Chapter-I

INTRODUCTION
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Level of Aspiration:

Aspirations are said to be strong desires to reach something high or great (Haas, 1992). According to Lewin et al (1944), psychological problems, "especially those in the fields of motivation and personality, inevitability involve goals and goal directed behaviour". Adler (1925), emphasized that everyone has a "life plan", a purpose or goal which determines his/her reactions. This life plan is generally developed early in life as a result of certain relationships between the person and his/her physical social environment.

Multon, Heppner, and Lapan (1995), have also proposed personality variables (both cognitive and affective), to be related to goals. In their explanation on the purpose of goals on achievement motivation, Miller et al. (1996), said that goals in achievement settings revolve around the pursuit of competence, i.e. level of aspiration.

Dembo, a student of Lewin, is the pioneer to formulate the concept of 'Level of Aspiration', which is the English translation of the German word 'Anspruchsniveau', which means the level of performance that an individual expects of herself/himself (cf. Gardner 1940; Ali, 1975; Khan, 1986). It refers to the goal that an individual sets for himself/herself. However, while doing so, she/he is seldom guided entirely by considerations which are realistic in nature. Level of
aspiration has received considerable attention from the investigators who worked in areas of personality, social psychology, clinical and experimental psychology.

Dembo, in the course of an investigation of anger, employed experimental situations that produce frustration as a means of evoking anger. This was accomplished by requiring the subject to perform on some task which was either extremely difficult or completely impossible. During the course of her observations, she discovered that some of her subjects, unable to attain the difficult goal set by the experimenter, set intermediate level goals of their own which were easier than, but a step towards the expected goal. This sub-goal, Dembo termed, the subject's *Momentary Level of Aspiration*. Though she did not pursue into the phenomenon that she implicitly observed, it was nevertheless, the psychological mechanism called level of aspiration which her subjects had resorted to cope with a threatening situation. By setting a goal of lower difficulty level, in this manner, the subjects were able to avoid the frustration that may result from the failure of attempting the unattainable goals set by the experimenter. Lewin, et al (1944), termed the distance between the two goals as inner discrepancy:

The credit for conducting the first and extensive studies on level of aspiration is given to another student of Lewin. Hoppe, by subsequent researchers (cf. Gardner. 1940: Pareek. et al 1966, Ali,
Hoppe's understanding of the term *level of aspiration* is quoted from Gardner (1940), in the following passage:

> The subject ... always undertakes the task with certain demands (Anspiruchen), which can change in the course of activity. The totality of these constantly shifting, now indefinite, now precise, expectations, goal settings or demands in connection with one's own future performance, we shall term the level of aspiration of the subject. (P.61).

After defining success as subject's attainment of intermediate goals regardless of whether or not the subject has achieved a perfect score or the experimenter's set goals and failure as subjects performance not coming up to his/her momentary level of aspiration, Hoppe suggested that success performance shifts the level of aspiration upward and failure experience may likely to lower the level of aspiration.

Another important observation by Hoppe is the marked individual differences in level of aspiration even in simple laboratory tasks. Some subjects were found to set higher levels of aspiration well above their level of performance, while others were observed to play safe by setting lower or intermediate goals within easy reach, probably satisfying the subjective feeling of "better than ... expected". Such individual differences in level of aspiration, according to Hoppe, were reflections of differences in characteristics of subjects which are referred to as ambition, prudence, self-confidence and courage to face reality.
Hoppe's method for studying level of aspiration was inferential - the simultaneous use of three of the following lines of evidence: 1) The spontaneous remarks of the subject, 2) the occurrence of success and failure experience, and 3) the way the subject 'gets at' task.

Subsequent researchers, while adhering to the basic concept of level of aspiration, questioned the inferential techniques for the reasons of objectivity. Hausmann (1933) told his subjects to make a 'bid' before each trial on the task. He penalized the subjects for overbidding and gave no credit for underbidding. However, like Hoppe, he too heavily relied on the inferences drawn from the subjects' verbal and motor responses for determining their level of aspiration.

Juknat is reported to devise a more precise method (cf. Gardner, 1940). Ten paper and pencil mazes were arranged in order of difficulty and presented to the subjects. As the size of a maze was larger with increasing difficulty, the subjects could easily recognize the pattern of the difficulty of the maze they wished and start working on it. The selected maze revealed the subjects' level of aspiration.

Gardner (1940), while recognizing the advancement of this method over Hoppe's argued that such a method will not indicate the level of aspiration as was understood by Hoppe (i.e. individuals true inner goals, aims and 'expectations). This is because, according to Gardner, both verbal and nonverbal expressions of a subject may not be valid
indicators of the individual's inner attitudes. Cherished inner goals, when expressed for public inspection, are commonly 'edited' by the individual. Thus, Gardner suggested either the method be dropped or the meaning of the term level of aspiration be redefined as "that level in a difficulty scale at which the subject is willing to test himself in the presence of the experimenter".

Frank (1935, 1941) is credited for redefining level of aspiration as "the level of future performance in a familiar task which an individual knowing his level of past performance in that task explicitly undertakes to reach". This action oriented definition is, of course, a departure from the original conception held by Hoppe since it emphasized the explicit undertaking whereas the latter was an implicit goal-setting.

The method used by Frank was that the subject after each trial in a given task was told his/her performance score and was asked to state how well he/she intended to do next. This sequence was repeated a number of times in the course of the experiment. The procedure yielded a quantitative score, implying that level of aspiration was a definite and precise goal. On the other hand, Hoppe's conception of the phenomenon was the totality of highly fluctuant and a constellation of now indefinite and now precise goals where the subject is not sure about - thus the departure.
Gardner (1940) has discussed his scepticism of the finding of the 'true' level of aspiration since an individual in an activity may concurrently entertain aims that may be manifold, fluctuant, ephemeral and differing qualitatively as well as quantitatively. Therefore, he argues, one cannot distil true aspirations out of the maelstrom of aims. His argument led him to assert that level of aspiration should have one and only one meaning. "It can only refer to quantitative indicators concerning his future performance in an activity." In experimental situations, two important features are further demanded by Gardner - the subject should make "some public indication of his aims and that he make this in quantitative terms". However Gardner overlooked an important point while defining level of aspiration (Khan, 1986). An individual while undertaking to perform a task, may entertain quite a number of goals, differing in height, but all related to the same task.

This deadlock was solved by Lewin et al. (1944). According to Lewin, et al., the level of aspiration presupposes a goal which has an inner structure. This means, a number of more or less realistic goal levels are present within the whole goal structure of the individual. "Goal levels within one goal structure may include a high dream goal, a somewhat more realistic wish goal, .. a low level goal which a person might hit if luck were against him". Somewhere in this continuum of goal levels lies what the author called the action goal. This action goal is what the person "tries for" at that time. It was
described by them as "the criterion for the level of aspiration for an individual at a given time", in which researchers like Frank attempted to measure. The authors have further indicated that the action goal of the individual may sometimes come closer to his/her ideal goal, sometimes the gap may be wider. Thereafter, the action goal based concept has come to be accepted as the standard definition of level of aspiration, and thus, Frank's definition of the concept.

However, the method of requiring the subject to state the level of the goal she/he expects to achieve in a task and then making her/him work for it in the presence of an experimenter was questioned for the fear that subjects may resort to defensive behaviours distorting their true level of aspiration. This was felt by Frank (1941) himself. "In experimental situations ... the level of aspiration situation is usually a treat to the subject's self-esteem in that he must not exhibit his ability before someone else." According to Frank, subjects attempt to meet this threat both by performing well and by manipulating their level of aspiration. Similar concerns were also raised by many researchers (e.g. Gould, 1938; Gardner, 1940; Rotter, 1954).

Pareek and Chattopadhay (1964), in order to circumvent the factor of defensiveness, which was thought inherent in the procedure of Frank, developed a semi-structured situation to enable their subjects (farmers) project their true level of aspiration. Sinha (1969) too,
developed a semi-projective technique centred around an imaginary story of a farmer and employed a more refined procedure for scoring.

Such projective techniques may be free from the influence of defensive tendencies in case the method of Frank really brought them into operation. However, taking the scores of the projected standard of achievement as a measure of level of aspiration is so remote into the future, hence liable to bring the factor of wish into operation, which could make the level of aspiration somewhat less realistic (Khan, 1986). In addition, the influence of past performance on such distant goal may be very weak. Such arguments imply that projective methods may not be better substitutes for Frank's method of direct verbal expression.

It is documented that the characteristics and dispositions of the individual do affect his/her level of aspiration (Rotter, 1954; Holt, 1946; Chance, 1960). But the question is whether the defensive tendencies are inherent in Frank's method of measuring level of aspiration. The issue was investigated by Ali (1976). He took 48 randomly selected undergraduate students and employed a 'within subject design' where the same subjects served under experimental (private) and control (public) conditions with in a span of two weeks. The term 'public' was used to mean as the presence of the experimenter alone. Two sets of tasks (letter-symbol substitution tests)
of the same nature were used. Under public condition, one set was
used and subjects were to provide their identity and declare their
expectations and performance scores in front of the near by sitting
experimenter. In the private condition, the experimenter sat at a distant
place and only was there to inform the time limits. After the session
was over, the subject was told to throw the separate response sheet in
a waste paper basket which all willingly did. Secret marks on the
response sheets helped to identify the subjects' identity. Data was
analysed using goal-discrepancy and shifts scores. The results of t-tests
of the mean-discrepancy scores of public condition (mean = 3.440) and
private condition (mean = 3.112) revealed statistically nonsignificant
differences. Similarly, differences in the shifts measures were
nonsignificant. Based on the findings, it was concluded that the
"presence of the experimenter with full opportunity to see or observe
what the subjects do, neither evokes any defensive tendency in them
nor makes any other kind of effect on their goal setting behaviour".
The results showed that the arguments against the use of Frank's
method for the reason of experimenter effects were unfounded.

Thus, Frank's method of measuring level of aspiration with his
operational definition that conforms to Lewin's concept is said to
remain the standard definition of level of aspiration.

Several subsequent researchers used a variety of instruments to
measure level of aspiration directly and indirectly as well. For
example, Hurlok (1967), has reviewed the most frequently used indirect methods for studying level of aspiration: Studies of wishes, studies of ideals, studies of resolutions, and laboratory experiments.

Hurlock (1967), has made a distinction in her definitions of the terms aspiration and level of aspiration. "Aspiration means", she stated, "a longing for what is above one, with advancement at its end". That is, a goal the individual sets for himself/herself in a task which has intense personal significance, or in which the person is ego-involved. On the other hand, level of aspiration is defined as "the standard a person expects and hopes to reach in a given performance". It is the "discrepancy between his achieved and his stated goals". From these definitions we can observe that the difference between the definitions of the two terms is in the degree of operationality. The definition for level of aspiration is readily measurable. However, quite a number of recent investigators used the terms level of aspiration and aspiration to imply similar message.

Hurlock (1974) divides aspiration into three categories: Negative and positive aspirations, immediate and remote aspirations and realistic and unrealistic aspirations. Lewin et al (1944) have proposed how the level of these aspirations, is determined by the individual. Using Escolana's "resultant valence theory", level of aspiration was formulated as an apparent discrepancy between the tendency to set up higher goals
and the tendency to parsimony. A goal may contain attractiveness (positive valence) and disagreeableness (negative valence). The more difficult the task, the higher the positive valence (and vice versa), but the probability of attaining success diminishes. Thus, level of aspiration will be the resultant combination of valances of success and failure and the probability of success and failure.

Based on Hoppe's notions, Frank (1935), has elaborated that success and failure (i.e. the relation of level of aspiration to past performance), depended on three needs: 1) The need to keep the level of aspiration high, 2) The need to make the level of aspiration nearer to future level of performance, and 3) The need to avoid failure. Frank suggested that the relative strength of these three needs depends on both environmental and personality factors.

Another point worth mentioning in this discussion is the generality of level of aspiration. Hoppe was said to be aware of the problem of generality and tried to demonstrate the consistency of the behaviour over different individuals (Lewin, et al, 1944). However, the first systematic study of generality of level of aspiration was conducted by Frank (1935). His basic hypothesis was that certain types of behaviour of level of aspiration express personality traits. To this end, Frank attempted to discover whether individual differences in level of aspiration 1) persist in time and 2) manifest themselves unchanged
through a variety of situations. Three groups of students were taken
and three tasks - printing, spatial relation, and quitos - were
performed, two tasks for each group. Correlations of discrepancy
scores for the two different sessions (i.e. time) on the same task
ranged from .57 to .75 for the tasks of printing and spacial relations.
The correlation for quitos was very much lower. Correlations of the
same session for scores of printing and spatial relations yielded from
.50 to .65, where as correlations involving quitos was negligible. This
was explained by the irreality of the task (quitos were more of a
play). The results led him to conclude that level of aspiration (as
measured by D-scores) in a given task "represents a relatively
permanent characteristic of personality." Gould (1939), using six
different tasks, three given in one session and remaining three in
another, found inter-correlations among the tasks scores ranging from
.44 to .04 with a median correlation being .29. When the scores of
tasks of the same session were calculated the median inter-correlation
went up to .40. Gould's correlations, although lower than those
obtained by Frank, still indicate some tendency toward consistency.

Heathers (1942), varied three factors of objective situation to
determine their influence on the degree of generality - the scale in
which the performance was presented to the subject, the shape of the
curve which the series of performance followed, and the motivation of
subjects. Prearranged series of false performance scores were reported
to each subject on each task and was asked what score she/he was "going to try to make in the next trial". Five tasks were used: digit-symbol substitution, letter-code substitution, mental multiplications, addition and card-sorting. Scores were correlated for two tasks at a time under the different/similar conditions. Her results indicated that for similar conditions, there were high correlations between the different tasks. As the conditions change, significant differences were found in some while some other variations produced no pronounced differences. This was also true of the condition - degree of motivation. The generality correlation coefficient for the highly motivated group was very high (.90), and was significantly different with the generality score of the less motivated group (.84) in any two different tasks during day 1. However, in day 2, this difference was not significant. Such results led Heathers to conclude as "the similarity of a subject's level of aspiration in two situations depends upon the similarity of the two situations to the individual as well as upon his personality organization".

To shade some light on the problem of the generality of level of aspiration, Pareek, Kumar, and Chattopadhyay (1966), carried out a factor analytic study using a sample of farmers. Data on the level of aspiration of the farmers were collected using the projective technique devised by two of the authors. After factor extraction was done on the data and orthogonal rotation was carried out, three factors that
accounted for 70% of the variance in the level of aspiration, appeared in the scene. The third factor that accounted for 31% of the variance and has showed high loadings in all the aspects of level of aspiration was called the General Factor of farmers level of aspiration. The second factor that had high loadings in education, production and livestock (22% of the variance), was termed as the factor of Achievement Orientation. The third factor that accounted for 17% of the variance had high loadings on material possessions, house, and income. It was called the factor of Security Orientation. Thus, we can infer that the researchers have arrived at a general level of aspiration and two specific levels of aspiration construct.

A number of recent investigators also indicated the generality and specificity of the level of aspiration construct. Plucker (1998) identified two specific students aspirations i) Inspiration, which means becoming involved in an activity for its intrinsic value and enjoyment and ii) Ambition, a sense of goal orientation which can be expressed as goals for the future.

On the basis of 'self discrepancy' theory Higgins, Shah, and Friedman (1997) differentiated between two types of goals and related them to different kinds of emotional responses to goal attainment. The specific goals were: i) A goal having a positive - outcome focus involving a promotion focus on advancement and accomplishments, and
ii) a goal having a negative-outcome focus on safety, responsibilities and obligations.

Miller et al (1996) similarly identified two specific goals: i) Learning goals, which use improvement of skill or knowledge as evaluative criterion, and ii) ego-oriented goals, which use relative standing among others as evaluative criterion.

Using factor analytic techniques, Kaser and Rayan (1993; 1996) developed an Aspiration Index containing fourteen sub-scales. The index measures seven specific levels of aspirations with their degree of importance. 1) Aspiration for financial success, 2) for social recognition, 3) for appealing appearance, 4) for self-acceptance, 5) for affiliation, 6) for community feeling, and 7) for physical fitness.

Other researchers also attempted to study the specific levels of aspirations. Jafri (1992) studied the level of social aspiration, economic aspiration, and educational aspiration of undergraduate women students in Aligarh. Social, educational, political, economic and religious aspirations of Rajputs were investigated by Hussain (1996).

The most widely studied specific level of aspirations among adolescents are educational and occupational aspirations, as these two areas are of immense importance for the later status attainment of the youth in societies where they live. Phillips and Asbury (1993), conceptualized level of educational aspiration as "an internalized
advance estimate of eventual educational attainment." Wilson and Wilson (1992) describe educational aspiration as "the level of educational attainment that one desires to achieve."

Level of occupational aspiration can similarly be understood as the prestige/status level of the occupation one desires to attain. Rojewiski (1995) defined career aspiration as "orientation toward a particular career goal." Farmer and Chung (1995) conceptualized career aspiration as one of the dimensions of career motivation which refers to the "prestige or socio-economic level of a person's ideal occupation."

The measurement of the above two specific levels of aspiration is mostly done using self-report instruments. Many researchers directly ask students the educational level they want to reach. Rojewiski and Yang (1997) determined the level of educational aspiration by asking respondents to denote the highest level (category) of education they thought they would achieve. Wilson and Wilson (1992) measured educational level of aspiration by the question: "What is the lowest level of education you would be satisfied with?" From nine response categories, responses were dichotomized into high and low aspirations. Similarly, Solorzano (1992) dichotomized the responses into two from the question: "As things stand now, how far in the school do you think you will get?" In Chung, Loeb, and Gonzo (1996) study, educational level of aspiration was assessed by the respondents
selection of one of the five levels: a) No degree b) Vocational certificate or associate degree c) Bachelor's degree d) Master's degree e) Ph.d. or equivalent. This dichotomy is said to be in line with Farmer's (1985).

Similar procedures are used for vocational aspirations. Researches ask students to indicate or select their chosen vocations and the responses are coded using the region's occupational codes.

A single item developed by Farmer (1985), was used to measure career level of aspiration: "What occupation do you expect to end up in?". Similarly, Rojewiski (1995) obtained occupational aspirations by asking the question: "It is interesting to think about the occupation most desirable to you, without having to consider limiting factors like money, ability, or opportunities needed to obtain further education and training. This may sound impossible, but if you were completely free to choose any job you wanted, what would it be?" Some others provide a list of occupations for adolescents to choose. Seventeen separate occupational categories were provided and students were asked to choose the job they expected to have at 30 years of age (Rojewiski and Yang, 1997). Similar list of occupations to which students might aspire were provided for selection by Chung, Loeb, and Gonzo (1996).

Still, some others measure occupational aspirations by administering standardized scales. King and Multon (1996), administered
"My Vocational Situation" - a 20-item self report instrument, consisting of four different scales. Lapan and Jingelski (1992), administered the "Career Aspiration Scale" that was developed to assess the degree to which a person aspires to achieve leadership or advanced position within a chosen field.

We can see from the above review that unlike the measurement of general level of aspiration, levels of educational and career aspirations are measured outside the laboratory as they mainly deal with remote rather than immediate aspirations.

**Psycho-social Disadvantage:**

The terms disadvantage, underprivileged, deprived, under class, and even 'at risk' are often used by researchers and also by the laymen to refer to a group of people in a society who have experienced backward and un nurturing environment for a long period of time. However these terms have some semantic differences. The Webster's Dictionary of the English language defines these terms as follows. Disadvantaged means "having less than what is regarded as basic or minimal for decent living, as money, social equality, etc". The underprivileged are those "who are deprived socially and economically of enjoying certain fundamental rights theoretically possessed by all members of a community or a nation". This meaning obviously puts the underprivileged in a position of disadvantage when compared with
the privileged. The definitions show that the terms are relative. What is considered as a decent living in one society may be viewed as an underprivilege in another. Even in one society, a person may be advantaged in one aspect and underprivileged in another.

To deprive is "to take something away, from divert; to keep from acquiring, using, or enjoying." Thus, the deprived group is the one who is denied of conditions essential for proper progress. This may be done consciously by the dominant group or may be the result of tradition. The term 'under class' is also being applied to those group of people who are entrapped in poverty and living in social isolation, whose survival is without the hope of steady work (Brantlinger, 1992). For the disadvantaged children, the future is bleak and the term at risk is assigned to them by some (Cress, 1992).

While these different terms may indicate some semantic differences, in fact, they imply the same message - a marked deficiency of essential conditions for reasonable living, progress, and development.

Singh and Sinha (1986) understood social deprivation as a dispossession or loss of privileges, opportunities, material goods and others. It may occur, they said, with reference to three interrelated sets of basic needs: physical, psychological, and sociocultural. Gaur and Sen (1989) termed those children who live in unfavourable conditions or
circumstances, who experienced insufficient opportunity for growth and who did not receive deliberate recognition for their developmental needs as disadvantaged or deprived. Hunt (in Tripathi and Misra, 1976), is reported to have equated deprivation with failure to provide opportunity to have experiences. Ujjwalarani (1993) termed social disadvantage as being born in one of the communities that is at the lower levels of these social hierarchy. Poverty, more specifically, paucity of income, was viewed by the investigator as economic disadvantage.

Karna and Panjiar (1997) conceptualized environmental deficit as the deprivation of "a child of the opportunity to maximize in his biological endowments and compels him to live a life of abject poverty with all its evil consequences", including intelligence.

The role of the environment in facilitating or depriving the development of human beings - be it physical, intellectual, social, personality, etc. is stressed by many.

Sinha (1977) emphasized that the type of environment in which a person grows provides the necessary sensory inputs, stimulation and experiential base for the overall development of the individual. He conceptualized the environment in terms of two-tier concentric layers. The upper, which is a more visible layer, comprises individual's home, school, peer groups, and the like - each providing three dimensions:
physical space and materials, social roles, and relationships. The surrounding layer includes the physical environment and the institutional setting of the person.

A similar view of the environment, is presented by Bronfenbrenner (1989). The child is viewed as developing within a complex system of the surrounding environment - four levels of concentric circles: (i) The **Microsystem** is the innermost level of the environment which refers to activities and interaction patterns in the child's immediate surrounding. (ii) The **Mesosystem** refers to connections among microsystem such as home, school and neighbourhood. (iii) The **Ecosystem** is the third layer which refers to social settings that do not contain children but that affect their experiences in immediate settings such as parents' workplace or health or social services in the community. (iv) The **Macrosystem** is the outermost level which is not a specific context but instead refers to the values, laws, and customs of a particular culture. According to Bronfenbrenner, the environment is seen as a dynamic ever changing force where it affects the child's development and to some extent affected by the child.

These views assert that all aspects of the environment, both the visible and the near, and those that play behind the screen interact in promoting/deterring individual's development. Overcrowded and inadequate space in the home, lack of toys and other materials, the quality of schooling, poor interpersonal relations at home and in
school, the poverty level and the living conditions of the neighbourhood, the attitudes of significant others, the restrictions and prejudices imposed systemically and structurally, will deprive the child of proper cognitive growth and functioning, motivational competence and proper personality development. Deprivation not only makes the life of a person miserable but also restricts his/her abilities to improve, since impoverished living denies the experiences necessary for cognitive and affective growth.

The importance of experiences and constant interaction with the environment is stressed by almost all prominent psychologists. Freud (1920) laid emphasis on the significance of early experience in the development of personality character. Piaget (1969) has argued that major cognitive advances take place as children act directly on the physical world, discover the shortcomings of their current ways of thinking and revise them to create better adjustment with external reality. Bardura's (1977) social learning theory also accepts the role of the social environment for adequate real and vicarious models to be imitated by children.

Quite a number of research findings indicated a high degree of relationship between environmental deprivation and cognition, intelligence, and scholastic achievement. As cognition or cognitive processes refer to all processes by which sensory input is transformed, reduced, elaborated, stored, recovered and used (Neisser 1967), that
includes all mental activities - remembering, symbolising, categorising, problem solving, fantasizing, and even dreaming (Blank, 1990), it is reasonable to expect relationships between deprivation and various forms of cognition, intelligence and many other correlates. However, when explaining the relationships, the old problem of nurture vs. nature surfaces.

Artur Jenson (1969, 1985) repeatedly showed that differences in intelligence scores are more of the genetic make-up of the individual or group. Jensen differentiated between two kinds of intelligence - Level I and Level II. Level I refers to items emphasizing short term and rote memory. Level II involves abstract reasoning and problem solving - items correlated to Spearman's 'g' factor, such as vocabulary, verbal comprehension, spacial visualization and figure matrices. Findings of Jenson's studies indicated that Black-White and social class differences in IQ scores are largely due to level II abilities. The groups are almost the same in Level I intelligence. Furthermore, Jensen indicated that among level II abilities, Black children do worst on the least culturally loaded fluid-type items (e.g. figure matrices) and were better on crystalized tasks (such as vocabulary). Therefore, he concluded that Blacks are least well endowed with higher-order forms of intelligence.

More recently, Darolia and Chandel (1997) have arrived at findings similar to Jensen's explanation. They administered what they
claimed to be culture fair tests of intelligence and a socio-economic status scale to a group of 40 high school students. Their results showed no significant difference among high and low socio-economic status groups. This was because, the authors explained, in the Indian setup, SES is not the sole outcome of genetic composition. Thus, lower levels intelligence can not be attributed to social deprivation, implying that the observed low intelligence scores of Jensen's Blacks is not because of their social disadvantage but their heredity.

On the other side, there are a large number of investigators that reported differences in IQ of the subjects by race and social class and that attributed the major proportion of the variance to the degree of deprivation.

Jachack and Khandai (1983), to test Jensen's theory in Indian context, sampled children on the basis of their levels-I and II scores and grouped them in to three classes: High on Level I and II, high on level I but low on level II, low on levels I and II. The groups were compared with regard to six major home-environmental variables - SES, living arrangement, parental aspiration, parent-child interaction, mass media, and nutrition. Results showed that intellectually less endowed groups were also disadvantaged in all the six home environment variables. Though their findings are parallel with Jenson's, they attributed the variance more to environmental deprivation as there may be less genetic differences in the Indian context.
Tripath and Misra (1976) attempted to discover a quantitative relationship between deprivation and relative efficiency in various types of cognitive processes such as depth perception, perceptual identification and conceptualization. They selected a sample of 645 subjects and administered the Prolonged Deprivation Scale. In addition, they administered four tests that measure cognitive processes. Significant but negative relations were observed between deprivation scores and cognitive performance scores. This led the authors to conclude that deprivation experienced by the individual in various spheres of life restricts the growth of cognitive skills.

A somewhat related finding was reported by Misra and Tiwary (1985). Several cognitive measures were administered to 300 children who were selected from inferior and superior schools in rural and urban areas. The results showed that residential background had more differential effect on the development of girls while school quality was important for boys.

An experiment was conducted on 189 children using toys, blocks and stories. Frustration was used as independent variable and story construction as dependent variable. Superiority of high socio-economic status group over low SES group was observed in the "productivity" and "planning" of the stories in both experimental (frustration) and control groups (Verma and Sinha, 1977). Enriched social environment,
varied information sources, richer diet and better physical environment were the likely reasons for the superior performance of the high SES children.

Mohanty (1980) selected 100 boys, half of whom were socio-culturally disadvantaged and the remaining half advantaged. A test of intelligence (Raven Progressive Matrices) and a short term memory test were administered. ANOVA results showed that advantaged boys significantly scored higher than the less advantaged boys. Here, the main difference with Jensen's studies is the significant differences found in the short term memory among the two groups. Absence of order, organization, plan, predictable structure and task orientation as well as minimal motivation in the lower class homes were suggested as explanations, rather than heredity. Another important finding was that as the subjects were selected across grades, the gap in intelligence scores widened with age.

More recently, Karna and Panjiar (1997) selected 'Mushar' children who are deprived class and 'Kayestha' children who are from the middle class and administered an intelligence test, enquired on their health and looked at the students' school achievement records. The average IQ of Mushar and Kayastha children were 87 and 111 respectively, a significant difference between the two groups. For adolescents, the difference widened to 72 for low SES and 112 for high SES groups, showing that prolonged deprivation sharply lowered
IQ scores. Achievement and health conditions were also significantly different for the two groups in favour of the advantaged groups.

Five social stratification by caste were constructed among 800 college students. Significant intelligence score differences were observed between the two extreme groups of social classes (Pandey, 1974).

Similar finding was reported by Sinha and Shukla (1974). Two groups of 125 children each from Indian nurseries and orphanages were selected. The test was pictorial depth perception. Intelligence was correlated with all the six scores. When intelligence was controlled, the retarding effects of deprivation on the scores was nil with 3-4 years old children. But at higher age levels, differences widened showing the effect of prolonged deprivation. Lack of heterogeneity and absence of stimulation in orphanages were attributed to the findings.

Many other findings also indicated the adverse effects of disadvantage on intelligence. Social deprivation strongly predicted both intelligence and educational achievement (Singh and Sinha, 1986). Mentally retarded and low scoring children on intelligence tests were found to score high on Prolonged Deprivation Scale (Gaur and Sen, 1989). Non-tribals (advantaged) were more creative than tribals (disadvantaged). Private schools students (advantaged) were more creative than public schools students (Kumar and Kumar, 1994). Academic achievement was found to be a function of the degree of
deprivation/SES (Gopal, 1970; Chatterji and Mukeherjee, 1972). In a test of reasoning, high school students of unskilled parents were found to perform much less than their counterparts belonging to parents in the professional services (Kanth and Prasad, 1967).

The strong relationships between cognitive abilities and language skills is agreed by the prominent psychologists, despite the differences which one is primary. Thought and language are viewed by behaviourists as identical. Vigotsky distinguished between inner speech and overt speech and considered their relations with thinking. Still some others (e.g. Whorf) hold that thought is dependent on language, while some contend that language depends on thought (cf. Kellogg, 1995). However, almost all agree that language and thought are closely inter-linked. In language learning, children acquire the four components: phonology, semantics, grammar and pragmatics, which they combine to flexible communication system. The influence of environment on these skills can readily be inferred from the behaviourist theory of language (Skinner, 1957). A child grown in deprived environment would not adequately acquire the necessary stimulation (i.e. reinforcement) from parents and others, who themselves could not be good models due to their poor language. Even the nativist perspective (Chomsky, 1957), despite biological emphasis, appreciate the role environmental input for language development.
Krishna (1979), conducted a study to determine the effect of socio-cultural background on vocabulary in Hindi. He reported that students belonging to higher strata families spoke and wrote words of Hindi correctly. But the result was completely different in case lower families. It is documented that verbal ability and academic achievement are positively and highly correlated. Reading ability was found to be a function of home background and intelligence for a sample of 60 children (Gupta and Veeraghavan, 1987).

Ethnic minority families often foster unique language skills that do not match the expectations of classroom and testing situations. Heath (1989), by observing low-income Black homes, found that adults asked Black children very different kinds of questions than is typical in White middle-class families. From an early age, White parents ask knowledge training questions that resemble classroom situations. Black parents asked questions that call for elaborate responses about whole events but that had no single right answers. The Black children, according to Heath, developed complex verbal skills at home, but these worked poorly when they go to school.

Arguments and empirical studies in favour of environmental disadvantage as a strong factor for lowered intelligence and achievement are substantial. When poor children fostering in poor families were adopted to middle-class families, their IQ have been found to be higher when compared with the control group. Scarr and
Weingberg (1976) gave IQ tests to over 100 adopted Black children. The White adopting parents have above average intelligence, occupational statuses and educational levels than the biological Black parents. The IQ scores of the children was averaged at 110, 20 points above the mean of the children growing in low income Black communities. They concluded that it was environment, not heredity that accounted to Black children's typically depressed intelligence test scores.

Moore (1986) compared test taking behaviour and parent-child interaction of two groups of Black adoptees - one growing in White and the other growing in Black middle-class families. Tested between 7 and 10 years of age, the traditionally adopted children did well, attaining a mean score of 104. But the IQ score of the trans-racially adopted counterparts was much higher, averaging 117.

The review of status studies by Scott-Jones (1984) noted that family socio-economic characteristics were generally found to significantly relate to educational performance variables, while White's (1982) meta-analysis of 200 studies correlated about .22 with individual student achievement. When schools were taken as units of analysis (aggregate achievement by results over schools), the correlation between SES and mean achievements increased to .79.

A number of research reports have also shown that the motivation,
attitudes, morality, etc. of individuals are also affected by environmental disadvantage. Middle-class students possessed significantly higher self-concept scores (Pal and Tiwari, 1984; Singh, 1982) than the disadvantaged students. Middle-class college girls showed diversified interests and extra curricular activities than their less fortunate female counterparts (Sharma, 1979). SES as measured by income, significant differences were found on economic, political and social values among rich and poor adolescents (Hafeez and Hafeez, 1982). Using a moral concept development test that measures truth, duty, responsibility, judgement, discrimination between good and bad, sympathy, respect, obedience, helpfulness and honesty, Kothari (1983) found out that adolescents from parents of higher educational background scored significantly high on all dimensions than their peers from parents of poorer educational background.

Similarly, poor home environment was found to accelerate the occurrence of more frequent emotional disturbance among adolescents when compared to normal distribution (Dhoundlyal, 1984). Psychopathic tendency and SES were negatively related (Helode and Kapai, 1986). Advantaged undergraduate female students demonstrated more emotional stability, sociability, and thoughtfulness than the disadvantaged girls (Sharma, 1980). Low SES adolescents showed inwardly directed aggression, exhibited more ego-defensive responses, and were very poor in self-disclosure (Pathak and Rostagi, 1980).
Differences between the disadvantaged and the advantaged groups are also reported with regard to other dimensions of behaviour and personality, such as problem intensity (Sudha and Trith, 1980); escapist attitudes (Sharma, 1970); anxiety (Hussain, 1979; Gunthey and Sinha, 1983); adjustment (Rami, 1979; Srivastava, 1992); approval motive (Ujjawalarani, 1983); risk taking behaviour (Gupta and Arora, 1982); Prejudice (Khalique, 1982); needs (Dhillon and Acharya, 1985).

The above discussion indicates that environmental deprivation has far reaching consequences on the all round developmental aspects of an individual. This is not to undermine the role of heredity but to emphasize the influence of disadvantage. The suggestions of Agrawal (1997) is worth to be kept in mind. He argued that the logic used by environmentalists is flawed - a "sociologist's" fallacy - a fallacy of assuming that any environmental difference between individuals and groups reveals a purely environmental influence for predicting IQ difference, i.e. a socio-economic difference in intelligence must be purely environmental rather than partly genetic.

Criteria for Identifying the Disadvantaged and Advantaged:

In India as well as in Western countries, researches have developed a number of measures that could be used as criteria to differentiate the disadvantage from the advantaged. The criteria used are so vast and varied that it may sometimes be difficult to distil the
main features. However, we can broadly classify them into two categories- i) single factor ii) multiple factors. Again, among those who use multiple criteria, some use composite scores (sums, averages, etc) while others use the different components of disadvantage separately in their analysis.

The single factor criteria is based on such considerations as social grouping of people in social, ethnic, religious, caste, living areas, income, etc. The assumption behind the use of single measures is that due to the social and structural pattern that exists in a given system, certain segment that is considered disadvantaged in the considered criteria will also be disadvantaged in many other dimensions of disadvantage. This means that high correlations exist between the various forms of deprivation. For instance, it is well documented elsewhere that African Americans are not only subjected to racial disadvantage but also they are in the bottom line economically, socially and educationally.

A number of investigations both in the US and India have used single criterion for identifying the disadvantaged groups for their studies. Phipps (1995) identified the deprived on the basis of participation in free school lunch programmes. Residential area was used by Cook and others (1986). Living quarters, was used by Brantlinger (1992). The following is a sample of single criterion used
by Indian scholars: Religion - Hindus vs Muslims (Husain, 1979); institutionalization - nurseries vs orphanages (Sinha and Shukla, 1974); Caste - Foreward caste vs Backward caste vs Harijan (Gupta and Arora, 1982); Mushhar vs Kayastha (Karna and Panjar, 1997); father's occupation (Kanth and Prasad, 1967); income (Rami, 1979; Hafeez and Hafeez, 1982); father's educational level (Kothari, 1983).

Though the use of single criterion may be comfortable for ease of measurement and for some cultural settings, as the degree of deprivation and the effect of the different components may differ, it seems less appropriate for making generalizations in many cases.

Other investigators systematically considered a number of variables for making distinctions between the advantaged and disadvantaged groups. The main argument is that single criterion is not adequate for identifying the deprived/privileged, since there are wide areas of disadvantage. For example, Tripathi and Misra (1976) contended that members of a particular group or community are not subjected to identical interactions. The various variables that affect these groups cannot be isolated and their contributions on individual's psychological functions cannot be quantified. Therefore, the authors suggested, deprivation be "treated globally and should include all aspects of life in a specified natural setting for determining its level and should be conceived as a hypothetical construct referring to all possible aspects of experiential input an individual has received during his life time".
The authors have developed a Prolonged Deprivation Scale that assess fifteen factors. In these global/multidimensional approaches, a number of social, psychological, and economical aspects are assessed but no attempt is usually done to consider each aspect separately.

In India a number of scales that measure deprivation, home background, or socio-economic status are already in use. The prolonged deprivation scale was used by Gaur and Sen (1989); a Home Environment Scale by Dhoundlayl (1984). Many researchers also use SES scales. Singh and Saxena's Socio-Economic scale by Pal and Tiwari (1984); Kuppuswamy's SES scale by Dhillon and Acharya (1985), Srivastava (1992), Gopal (1970); Sharma's SES scale by Sharma (1980); Joshi and Tiwari's SES scale by Gunthey and Sinha (1983); etc.

In Western countries too, SES is often used as an index for deprivation. Composite scores of two or more of the following: family income, father's educational level, mother's educational level, father's occupational status, mother's occupational status are often used by many (Solorzano, 1992; Walker and Sutherland, 1993; Rojewiski and Yang, 1997; Marjoribanks, 1997).

Other investigators, while measuring more than one dimensions of disadvantage (i.e. multidimensional factors), have attempted to estimate the amount of variance contributed by each component in their
analyses. House (1981) developed a framework of what he called the 'components' and 'proximity' principles. The components principle suggests that researchers explore the effects of social class using separate measures of different dimensions of class. House argued that the use of composite measures of social class is only appropriate when there is theoretical guidance in developing such a measure. In the absence of a theory which specifically calls for the use of composite measures of class, he suggested that using component measures is more fruitful since they will not obscure the effects of the different dimensions of social class.

There are a number of investigators, both American and Indian, that considered social components of disadvantaged/advantaged statuses and studied their effects separately on the outcomes of their interests. Demographic surveys that assess different background variables such as sex, income, parent's education, parent's occupation etc. were gathered and their influence treated separately (King and Multon, 1996; Chung Loeb and Gonzo, 1996). Father's level of education and mother's educational level, were used separately as measures of SES (Farmer and Chung, 1995). Race and other five components of SES - family income, educational and occupational level of head of household, head of household unemployed, welfare - were measured and their separate effects studied by Triplett and Jarjura (1997). Race and family income were separately considered by (Karraker, 1992). Ethnicity, father's
education and mother's educational levels were measured and their contribution of variance to aspiration estimated (Hosler and stage, 1992).

Similarly, Indian investigators have measured different components of disadvantage and their separate effects analysed. Jachack and Kandi (1983), in their study of the effect of home environmental variables on intelligence scores used six separate variables - SES, living arrangement, parent child interaction, mass media and nutrition. Caste for social disadvantage and income for economic disadvantage by Ujjawalarani (1993). The separate effects of caste and school quality were considered by Kumar and Kumar (1994). To study the effect of certain SES factors on scholastic achievement, Chatterji and Mukherjee (1972) used eight measures of SES - number of children, family size, family income, parental educational level, father's occupation, private tutor, helper in lessons and study room at home were considered separately. Parental monthly income and parental education were studied for their separate effects of college girls' aspirations (Jafri, 1992).

From the above brief review, we can infer that despite the difference in approach for identifying the disadvantaged/advantaged sections in a society or community, two main indicators come to the front - ethnicity/race/caste/religion, and socioeconomic status (family income, parents' educational and occupational levels and quality of schooling).