poems and the like.

Despite the broadly discriminating strands of definitions, it is not likely to include a particular definition strictly within a specific strand mainly on account of overlapping from one category of definitions to the other. Moreover, creative process without having references to person, press and product is equally ambiguous. Torrance (1965), while accepting the process definition of creativity has rightly raised the question; what kind of person one must be in order to engage most successfully in the process?, what kind of environment one needs in order to function most successfully in the process?, and what kind of product results from the process?

In an attempt to arrive at a meaningful picture of numerous definitions of creativity different views have been tentatively accommodated in the same pattern as given by Oakhar (1975) within the roughly discriminating categories of
(a) Creativity as a Product

Creative products essentially include an element of newness which implies novelty, freshness and inventiveness. It is a quality of originality involving fusion of perception in a new way, finding new connections and relationships, production of new insights, moulding of experience into new organizations, presentation of new constellations of meanings, and innovations.

In some definitions of creativity, newness has been viewed as tangible products but certain others hold that it can also be present in the intangible products. Through another approach newness is manifested by the acceptance of creative products in the context of society or the individual.

Rogers (1962) and Arnold (1962) include a poem, a work of art, or a scientific theory under tangible products. Mednick (1962) asserts that such creative results must be useful. Likewise, Haefele (1962) pleads that the creative innovations must have a social worth.

According to Stein (1953) creativity represents a regeneration of existing materials or knowledge as a consequence
of interaction between a creative individual and his environment for the production of something new that is acceptable as tenable or useful or satisfying by a group at some point in time.

Dehaan and Havighurst (1961), stated that creativity is the quality which leads to the production of something new, may be new to society or merely new for the individual who created it.

Harmon (1956) agrees with the contention that creativity pertains to new form or arrangement of old elements involving production of something new but at the same time the creative product must contribute to the solution of a problem. In agreement with Harmon's problem solving strategy, Mackinnon (1962b) holds that creative response or idea is either novel or at the very least statistically infrequent so that it helps to solve the problem or fits in a situation or accomplishes some recognizable goal involving sustaining of the original insight and evaluation and elaboration of it, a developing of it to the full.

Rogers (1954) is of the view that creativity involves an emergence in action of novel, relational product. He argues that such a product grows out of uniqueness of individual on the one hand and the material, event or circumstances of his life on the other. Piers et al. (1960) attach importance to novelty and usability of creative products,
outcome of which depends upon the capacity of an individual
to avoid usual routine and unconventional ways of thinking
and of doing things. To Mallory (1970), creativity implies, not
making things however complex, which already exist but making
new forms.

Opposed to Mallory's remark, Stewart (1950) insists
that creative thinking may occur even though the idea produced
may have been produced by some one else at an earlier time.
To him, productive thinking may take place in the mind of the
humblest workman as well as in the most distinguished statesman,
artist or scientist. He mainly upholds the importance of
creative product to the individual and not to the society.
In a similar vein, Thurstone (1952) argues that it does not
make any difference whether society regards an idea artistic,
mechanical or theoretical, as novel. He maintains that an act
is creative if the thinker reaches the solution in a sudden
closure which necessarily implies some novelty for him. Too
much emphasis on the tangible nature and social value of
creative products is not appreciated by Guilford (1964) on the
plea that idea of usefulness involves a value judgement in a
way that science cannot tolerate or manage. A novel idea
culminating out of creative thinking may or may not emerge in
the form of tangible products and many a useless invention is
no invention. He further argues that the kinds of mental
activity that go into inventions, useful or useless, are essentially alike psychologically. Likewise, Parnes (1960) considers creative behaviour as discriminative, relational and evaluative and maintains that the product may be unique and valuable to a group or organization, to society as a whole, or merely to the individual himself.

Bomey (1975) has defined creativity simply as the combination of old ideas and observations and information, to form something that is new to us. It is the invention of a new and previously 'hidden' connection. According to Hamill (1982) creative product is a symbol for a conception of experience that is new to the symbol maker. Howley (1979) defines creativity as "the ability to produce new and valuable forms."

Creativity is neither an infinite capacity for taking pains nor it is a large capacity for novel ideas. Creativity is the ability to generate novel concepts and either to know that they will work or find some one who shows that they will work. Feedback, criticism and selectivity whether the source is internal or external are essential components of creativity. Indeed how to distinguish important advances from trivial is the central problem of creativity.

The definitions given so far dealing with the tangible and novel creative products emphasize social worth, appropriateness, desirability and recognizability. On the other hand
intangible products may or may not have relevance to society but they certainly have psychological relevance to the individual creator with regard to recognition, utilitarian value, meaningfulness and appropriateness.

(b) Creativity as a Process

Numerous references occur in the research literature which are in support of this viewpoint that creativity is mainly a process. Creative thinking has been regarded basically as a process of seeing or creating relationship. It comprises the processes of discrimination from many alternative possibilities and that of synthesizing elements in altogether new and original ways. Simpson (1922), for example, defines creativity as the initiative which one manifests by his power to break away from the usual sequence of thought into an altogether different pattern of thought. The change of pattern of thought from the initial to the final stage involves varying shifting approaches to a problem and selection of different elements so as to bind them together to tenable systems. Likewise, Bartlett (1958) emphasizes the need to deviate from main tract, to break out of the mould, to be open to experience, and to permit one thing lead to another, as characteristics of 'adventurous thinking' - a term synonymously used for 'creative thinking'. In this process, Jennings (1964) perceives movement from loosened to tightened construction. By loosened construction he means the varying shifting approaches to a problem, testing of hypotheses, and
manipulating elements in a situation which lead to arrive at the tightened construction accounting for the solution of a problem in a given situation.

Ghiselin (1958) regards creativity as a process of change of development or evolution in the organization of subjective life. The process is characterized by human purposes rather than either the random processes of nature or trial and error processes of human activity. Torrance (1962) describes creativity as taking place in the process of sensing difficulties, problems, gaps in information, missing elements, identifying the difficulty, searching for solution, making guesses or formulating hypotheses about the deficiencies; testing these guesses and possibly revising and retesting them; and finally in communicating the results. He claims that his definition describes a natural process, and that strong human needs appear to be the basis of each of its stages. In this way, he maintains that his definition places creativity in the realm of daily living and does not reserve it for ethereal and rarely achieved heights of creation. Creativity as a mental process, thus seems to be purposeful and goal directed (Harmon, 1956; MacKinnon, 1962b).

Stressing upon the bisociational approaches in the creative process, Koenstler (1964) attempts to integrate the findings of a range of disciplines into a single theory of creativity. He seeks to synthesize his own theory of creativity
as manifested in humour, art, and science with the latest conclusion of psychology, physiology, neurology, genetics, and a number of other sciences on the thesis that all creativity processes share a common pattern termed as 'bisociation' which is the connecting of previous unrelated levels of experience and frame of reference. According to him, the creative act of connecting previously unrelated dimensions of experiences enables the creator to attain a higher level of mental evolution. It is an act of liberation - the defeat of habit by originality.

Mednick (1962) defines creative thinking as "... the forming of associative elements into new combinations which either meet specified requirements or are in some way useful". His definition implies that the person's associational behaviour poses a general orientation towards some given requirement that guide the nature of his responses. The same general associative conception of creativity has been followed by Wallach and Kogan (1965) with slight variation in their operationalization. They conceive of this process in terms of the number of associational responses and uniqueness of these responses, thus operationally making it possible to measure creativity.

To Freud (1949) creativity originates in a conflict within the unconscious mind (the id). Sooner or later, the unconscious produces a solution to this conflict. If the solution is ego-syntonic, if it reinforces an activity intended
by the ego or conscious part of the personality, it will issue in creative behaviour. In ease, it is at odds with the ego, be either it will repressed altogether or it will emerge as neurosis. Besides, the role played by unconscious mind in creative thinking, Hebb (1949), considers that the conscious mind also contributes to it and maintains that creative function is a function of relative strength of conscious and unconscious processes. Neo-Freudians are at variance with Freud in accepting creativity as the product of pre-conscious rather than the unconscious mind. They believe that creative thinking occurs when the ego voluntarily and temporarily withdraws from some area of the preconscious in order to control it more efficiently later. Thus creativity is a regression permitted by the ego in its own interest. More recently Torrance and Hall (1980) give support to the idea that much of the mental activity critical to the creative process emanates from the unconscious. In a review on Freudian and Neo-Freudian conception of creativity Rugg (quoted by Kneller, 1965) comments that it is more likely that imagination and creativity, though specially strong in the preconscious, are present, in some degree at all the levels of mental activity.

Rothenberg (1976) through intensive clinical and experimental research with creative and non-creative subjects has begun identifying properties common to creative experience. He has clearly demonstrated the existence of two thought processes
which affect creativity "Janusian thinking" and "Homospatial thinking Janusian thinking allows the juxtaposition of two contradictory concepts or images to form a single unique and unified idea. Homospatial thinking is the visualization in the 'mind's eye' of two separate entities simultaneously occupying the same space, producing a new mental picture. The later is frequently associated with verbal and musical metaphor and with visual abstractions.

Trowbridge (1978) discusses creativity in terms of a dynamic balance between the processes associated with the three substrates of the brain; the primary reticular brain system (associated with action), the limbic system (associated with effects), and the cortical areas (associated with cognition). Further he describes, "creativity depends on the balance between action, emotion and intellect, with the addition of insight or intuition, and defined as the ability to synthesize the components of a situation into a meaningful whole." He proposed a seven steps model for creative process: (i) awareness of need (motivation), (ii) preparation and study (intellectual activity), (iii) illumination (Insight or intuition), (iv) appreciation of the solution (emotional reaction), (v) development of application techniques (Intellectual activity), (vi) implementation (action) and (vii) integration and assimilation.

In an attempt to explore the role of creativity in scientific innovation, Brown (1977) studied numerous scientific
breakthroughs. He writes that each major advance in science involves an irrational, illogical element, a suspension of reason, together with a mental leap of creative insight. The discovery process is not a cold unemotional affair, instead, it is frequently changed and very memorable. A common theme found in many writings explaining the creative process is the description of encounters with a phenomenon that takes one on a journey beyond the everyday routine. Through the development of an intimate relationship with that phenomenon emerges the creative insight and the novel discovery (Motamedi, 1973).

The creative process according to Motamedi (1978) is purposeful and evolves through seven phases. Experience in each phase has a profound effect on the total outcome of creativity; in each phase the relationship between the person and the phenomenon changes. The seven phases that embody the creative effort consist of framing, probing, exploring, revealing, affirming, reframing and realizing. Successful completion of the creative process requires a sufficient range of required cognitive and non-cognitive resources.

However, it is likely that each step of the process requires the flexibility to shift between and across different styles of thinking and working. The successful outcome seems to depend on the ability to integratively use the two hemispheres of the brain (Ornstein, 1972; Watzlowick, 1978). Both the analytic left hemisphere specializing, by and large, in language
and reduction, and the holistic right, specializing in visual tasks, rhythm and composition, contribute to the creative outcome (Wittrock, 1977). The creative process necessitates the concretization and abstraction (Kolb et al., 1979) of events, as well as mutual interaction of past and present experiences. It engages all four Jungian psychological functions of thinking, intuiting, feeling, and sensing (Jung, 1938; Hall and Nordby, 1973) toward a purpose and a future outcome.

Traditionally, the creative process has been viewed within a model containing four parts (Wallace, 1926; Poincare, 1952; Vinache, 1952). Preparation, incubation, illumination and verification. These involve immersion of the mind in some specific medium, acquisition of experience and structure, introspection or illumination and critical evaluation of the work done. This concept and much of the subsequent writings on creativity exclude discussion of the many styles and deeper introspective processes interwoven in the creative journey. The relationship between the pursuer and the phenomenon evolves as the journey progresses. It begins with an awareness, travels beyond the familiar into the unknown and ends with the return to the familiar – the homecoming. The pursuer returns with the new awareness to be shared with others.

In substantially concrete terms, Rogers (1976) has set forth a descriptive definition of creativity, which encompasses all forms of creativity at all levels of development. It holds
that the creative process is separate from the social and artistic worth of the product and exists only for its creator. He further proposed several characteristics which the creative individual must possess, (1) extentionality, i.e. receptiveness to experience, (2) internalised locus of evaluation, i.e. the ability to play with elements and concepts, i.e. the ability to play with ideas. To support these characteristics Rogers pointed to two environmental factors. Psychological safety, which includes full acceptance of the creative individual, absence of external evaluation and in depth understanding of the individual, and psychological freedom, which entails the freedom to assume responsibility for creative expression, as well as the freedom to express oneself creatively.

Beardsley (1976), considered the question of the inception of the creative act - whether it resulted from the idea requiring pursuit or a goal demanding achievement. His conclusions were vague, evolving into comments on the awareness of the completion of the creative process, and on artist's internalized criteria for evaluation of both process and product. He also identified two phases of creation, the 'inventive' phase in which the ideas are generated and the 'selective' phase in which they are criticized. Finally, he differentiated between the creative process and the creative product because this alone is the source of experience for the observer.

According to Gordon (1982), the term creative can be
used to describe the basic openness to closure process common to the act, personal growth with which this process unfolds, it involves taking in information analyzing it, synthesizing it, evaluating the synthetic configurations, utilizing the most appropriate synthetic form and responding to environmental reactions to this utilization.

Wilson (1952), while offering an operational definition of 'creativity' synthesized the diverse meanings of creative process prevalent at that time and viewed creativity as characterized by the outflow of individual or group through which, a product is structured; an action of the mind that produces a new idea or insight, the mental process of manipulating the environment which results in the production of new ideas, patterns or relationships; the capacity to produce through thought or imagination, the original work; the emergence in action, of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people or circumstances of his life, on the other; the mental process that involves the rearrangement of part experience, with possibly some distortions into new patterns to better satisfy some expressed or implied need; the process which results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time, and the creative process is any process by which something new is produced - an idea or an object including a new form or arrangement of old elements. The new creation must contribute to the solution of some problems.
The multi-dimensional nature of creative process was also emphasized by Johnson (1972).

(c) Creativity through the Approach of Person

Another strand of definitions of creativity has relevance to cognitive qualities and non-cognitive aspects of personality. The conception of creativity in terms of cognitive power has frequently been thought of as a single dimension or at least as a unified cluster of traits resembling and to some extent overlapping general intellectual ability, whereas within the context of non-cognitive aspects of personality, a set of characteristics is considered to match the response properties used as criteria of creativeness.

Various authors argue that creativity is related to unique cognitive factors. Guilford (1950, 1956, 1957 and 1959), for example, considers creativity as involving the interplay of all factors of divergent thinking on the one hand, and factors of seeing problems and evaluation on the other. His point of view reflects that creativity, whatsoever its range of application, is by no means a unitary trait but is rather a collection of different component abilities and other traits. Earlier studies demonstrated two distinct modes of expression: verbal fluency and originality. Guilford et al. (1951), identified the following kinds of thinking abilities; such as sensitivity to problems, fluency of ideas, flexibility, originality, redefinition, ability to rearrange, abstracting ability,
synthesis, closure and coherence of organisation. On the basis of Guilford's factorial studies, Dehaan and Havighurst (1961) observe that creativity includes seven factors, namely sensitivity to problem, associational fluency, ideational fluency, spontaneous flexibility adaptive flexibility, originality and redefinition.

Good and Markel (1959) described creativity as a quality thought to be composed of a broad continuum, upon which, all members of the population may be placed in different degrees and composed of factors, namely ideational fluency, originality, adaptive and spontaneous flexibility and the ability to make logical evaluation. Torrance (1963b) also names sensitivity to problem ideational fluency, flexibility, originality, elaboration and redefinition as factors of creativity.

However, definitions imply variations as to the degree of complexity of processes covered by creativity. Hence although Gordon (1961) and Koestler (1964) have taken creativity as a unitary trait. McGuire et al. (1961), Sultan (1962) and Lehois (1963) think of defining creativity as a complex human attribute involving different factors; Ghiselin (1959) argues the existence of verbal factor of creativity and speculates that an analogous non-verbal factor may exist; Anderson (1964) obtains two factors of verbal and non-verbal creativity; and Taylor (1964) suggests that there are at least two types of creativity.
Getzels (1964) has attempted to deal with creativity along somewhat different lines, giving primacy to the nature of the problem rather than to the solution. A distinction is made between presented and discovered problem situations; the former involving a problem that is already formulated, the latter a problem that still needs formulation. The significant element in creative performance is the envisagement of the creative problem; for it is a fruitful question to which the novel situation is the response (Getzels and Csikszentmihalyi, 1974), Wallach and Kogan (1965), in an experimental approach to creativity, conceive it in terms of the number of associational response and uniqueness of these responses.

Creativity has relevance to cognitive qualities of personality. The conception of creativity in terms of cognitive power has frequently been thought of as a single dimension or at least as a unified cluster of traits resembling and to some extent overlapping general intellectual ability.

The non-cognitive qualities of a person also contribute to creative production. According to Getzels and Jackson (1962) the important distinction between the highly creative and highly intelligent adolescents does not confine to the cognitive spheres alone but it embraces the temperamental characteristics as well. Freeman et al. (1969) point out that the differences in creativity seem likely to be related more to non-cognitive than cognitive traits. Mackinnon (1962a, 1963, 1965, 1967 and 1970) places premium on the criterion of achievement
accomplished by men in different fields for identifying creative individuals. He finds considerable evidence in biographical, temperamental and motivational factors for identifying creativity.

According to Roger's (1954), "creativity is the tendency to express and activate all the capacities of the organism to the extent that such activation enhances the organism or the self." Creativity, he submits, has certain inner conditions, such as, openness to experience implying flexibility, the internal locus of evaluation considering other viewpoints of one's work not fundamentally allowing to alter it, and toying with elements and concepts drawing their implications in the intellectual exploration. Rogers, thus appears to emphasize man's tendency to actualize himself, to become his potentialities as the main spring of creativity. In his view, creativity is characterized by traits such as intuition, and spontaneity with a tendency to self-realization. Maslow (1959) designates these two senses of creativity as special talent creativeness (intuition and spontaneity) and self-actualizing creativity (Self-realization). In the first sense, he says that creativity can occur despite neurosis but in the second sense, it is the expression of sound and integrated personality, the latter springs directly from personality.

There is yet another point of view which stresses that creativity itself is to be understood in terms of personality or in a sense, the person himself. Allport (1937) recognizes
the significance of assumption of creative motive from functional autonomy in the individual. Guilford (1950) remarks that Roe's (1946a, 1946b and 1953) studies of leading scientists manifest one temperamental trait to be universal - a willingness to work hard and to work for long hours. Mackinnon (1962a) in his sample of master architects as creative subjects finds them to enjoy sensuous experience, have social poise and presence, appear socially at ease, to be genuinely dependable and responsible. The architects exhibit the highest value aesthetic and are almost equally high on theoretical values. Mathematicians and writers were investigated (Mackinnon 1962b and Barron, 1965), creative mathematicians were found to be significantly different from the representatives of their professions by being individualistic, preoccupied, artistic, complicated, courageous, emotional, imaginative and self-centered. These creative mathematicians were high on both theoretical and aesthetic values. For creative writers, the results were similar to those obtained on architects and mathematicians. The creative writers are known to possess a high degree of intellectual ability, verbal fluency and aesthetically reacting tendency. They value intellectual and cognitive matter and autonomy, and are found to be productive, concerned with philosophical problems and possessing a high level of aspiration, a wide range of interests and an unconventional thought process. Taylor and Holland's (1964) presented the personality characteristics of creative persons as autonomous, self-sufficient,
independent in judgement, more open to the irrational, more
stable, more feminine, dominant, self-assertive, complex-more
self accepting, more resourceful and adventurous, more
bohemian, self-controlled, emotionally sensitive, introverted
and bold.

Findings of most of the personality studies lend positive
support to the notion that artistic creativity is related to
certain attributes of personality, the intellectual affective
and motivational characteristics. The various background
factors of development and milieu, point to wide variations as
to the constellation of the said correlates among the creative
samples studied by various investigators. Hersch (1962)
suggested that the cognitive functioning of creative person is
distinguished by a greater availability of both the relatively
mature and relatively primitive processes. Siduson (1958) also wrote
that it was primarily in their ways of thinking and perceiving
that artists exhibited the most marked differences from non-
artists. She reports that the artist's thinking is marked by
a great deal of elaborated fantasy; they are able to tolerate
ambiguity in perception and also have the ability to loosen
or relax their thinking without accompanying personality
disorganization. Raychaudhuri (1963) concludes that creative
musician is more distinctly marked by his emotional and tempera-
mental characteristics than by other aspects of his personality.

In conclusion agreement seems to fall in line with Dallas
and Gaier (1970) who maintain that creativity is not entirely a cognitive process, nor it is entirely a result of complex set of personality traits. On the other hand, creativity may be considered as related to unique cognitive factors (Guilford, 1950; and Lowenfeld, 1958), as also dependent upon certain personality and emotive characteristics (Freud, 1910, Barron, 1955; Couch and Keniston, 1960; McGuire et al. 1961; Drevdahl and Cattell, 1963; and Cropley, 1965a; Raina 1968 and Paranash, 1970). It is likely, therefore, that multiple types of creative talent exist and these intellectual components are linked significantly to certain personality characteristics as well.

(d) Creativity through the Approach of Press

Attempts to define creativity through the approaches of product, process and person and likely to be inadequate without reference to the 'Press'. The term creative potential perhaps may best be actualised within favourable environments whereas indifferent and hostile conditions may inhibit it. Environmental conditions conducive to creative behaviour may be referred to as psychological safety and psychological freedom, socio-cultural influences and increased creativity through education.

Basic to the assumption of creativity in terms of environment, according to Hallman (1963), is the condition of openness. It designates, "the characteristics of the environment,
both the inner and the outer, the personal and the social, which facilitate the creative person's moving from the actual state of affairs which he is in at a given time towards solution which are only possible and as yet undetermined." These conditions include sensitivity, tolerance for ambiguity, self-acceptance, and spontaneity which are not aspects of man's inheritance. They are learnt and are, therefore, environmental factors. Openness to experience was earlier accepted as the criterion of environment by Rogers (1954), by which he meant "lack of rigidity and permeability of boundaries in concepts, beliefs, perceptions and hypotheses." It implies tolerance for ambiguity where ambiguity exists as also the ability to receive much conflicting information without forcing closure upon the situation which in the terminology of general semanti-
cists is called 'the existential orientation'.

In the light of the remarks made by Rogers (1954) and Hallman (1963) it may be suggested that the inner conditions of creativity cannot be forced but must be permitted to emerge. It raises very fundamental question as to how best the external conditions can be established in order to foster and nourish the internal conditions of creativity? To this question, Rogers submits an answer whereby he argues in favour of setting up conditions of psychological safety and psychological freedom so as to maximize the likelihood of an emergence of constructive creativity. Psychological safety may be established by three
associational processes, namely, (a) accepting the individual as of unconditional worth (b) providing a climate in which external evaluation is absent, and (c) understanding emphatically. The condition of psychological freedom amounts to permitting the individual a complete freedom of symbolic expression - complete freedom to think, to feel, to be whatever is most inward within himself. It fosters the openness and playfulness and spontaneous juggling of percepts, concepts and meanings leading to creative behaviour.

Torrance (1965) also subscribes to the need for psychological freedom though expressed differently. In order to facilitate creative thinking, specially at young age, he recommends that creative thinkers be provided with a refuge; should get patronage by persons of prestige in the social subsystems. These help the creative individual to understand divergence and the good reason for it; let him communicate his ideas by listening to him and by helping him to get listened to by others; make efforts to get his creative talent recognized and rewarded; and help parents, supervisors, and authorities to understand him. The creative individual needs to learn to accept inevitable limitations in the environment while yet holding to his purposes and searching for opportunities for the expression of his talent. He also needs to learn how to cope with hardships and failures, with anxieties and fears, and to avoid isolation and retreat by way of adequate interaction with the environment.
Within the periphery of socio-cultural influences, such considerations as social institutions and practices, socio-economic status, and cultural sub-groups including the 'disadvantaged', may be clustered together. Many social institutions and practices have been singled out as contributors to an unfriendly environment for creative behaviour. Mead (1959) for example, insists that our present ways of rearing children prepare them for team work but not to do the original work which makes a team worth while. Another practice is higher education and its admission and evaluation procedures. Getzels (1960) levels a charge against the conventional admission and evaluation procedures from being biased in favour of the convergent intellectual ability and social interest, which he feels - may be detrimental to the cause of adequate creative growth.

Another way in which the environment has failed to reward creative behaviour has been in assuming that creativeness is the sole prerogative of certain professionals - artists, musicians, scientists, and the like. As against this assumption, Maslow (1962) identified certain persons as creative who did not belong to the category of professionals.

Creativity is not a product of the artist or the scientist alone, but it is relative to a particular culture as well. Cultural environments may favour or inhibit the creative production (Cattell, 1906). Very often social and educational
factors within a specific culture, accounting for the institutional climate explain why certain universities or institutions produce more creative research than others.

Cultural deprivations seem to dampen the creative potential of individuals to which evidence has been presented by Reissman (1962). As a corollary of it, dampening effect accrues out of a feeling of psychological insecurity. However, Torrance (1967 and 1970), Covington (1969), Richmond (1968), Check (1970), and Langgulüng (1971) do not find significant differences, on Torrance tests of creative thinking, between the culturally advantaged and the disadvantaged barring minor exceptions.

Besides, understanding creativity by focussing attention to the press implies identification of a number of facilitating forces which might counteract some of the inhibiting forces. Most of the studies that have been undertaken in this direction concern classroom setting and educational locale. On the basis of several studies, Torrance (1965) lists certain factors which facilitate creative behaviour. These are ways of rewarding creative behaviour, creative motivation or attitudes of the teacher, creative activities and opportunities for practising skills in creative thinking, different rewards for boys and girls, differential rewards for originality, competition, unconventional practices, creative rather than the critical peer-evaluated practices, peer pressures in homogenous groups,
trouble shooting evaluation and helping children and young people value their own ideas. Attention is also given to differences in the way different cultures encourage characteristics associated with the creative personality. Covington and Crutchfield (1965) attack the problem of training creativity by constructing a special curriculum in creative problem solving using an auto-instructional programme. In an experiment by them, the special training resulted in an increase in creativity. Training effects explain increase in the originality of responses in some earlier experiments as well (Parnes, 1959 and Maltzman et al., 1960).

Studies of Rivlin (1959), Nuss (1962) and Hudson (1966) reveal that high creatives generally come from higher socio-economic class groups. Wylie (1963) attributes differences in creative behaviour to sex, race and socio-economic status. Although Wallach and Kogan (1965) obtained similar results yet they themselves doubt the validity of their findings on the ground that their sample almost entirely represented upper social class group. Contrary to the above mentioned findings, Foster (1971) reports that he could find no evidence of creative ability as measured by variety of tests and ratings being significantly related to the social class of the parents of the children in the sample.

Gallagher (1964) reports that there are numerous indications that only slight changes in style and approach on the part of
the teacher can modify the child's output in terms of originality and uniqueness on tests. Evidence to the effect of teacher's role had been presented by Gallagher and Archner (1963) that the number of questions requiring divergent thinking asked by the teacher in a social study class of gifted children determines the proportion of divergent thinking expressed by the students. Spaulding (1963) arrives at the relationship between students feelings and performances and the affective or emotional atmosphere developed by the teacher as measured by time-sampling observations of the teacher in the classroom, and maintains that the teacher is an important figure in the development of both cognitive processes and personality characteristics in children. Demos and Gowan (1967) regard instructor's role in furthering the student's creativity as protective and nurturing one. Briefly, it appears to consist of five phases: (a) inspiration, (b) stimulation, (c) amelioration, (d) direction, and (e) encouragement and development.

A reference to 'brain-storming (Osborn, 1957) and Synectics (Gordon, 1961) has been made as appropriate methods for increasing creative efficiency.

The relationship between creativity and cultural forces according to Cropley (1973) is reciprocal. Creativity fosters the cultural change process by operating to extend the limits of culturally tolerable behaviour and thus broadening a culture's value aspiration and indeed, its ability to cope-effectively
with the world. In turn, creativity is also itself facilitated by such changes—factors which act in such a way as to produce alternative points of view in culture's members and to extend the boundaries of what is actively encouraged are, therefore, in a sense creativity facilitating.

Creative potential, thus seeks its maximal actuation within environmental conditions characterized by psychological safety and psychological freedom, socio-cultural influences and increased creativity through education.

Reviewing all these definitions, one finds that novelty or newness, originality, fluency and flexibility come out to be the main factors which constitute the creative thinking. It appears that creativity is not a unitary trait but is multi-dimensional ability running through many spheres of human activity and is manifested in a variety of forms at various levels, though it is essentially the process bringing something new into birth. Creativity involves an action of the mind directed to manipulate the environment engineering to new ideas, patterns or relationships. As a capacity for original work involving the restructuring of past experiences intended toward new useful creations. Creativity is a complex universal human attitude, near normally distributed and manifested by the cognitive-personological processes.

Levels and types of Creativity

Some of the apparent differences evinced by the foregoing
discussions concerning various strands of definitions of creativity have been seemingly reconciled by suggesting that creativity may be thought of in terms of levels and types. This reconciliation, perhaps, is rooted in the assumption that creative thinking operates at different levels in different persons. Ghiselin (1958), for example, distinguishes between two levels of creativity, namely, (a) creative action of higher sort which alters the "universe of meaning by introducing into some new elements of meanings or some new order of significance", and (b) creative action of lower sort which gives "... further development to an established body of meaning through initiating some advance into use." Taylor (1959) suggests five levels of creativity: (a) expressive creativity accounting for independent expression where skills, originality, and the quality of the product are unimportant, as in the spontaneous drawings of children; (b) productive creativity dealing with artistic or scientific products where there is a tendency to restrict and control free play and develop techniques for producing finished products; (c) inventive creativity related to inventors, explorers, and discoveries where ingenuity is displayed with materials, methods and techniques; (d) innovative creativity concerning improvement through modification involving conceptualizing skills; and (e) emergentive creativity, which is an entirely new principle or assumption. Lehois (1963) differentiates between macrocosmic
and microcosmic creativity. In the former, man is simply growing and developing as a human being while in the latter, he is engaged in a particular act of creation such as painting. He further classifies creativity in terms of intensity at three levels, namely, (a) spontaneous-expressive level - the initial level of creativity; (b) the technical-inventive level or intermediate level; and (c) integrative-emergentive level resulting into highly original products.

Yet another set of data regards creativeness as types of thinking. There seems to be a general agreement that creative thought consists of certain integrating, synthesizing functions; that it deals with relational form rather than with individual instances; that it discovers new forms which can accommodate past experiences. Spearman (1931) refers to creative thinking as education of correlates; Vinncke (1952), as imagination rather than voluntary and rational operations. McKeller (1957) as autistic, prelogical and imaginative, and Bartlett (1958), as divergent autistic thinking as distinguished from closed systems.

Mackinnon (1960) suggests the possibility of coming across at least two types of creativity. In the first type, the product of the creation is clearly an expression of the inner state such as the needs, perceptions evaluations of the creator. In this type of creativity, the creator externalises
something of himself into the public field. Most appropriate examples of this kind would be found in the work of the expressionistic painter or sculptor, the poet, the novelist, and the composer. In the second type of creativity, the creative work acts largely as a mediator between externally defined needs and goals. Examples of this kind of creativity would be found in the work of the research scientist in industry, the engineer, the mechanical inventor. A third type of creativity, one so wishes to call it, may be revealed in the works of the representational painters, scenerio writers, musical arrangers and performers and perhaps, most clearly of all architects having characteristics of both type I and type II creativity.

Guilford (1956) opines that divergent thinking can be classified as figural, symbolic, semantic and behavioural depending upon the type of content involved. Based upon the extension of production, he further classifies divergent thinking into six types namely (a) units, (b) classes, (c) relations, (d) systems, (e) transformations, and (f) implications.

In recent years there has been a tendency on the part of researchers to define creativity with special reference to their own fields of work. Mathematical creativity for example has been defined as "... the ability to combine ideas, things,
techniques or approaches in a new way, observe patterns, see likeness and differences, and on the basis of what has worked in similar situations, decide on a method of attack in an unfamiliar situation." (Laycock, 1970).

The creative process thus, seems to acquire both vertical and horizontal dimensions. The former has a relevance with the levels of creativity, while the latter refers to the types of creativity.

COGNITIVE STYLES

In recent years there has been a marked upsurge of interest in the psychology of cognition. Mahoney (1977) noted, "There are numerous indications that psychology is undergoing some sort of revolution in the sense that cognitive processes have become a very popular topic". One manifestation of trend towards increased interest in cognition is the attention paid to cognitive styles in some publications as those of Kogan (1976), Landfield (1977), and Messick and Messick and associates (1976). Cognitive style is an area of developmental investigation that has generated considerable interest in recent years.

Cognition according to Dictionary of Psychology (Drever, 1952) is a term covering various modes of knowing, perceiving, imagining, remembering, conceiving, judging and reasoning. Many psychologists have defined cognition as that
part of perceiving, learning and thinking that is conscious. Cognition is a mediating process that is the centre of a resurgence of interest.

Each individual has different ways of organizing all that he sees and remembers and thinks about. Consistent individual differences in these ways of organizing and processing information and styles represent consistencies in the manner or form of cognition, as distinct from the content of cognition or the level of skill displayed in the cognitive performance. They are conceptualized as stable attitudes, preferences or habitual strategies determining a person's typical mode of perceiving, remembering, thinking and problem-solving. As such their influence extends to almost all human activities that implicate cognition, including social and interpersonal functioning.

According to Kogan et al. (1960) cognition is, "the organization of a stimulus configuration in order to arrive at a basis of similarity among a group of stimuli, and the assignment of a symbolic label to the organized pattern of similar stimuli." Wann et al. (1962) suggest that conceptual response is elicited by a process of seeing relationships, categorizing, discriminating and generalizing about those things which the child sees, hears and feels in his environment. Cognitive style refers to how children react under conditions of high response uncertainty. These are preferred modes of
conceptualization which Sigel (1963) refers to as cognitive styles.

As a hypothetical construct that has been developed to explain the process of mediation between stimuli and responses, Messick (1976) defines cognitive style in terms of consistent individual differences and maintains that cognitive structures mediate between environmental input and the organisms output. He adds that cognitive structures organize behaviour as well as input. "The cognitive style dictates the cues the individual will use, but not necessarily the level on which his intelligence functions. It is the preferred use of a specific class of conceptual responses" (Kogan et al., 1960). Schilling (1981) conceptualizes cognitive styles as the characteristic preference that individuals have for different types of information. It refers to the modes an individual employs in perceiving, organizing and labelling various dimensions of the environment. Ohmacht and McMorris (1971) define cognitive styles as those dimensions that characterize a person's manner of perceiving, thinking and problem-solving.

Harvey (1963) views cognitive style as the way an individual filters and processes stimuli so that the environment takes on psychological meaning and is representative of the mediation. As such cognitive representations modify the one to one relationship between stimulus and responses. If it were not for these cognitive representations, stimuli would
be irrelevant for the individual or the individual would respond to stimulation in a robot-like fashion. Bieri (1971) too noted that a process of information-transformation is a basic assumption of the cognitive theorist. He maintained that individuals learn "strategies" programmes or other transformation operations to translate objective stimuli into meaningful dimensions. Bieri termed these strategies 'cognitive structures'. Leff, Gordon and Ferguson (1974) define cognitive structures. Leff, Gordon and Ferguson (1974) define cognitive style as an in-built plan or programme to select specific types of data for processing or to perform specific mental operations on information processed.

In referring the term cognitive style to denote consistencies in the individual modes of functioning in a variety of behavioural situations Coop and Sigel (1971) seem to equate cognitive style with behaviour rather than mediating process. This definition is similar to the earlier use of the term style by Allport (1937), to describe consistencies in behaviour; and the earlier concept of silent organisation, used by the Gestaltists to describe cognitive structures that are not tied to specific content but rather guide behaviour (Scheerer, 1954). Tolman (1926) who used related construct utilized the concept of schema. Lewin's (1935) concepts of differentiation and hierarchical organization are also important. Common to all theory and research on cognitive style is an emphasis on the structure rather than the content of thought (Suedfeld, 1971)
structures refer to how cognition is organised, contents refer to what knowledge is available.

Individual behaviour styles can be delineated in the first months of life (Birch et al., 1962) in terms of activity level, threshold of responsiveness, rhythmicity of functioning, adaptability, intensity, approach withdrawal, mood, persistence and distractability. Broverman and Lazarus (1958) have suggested that the cognitive style may manifest itself in two ways, as a directive influence on behaviour or as an ability to resist disruption under interference conditions. The cognitive style may be 'perceptual-motor' dominant or 'conceptual' dominant. Although cognitive styles are viewed as habitual modes of information processing, they are not simple habits in the technical sense of learning theory for they are not directly responsive to principles of acquisition and extinction. They develop slowly and do not appear to be easily modified by specific tuition or training (Kagan and Kogan, 1970; and Kogan, 1971).

The stability and pervasiveness of cognitive styles across diverse spheres of behaviour suggest deeper roots in personality structure than might at first glance be implied by the concept of characteristics modes of cognition. Cognitive styles may entail generalised habits of information-processing, to be sure, but they develop in congenial ways around underlying personality trends and are thus intimately interwoven.
with affective, temperamental and motivational structures as a part of the total personality thereby providing one aspect of the matrix, as it were, that determines the nature or form of adaptive traits, defense mechanisms, and pathological symptoms (Shapiro, 1965). In this view, a core personality structure is manifested in the various levels and domains of psychological functioning - intellectual, affective, motivational, defensive - and its manifestation in cognition is cognitive style. Thus Adorno et al. (1950) have investigated the authoritarian personality. Gardner and his colleagues (Gardner, Holtzman, Klein, Linton and Spence, 1959; Gardner, Jackson and Messick, 1960) have explored the patterning of "cognitive controls which help the individual organize and mediate his transactions with the environment". Rokeach and his co-workers (1960) have concentrated research attention upon the behavioural correlates of individuals with 'dogmatic' (close-mindedness) and 'non-dogmatic' (open-minded) cognitive styles.

In his recent review of reported cognitive style variables Messick (1976) lists no less than 19 such traits. Of all the cognitive styles, by far the most investigated has been Witkin's field independence versus field dependence, other proposed traits in this category are somewhat less delineated and well differentiated from one another. This is true of complexity versus simplicity, it is generally recognized as a preference for complex conceptions over simple ones. Equivalence range is
another proposed cognitive style that is operationally related to sorting or classifying tasks. Levelling versus sharpening concerns reliable individual variations in memory. Focussing versus scanning is individual difference in the variations in vividness of experience and the span-awareness. Among the less investigated cognitive styles are conceptual styles concerned with categorizing behaviour. The style of conceptualization also has something to do with classification. The person who is high on the style trait of conceptual articulation, also named as "conceptual discrimination" is said to prefer sharpened classes, but also on the whole to show preference for relations where there are options. A style of conceptual integration, with the alternative label of integrative complexity, involves seeing how categories or dimensions of information are related in multiple and different ways. Cognitive complexity versus simplicity is the tendency to construe the world of social behaviour in a multi-dimensional and discriminating way. Reflection versus impulsivity involves individual consistencies in the speed and adequacy with regard to hypothesis formulation and information processing. Convergent versus divergent represents the degree of an individual's relative reliance upon convergent thinking as contrasted to divergent thinking. One style seems concerned with preference on three kinds of content i.e. sensory visual auditory and sensory modality preference. Risk-taking represents one's willingness to take chances and to venture responses. Constricted versus
flexible control is susceptibility to distraction and cognitive interference. Tolerance for unrealistic experiences or a readiness to accept unconventional ideas, strong versus weak automization refers to an individual's relative ability to perform simple repetitive tasks compared to his general level of ability. Conceptual versus perceptual motor dominance is with reference to novel or difficult task.

Field independence versus field dependence refers to a consistent mode of approaching the environment in analytical, as opposed to global terms. It denotes a tendency to articulate figures as discrete from their backgrounds and a facility in differentiating objects from embedding contexts, as opposed to a counter tendency to experience events globally in an undifferentiated dimension.

One of the most systematically investigated dimensions in this area of personality research has been the work done by Witkin and his associates (Witkin, et al. 1954, 1962) in their studies of individuals with 'field dependent' and 'field independent' cognitive styles. Witkin began his work on the personality dimension in the late 1940's with a study (1950) of how the individual orients himself in space. The strikingly consistent patterns of individual performance which Witkin observed here triggered almost three decades of research on the personality perception relationship and demonstrated convincingly that the individual's perceptual
performance is related in a consistent way to highly diverse area of cognitive life. Within and his colleagues have proposed differentiation as the over-riding conceptual agent at work. This concept was borrowed from the comparative development framework of Heinz Werner (1957), who championed the proposition that development involves an increased indifferentiation and hierarchic integration. Primitive, developmentally early behaviour is said to be global diffuse and lacking articulation between different areas of activity. As development proceeds to higher levels, functions become differentiated from each other and parts become discernible from a previously amorphous whole. They become discrete and articulated units. According to Werner, this theory stated the direction of development found in every psychological phenomenon: perceiving, thinking, learning, feeling, and language behaviour.

Applying this principle to the area of cognition led Within et al. to the working hypothesis that field independent persons have achieved a higher level of differentiation than field dependent persons as identified by RFT and EFT (Rod and frame test and Embedded figures test). The adequate performance on RFT and EFT requires differentiation of experience. The individual must perceive his environment in a discrete fashion in order to separate one item from the entire configuration. The field independent person is able to break-up the total field and attend to the relevant items while withholding
attention from the irrelevant items. One of his critical qualities is greater capacity for selection attention, a point which has been elaborated upon by Gardner and his co-workers (1959). On the other hand, field dependent or relatively undifferentiated person cannot withhold attention from a tilted luminous frame surrounding the rod and complex designs camouflaging the simple figures.

Field independent (or analytical) individuals have more facility with tasks requiring differentiation and analysis whether in identifying more easily the presence of logical errors or in understanding more quickly the point of a joke, and this analytical penchant leads to a high degree of differentiation of the self from its context. Field dependent (or global) individuals, on the other hand, tend to identify with a group exhibiting a social orientation in which they are more perceptive and sensitive to social characteristics such as names and faces than are field independent persons, but they are also more susceptible to external influence and are more markedly affected by isolation from other people (Vitkin, Dyk, Paterson, Goodenough and Karp, 1962; Vitkin, Oltman and others, 1975).

There is now a good deal of evidence that FDI style extends into psychological domains beyond cognition (Vitkin, 1976). Persons who tend to be field dependent also differ from relatively field independent persons in important personal characteristics. In forming their attitudes on an
issue, field dependent persons are especially prone to be guided by the positions attributed to an authority figure or peer group (Bell, 1964; Deever, 1968; Linton and Graham, 1959). Reflecting the use of external sources of information for self definition, field-independent persons are less attentive to the human content of the environment. Thus, they literally spend less time looking at the faces of those with whom they are interacting than do field-dependent persons (Konstadt and Forman, 1965; Nevill, 1971; Ruble and Nakamme, 1972). The fact is, of course, a major source of information about what others are feeling and thinking. To the extent that field dependents look at faces more, it is not surprising that they also tend to be better at remembering faces (Crutchfield, Woodworth and Albrecht, 1958; Messick and Damarin, 1964). Their special attention to the social environment is not limited to faces of others; it is reflected also in their superiority over field independent persons in attending to, and hence remembering, verbal messages that are more social in content (Eagle, Fitzgribbons and Goldberger, 1966; Eagle, Goldberger and Breitman, 1969; Fitzgribbons and Goldberger, 1971; Goldberger and Bendich, 1972).

Field independence is a manifestation in the perceptual sphere of a broad dimension of personal functioning which extends into the sphere of social behaviour and into the sphere of personality as well (Witkin and others, 1954;
Witkin and others, 1962 and Witkin, 1965. It is important to bear in mind that cognitive characteristics for both must be considered in making predictions and interpreting findings on how cognitive style figures in various aspects of the educational process. It is also worth noting that because these styles show themselves in perception, where they are readily accessible to observation and assessment by controlled laboratory techniques, they offer an objective route to study of individual differences in personal functioning.

Studies of family experience of children who turn out to be relatively field-dependent or field-independent have indeed demonstrated that the kind of relations the growing child has with his mother is very influential in determining his cognitive style (Seder, 1957; Witkin and others, 1962; Dyk and Witkin, 1962 and Dyk, 1969). The characteristic of child rearing that seems most closely associated with the development of a more field independent style of functioning, is the early encouragement of autonomous functioning. Socialization factors are undoubtedly of overwhelming importance in the development of individual differences in field dependence versus field independence. Field dependent or field independent plays an identifiable role in selection of electives and majors in the vocational preferences he expresses early in his academic career, and in the vocational choice he makes later on. More field independent students favour domains in which analytical skills are called for, whereas more field dependent students
avoid such domains, strong preference is shown by more field dependent students for domains that feature interpersonal relations and in which day to day work requires involvement with people. The orientation toward the social environment reflected in these choices by field dependent persons also shows itself in their tendency to prefer occupations favoured by their peer group (Linton, 1952). Field independent people are likely to learn more than field dependent people under conditions of intrinsic motivation. No differences in learning are found under conditions of external rewards, but criticism has a greater impact on the learning of field dependent people.

Using this detailed characterisation of the articulated and global cognitive styles the essential characteristics of cognitive styles in general may be enumerated as: (a) cognitive styles are concerned with the form rather than the content of cognitive activity. They refer to individual differences in how one perceives, thinks, solves problems, learns, relates to others etc. (b) Cognitive styles are pervasive dimensions. They cut across the boundaries traditionally and are inappropriately used in compartmentalising the human psyche and so help restore the psyche to its proper status as a holistic entity; (c) Cognitive styles are stable over time. This does not imply that they are unchangeable; indeed some may easily be attended; and (d) With regard to value judgements, cognitive styles are bi-polar. This characteristic is of particular importance in distinguishing cognitive styles from intelligence and other ability-dimensions.
Credit for the pioneer work in the field of motivation must be attributed for the most part to Freud and other psychoanalysts. The view that motivation is a key determinant of a person's behaviour reflects the dynamic and variable property of the organism. For quite some time study of motivation has gained scientific status and is seen as the study of conditions that arouse, sustain and direct behaviour.

It has been more than half a century since Freud and McDougall objected to the structuralism for its neglect of the importance of motivational variables, while the instinct theorists Benthem, Hobbs, Lebon and Tande have contributed heavily to current conceptions of human motivation and tried to assess motives. A clinical psychologist looks at the problem of motivation from pathological angle and a physiologist from the angle of bodily functions. In general then, an interest in motivation has long been characteristic of psychologists and educationists but only since the last two decades has there been a serious effort to provide an adequate means of measuring human motives (Lindsey, 1961).

The theories by Maslow (1954), McGregor (1960) and McClelland (1961) use the concept of need as a basic unit of motivational analysis. Strictly speaking a need is the immediate outcome of certain internal or external occurrences. It comes into being, endures for a moment and perishes. It is not a
static entity. It is a resultant of many forces. One need succeeds another though each is unique. Observation teaches that there are similarities among needs and on the basis of this, needs may be grouped together into classes; each class being as it were, a single major need. Thus, similar needs may be taken as being different exhibitions of one basic need. Between the different appearances of a certain kind of need there may be nothing to suggest it, but every day experience and experiment show that if proper conditions are provided the need will be activated. The term need may be used to refer to an organic potentiality or readiness to respond in a certain way under given conditions. In this sense a need is a latent attribute of an organism. More strictly, it is a norm which stands for the fact that a certain trend is apt to recur. The aim of a particular need is a particular kind of effect to be brought about through some kind of action. Needs of a person determine the direction of behaviour and thus change the organism's relation to its environment.

The concept of motivation as a relatively enduring disposition of personality was developed by Murray (1938) who made the concept of need (Symbolized by n) one of central importance in his system of dynamics. His views were influenced by McDougall (1923) and Lewin (1935). He defined need, "as a construct (a convenient fiction of hypothetical concept) which stands for a
force (the physico-chemical nature of which is unknown) in the brain region, a force which organizes perception, appreception, intellection, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation."

While discussing human motivation in general Maslow (1970) distinguishes between a need and a drive. A need is a lack of something, a deficit state; while motive is a conscious desire. According to Klausmeier (1971) the term need refers to a condition of lack or deficiency in the organism. Need indicates lack of something which if present would tend to further the welfare of the organism or of species to facilitate its usual behaviour. It is a condition within the individual that energises and disposes him toward certain kinds of behaviour (Mouley, 1960). Need may be taken as the outcome of behaviour. Strength of need or 'need potential' according to Rotter (1970) is the mean potentiality of a group of functionally related behaviour occupying in any situation.

Need has also been referred as goal directed. The term motive or need has been used by Atkinson (1966) to refer to dispositions to strive for a rather general goal, states, kinds of satisfaction, or effects. These dispositions, it is assumed, have their origins in childhood experience and are relatively stable and enduring after childhood. They are carried about from situation to situation by the adult and constitute the core of what is called personality. Sanford (1961) too defined need
as an energizing condition of the organism that serves to direct that organism toward a certain goal and stated that needs or motives are constructs rather than facts. Similarly, Sharma (1972) maintained that need is an enduring disposition of an organism to achieve some goal. The construct 'need' describes a person's tendency to behave in a given fashion in certain situations (Sharma, 1972). The term need is defined as an internal state of disequilibrium physical as well as psychological which causes the individual to pursue certain courses of action in an effort to regain equilibrium (Steers and Porter, 1975).

While classifying needs different psychologists have given different needs varying from three (Sanford, 1961) to twenty needs (Murray, 1938). Needs have both the effect of energizing the organism and of disposing it to react in a way suggested by the tangible goal to which it is directed. A condition of need in the human organism is one in which there is something disturbing to its satisfying psychological and/or physiological state of affair. The disturbance may be a matter of something noxious. The need for food creates a state of human hunger which drives the individual. Hence need for food gives rise to the hunger drive. The need produces in the body a psychological state demanding satisfaction.

Needs may of course, vary considerably in intensity from one person to another. The needs are also closely inter-related and have high degree of interdependency among them. The satisfaction or frustration of one need may strengthen or weaken
the goal behaviour. These needs are organized within an individual in various ways. Within any person some needs or groups of needs may be dominant or become dominant with changes in the stimulus situations. They may also be in conflict so that considerable misery may result (Shaffer and Lazaraus, 1952).

To describe personality in terms of the most important needs that characterize it, requires more than merely listing them. Differences in motivation among people are likely to be less a matter of having or not having certain needs than of how they are organized, of their relative importance for each person. It is clear that the same psychological need can be met through many kinds of behaviour and that the same behaviour, in different people can be meeting quite different needs.

In most behaviour, several needs are being served at once often in disguised form. Because learning plays such a large role in psychological motivation, one differs widely, both individually and culturally, in the strength of different psychological needs and in the motives and goals through which they are met. Thus in one person, achievement needs may predominate, whereas in other affiliation needs may be the most powerful. This is not to say, that the men driven primarily by striving for achievement is not interested in affiliation, rather, that the former is more powerful in energizing and directing his behaviour towards achievement. Knowing this one can, predict that when he is given a choice of action, to the
degree that achievement need predominates, he will take directions in his behaviour that offer opportunities to compete successfully against some standard of excellence. In contrast, if affiliation needs predominate he will strive mainly to establish warm, friendly personal relations with others.

Maslow (1958) has spoken the most forcefully on motivation. He equates creativity with the state of psychological health, and this with self-actualization process. He believed that creativity is the universal characteristic of self-actualizing people, it is the fundamental characteristic of human nature. It touches whatever activity a healthy person is engaged in but when it touches special talent, it calls for creativeness. The self-actualizing personality is characterized by an usually strong motivational drive. These impulses energize the individual in such a manner that he is impelled to act, to express, to perform and produce personality transformations. The creative person driven by an urge which eventually takes full possession of him, is careless about mundane things, spurns conventional attitudes and rejects security. These drives are pervasive, persistent and resist deflection.

All the motivational theorists agree that motivational drives have important effects upon creative activity - they energize the individual and impel him into creative expression. Emphasizing the importance of motives McClelland (1951) described
that motives relate unity and integrate the diversity of needs and goals in behaviour, provide organization, orientation, direction, introduce directional trends, create need-related imagery and increase interest in future possibilities.

Maddi (1965) emphasized the factors of high motivation among creative people. He was quick to point out that many highly creative people can be extremely productive if they are sufficiently motivated. Persons who are both creative and productive show strong needs for quality and novelty in their own terms, even more than they need peer recognition or physical comforts. Although Maddi speaks on his creative people in these terms, he stressed the element of self-direction which permits the creator to work in spite of hardships such as hunger, cold, or want.

VALUES

Values play an important role in individual life. They are socially approved desires or goals, conceptions or standards by which things are composed, approved, or disapproved and are internalized in individuals through the process of conditioning learning, socialization, and personal preferences. As potent determinants of human behaviour, they make human behaviour patterned and help to, "make sense out of discrete pieces of human behaviour which otherwise do not have any connection" (Williams, 1963). Drews and Lipson (1971) strongly believe that
man's survival and his advancement to a higher developmental stage are contingent upon his decisions and in turn they depend upon what is most valued.

The basic psychological research on values has been started on the basis of philosophical analysis. The pioneers have been Allport and Vernon (1931) who devised a well known test namely 'The Study of Values' based on Spranger's (1928) types of man. In common discourse, value refers to attitudes, preferences, life styles, normative frameworks, symbolic universe, belief systems and net work of meaning, men give to life. Philosophers, psychologists and sociologists have always had great difficulty in defining the term with precision as the meaning of the term is not fixed or static and keeps on changing with the passage of time due to education, everyday experience, culture, socio-economic status, and scientific advancement. Moore (1903) and Mooris (1956) accepted that this term is indefinable. But the concept is so important for the understanding of behaviours that many eminent scholars have attempted to define and explain it. These definitions given by them can be summarised under philosophical, psychological and sociological viewpoints.

The philosophical viewpoints contain the subjective, objective, and relational definitions of value. The value is defined in terms of sentiments and emotions, likes and dislikes etc. Brightman (1958) says, "In the most elementary sense, value means whatever is actually liked, prized, esteemed,
desired, approved or enjoyed by anyone at any time. It is the actual experience of enjoying a desired object or activity."

Hence value is an existing realization of desire. A value is always an experience, never a thing or object (Parker, 1931). In a later volume, Parker (1957) defines value as "either the joy giving activity or passivity or else as the assuagement of desire." According to Philip (1963) "values are strictly individual, subjective and private and that a person makes a decision in accordance with what seems best to him or what he prefers." Similar views have been expressed by Gruber (1959), according to him a subjective approach to values maintains that values vary from person to person, from place to place, from time to time, and from situation to situation. They are related to mind which serves them and depends upon the individual's interest experience and desire. The subjective definitions accept that value experiences are not under the direct control of reason. Values in some sense are subjective, in that they depend upon a relationship between an observer and that which is being evaluated.

Every object in the universe has value, actual or potential, for every organism which is capable of response to it. In more exact terminology it occurs or is capable of occurring in every case where an organism is able to respond (directly or indirectly) to an object and is a generalized end that guides behaviour towards the uniformity in the varieties of a situation with the object of repeating a particular self
sufficient satisfaction.

Objective definitions of values emphasize that values are independent of the valuer and they reside in the object and not in the subject. The followers of this view clearly discard the theory that 'values belong wholly to the inner world of mind' and believe that values are strictly out there in the world to be discovered. Joad (1942) supports such definitions. He says, "Values seem to reside in the objects just as truly as do colour, smell, temperature, size and shape." Turner (1961) defines values as 'objects which are regarded favourably or unfavourably.' Perry (1954) considers values as 'inherent aspects of objects'. Perry's claim that a theory of value must refer to the emergence of interests having objects is fairly representative of his point of view. Gruber (1959) presents the objective approach that there is something in the object which makes us form a judgement of it. Values reside in objects. A person of good taste recognises beauty, when it presents a moral person recognize goodness and a wise man truth. Experimentalists and instrumentalists following John Dewey (1959) believe that one can prove a value judgement to be sound in the same way that one proves a statement of fact to be true. An object acquires value, when it is chosen to achieve a purpose or to remove a difficulty or further an interest. Gaiger (1958), for example, says, "Values are outcome of human choices, among computing human interests."

Relational definitions of values are in contrast to both
the subjective as well as the objective views of values. This theory relates the concept of values as the relation between a valuing human being and his environment (i.e. between subjective and objective viewpoint). Thus the value may be called as the relational concept. Sanyal (1962) supports it by saying, "Value is, therefore, partly feeling and partly reason. The feeling part is hedonic or material in character; it is not efficient or dynamic. The reason part is regulative both formally and finally, varying in degrees of formality and finality. A value is, therefore, the meeting ground of the regulative principle and part of the constitutive principle." This is a comprehensive view because it takes into consideration both man and his environment, and also subjective and objective viewpoints. Pragmatic approach to values insist that values are events that are relative and exist situationally and instrumentally as a complex in which objective and subjective factors are brought into relation with each other.

Giving psychological viewpoints of values, Murphy, Murphy and Newcomb (1937) write, 'A value is simply the maintenance of a set toward the attainment of a goal." Supporting this viewpoint Jones and Gerard (1967) wrote that the "value is a motivation which sustains an individual's efforts to achieve a particular goal." This suggests that a person makes his persistent efforts to achieve a goal because it is a value for him. In another study Jones and Gerard (1967) also maintained
that "in our usage value refers to a wide range of motivational phenomenon. Any singular state or object for which the individual strives or approaches, extols, embraces, voluntarily consumes, incurs expense to acquire a positive value. Anything that individual avoids, escapes from deplores, rejects or attracts is a negative value. Values animate the person, they move him around his environment because they define its attractive and repelling sectors." Here they are clear that value is underlying motivation for most of the behaviour of the individual.

Giving a different viewpoint Margenau (1959) defines 'values' in terms of 'satisfaction of human wants'. According to him 'A value is the measure of satisfaction of human wants.' He speaks of two kinds of values - factual and normative. Factual values are observable preferences, appraisals and desires of concrete people at a given time and normative values are the ratings which people ought to give to value object. Fallding (1965) defines a value as a generalised end that guides behaviour towards uniformity in the varieties of situation. With the object of repeating a particular self-sufficient-satisfaction. Thus the values are organizing ends, organizing precisely because many other satisfaction and actions are subordinate to them.

By referring values as various in nature Corey (1962) stated, "a person's values are the referents towards which
he has developed positive attitudes. This means that values are as various in nature as are referents. One can value a person, a group of people, an idea, a material thing, an institution or a practice. Maslow (1938) considers value as a "psychological need." Woodruff (1952) defines, "value as an object, condition or activity which the individual feels has an effect on his well being." According to him, "value is conceptualised in terms of personal happiness, security and existence of the behaving organism." Allport (1958) defines values as dominant interests in personality. Hall and Lindsey (1966) have said, "the amount of psychic energy invested in an element of the personality is called value of that element; value is a measure of intensity when we speak of placing a high value upon a particular idea or feeling. It means that the idea or feeling exerts a considerable force instigating and directing behaviour." Adler (1960) claims that in order for values to qualify as concepts of social sciences, they must be defined in terms of behaviour. He sees them as learned components of personalities, identifiable only as probabilities, that particular behaviour will occur in a variety of circumstances.

Sociologists approach to the conceptualization of value according to Verma (1972) is not basically different from that of psychologists except in terms of value objects. Sociologists have chosen the value objects from the field
of social traditions, practices and modes of action, which are important in the life of an individual vis-a-vis his social environment.

Mukerjee (1958) writes, "values are socially approved desires and goals that are internalized through the process of conditioning, learning or socialization and that become subjective preferences, standards and aspirations." Kane (1962) writes, "values are the ideals, beliefs or norms which a society or the large majority of a society's members hold. They are responsible for the definition of a problem; they may help create a problem and they may also interfere with its solution." Similarly, Guber (1963) says, "people cherish certain ideas or beliefs which are often called their values." These ideas contain or express the judgements which people have, of the relative worth or importance of things. According to Rokeach (1960), "A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence." A value system is enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance. Kluckhohn (1951) writes, "value is relationship between the subject and object. It is a source of motivation and influences behaviour. It is personal as well as social and it is expressed as well as implied."
Verma(1972) summarizes all the definitions and comes to the conclusion that, "(1) value is a conception of desirableness of an object or activity for the well being of an individual. (2) motivational property of a value lies in the goal. (3) values can be organized in a hierarchy in the personality of an individual (4) value influences individual's behaviour, his likes, dislikes, goals and all his activities, and (5) values have social, personal, and psychological characteristics."

Reviewing all these different definitions, one finds that value preferences of a person depend upon his subjective approach about the value to be judged and the objective approach which his surroundings attach to the particular value.

Joseph Samler (1960) has held the view that values are absolute and final and are not readily subject to questions. He suggests three propositions for the derivation of values. They are (1) Man's increasing scientific knowledge about himself should supply the basic data for derivation of his values. Needs, it may be granted, are without undue difficulty translatable into values also capable of hierarchical ordering. (ii) The theoretical modes of psychologically healthy person, his orientation to himself and others, the choice, he makes and his criteria
for making these choices, offer us meaningful material for value determination. (iii) Values should be explicit examination as criteria for choice, as determinants of behaviour.

The concept of human values thus is guided by the assumption that firstly, the total number of values that a person possesses is relatively small; secondly, all men everywhere possess the same value to different degrees; thirdly, values are organized into value system; fourthly, the antecedents of human value can be traced to culture, society and its institutions and personality; and lastly, the consequences of human values will be manifested in virtually all phenomenon that social scientists might consider worth investigating and understanding.