Chapter - II

METHODOLOGY

It is clear from the preceding paragraphs that the primary concern of this investigation is to probe if personality factors intervene in some way in the individual's experiencing of satisfaction. That is, do individuals who perceive themselves as satisfied differ from those who perceive themselves as dissatisfied in some personality characteristics or configuration of characteristics. This basic issue constitutes the crux of the investigation and all other questions forming part of the probe aim at providing a comprehensiveness to its answer.

It will be recalled that studies conducted in the area have so far encouraged the conclusion that sex is a pertinent variable in determining satisfaction, that satisfaction increases with age, and as to the contribution of economic well-being, there is vociferous reiteration from many sources of it being the major determinant of satisfaction. Blisher and Atkinson 1980, Wilson 1967, Grichting 1983, Inkeles and Diamond 1978, and many other investigators have pointed to their importance.

As stated earlier, we are of the opinion that such unequivocal conclusions are not warranted by the results and are
the outcome of the tendency to generalize on the basis of apparent evidence without attempting to understand the less perceptible but more meaningful dynamics. Yet the results obtained by these are important and must not be overlooked if we want to place our findings on a broad, objective and comprehensive base. We have, therefore, included the variables of sex, age and socio-economic status in our investigation.

That sex, age and S-E-S factors must be studied is true, but it was also felt that they should be studied more meaningfully than has been done till now. The 'state', or the subjective experience of satisfaction, has been the sole parameter on which the differences amongst sex, age and S-E-S have been investigated. However, it should be kept in mind that the experience of satisfaction, more particularly satisfaction as reported is basically a matter of the individual's perception of satisfaction. The issue is being discussed at length in the forthcoming paragraphs where the instrument through which we measured satisfaction will be described, but the relevant point here is that since this experience (satisfaction) is the outcome of certain experiences which the individual has undergone (that it may in turn determine the individual's future experiences by having affected his 'world view' does not contradict what we are saying) it was felt that experiences reported as leading to satisfaction must be taken into consideration. It is obvious that
each particular experience as reported could not be treated as a distinct unit for comparison and discussion, therefore as an initial step in systematization, we formed two categories, the first consisting of those cases where satisfaction was reported as being derived from experiences involving the self, the second consisting of those cases in which satisfaction was derived from experiences involving others.

The choice of these particular categories was prompted by two considerations, first the purely pragmatic consideration of observing during the initial screening of response sheets that these two response tendencies were present and second the more overpowering conceptual-theoretical consideration of taking into cognizance the psychological contours of the Indian view of life. In the Indian culture, from ancient times to the modern age, the value systems, cherished traditions and ideology imparted right from the mother's lap focus on the central theme of renunciation and 'non-materialism'. True, as a consequence of the practical realities of this materialistic era, the youth may feel a sense of contradiction and confusion in this regard but in terms of the 'desirable' and the 'highest', sacrifice and non-materialism continue to be ideals and form part of the implicit assumptions through which self evaluation is conducted. The motives of "obligation" and "duty" have been considered in traditional Indian psychology even more potent than those of
gratification. There could have been other criteria for categorization (pragmatically equally feasible) - Maslow's hierarchy could have provided one such criteria, but this aspect of orientation towards self and orientation towards the non-self (others) was felt to be meaningful and pertinent. Finer categorizations could be built on this base. The journey of knowledge proceeds in this manner.

We may thus summarize the various aspects of our proposed study in the form of the following hypotheses -

1. Individuals who perceive themselves as satisfied differ in their personality configuration from those who perceive themselves as dissatisfied.

2. Certain personality traits contribute significantly to the experience of satisfaction/dissatisfaction.

3. Men and women differ in terms of their satisfaction-dissatisfaction.

4. Individuals falling in the higher age groups differ from those in the lower age groups in terms of their satisfaction-dissatisfaction.
5. Individuals belonging to the high socio-economic status group differ from those belonging to the low S-E-S group in terms of their satisfaction-dissatisfaction.

6. There is a difference amongst men and women in the nature of experiences contributing to satisfaction.

7. There is a difference between the high and low age groups in the nature of experiences contributing to satisfaction.

8. There is a difference between high S-E-S group and low S-E-S group in the nature of experiences contributing to satisfaction.

Two important points need to be noted. First, the measure indicative of satisfaction is specifically perceived satisfaction, the nature of the problem necessitates this. Second, since low score on the satisfaction scale is indicative of dissatisfaction, therefore whenever reference is made to satisfaction, the inclusion of dissatisfaction is implicit.

One phase of the investigation, which is concerned with purely methodological considerations with regard to one of the tools of the study (Cattell '16 PP scale) has not been pointed at in the problems formulated above and will be discussed in
forthcoming paragraphs at the appropriate place.

SAMPLE: The sample consisted of 210 subjects randomly drawn from the student, teaching and non-teaching population of the Aligarh Muslim University. Almost 300 subjects participated in the study, but 78 answer-sheets had to be rejected being either incomplete or not in accordance with instructions. The scale to measure satisfaction called for the subject's participation in a big way and many subjects left midway. (This could well be a topic worth investigating -- are all of us capable, or motivated, to probe our experiential worlds?)

The distribution of the sample in terms of sex, age and is as follows:

I - SEX

(i) number of males - 102
(ii) number of females - 108

II - AGE

(i) Below 20 years, N = 64
(ii) Between 20 - 30 years, N = 77
(iii) Between 30 - 40 years, N = 42
(iv) Between 40 - 50 years, N = 27
III - SOCIO ECONOMIC STATUS

(i) Family income below Rs.1000/- p.m., N=11
(ii) Family income between Rs.1000 - Rs.2000, N=37.
(iii) Family income between Rs.2000 - Rs.3000, N=61
(iv) Family income between Rs.3000 - Rs.4000, N=48
(v) Family income above Rs.4000/- , N=53.

The number of subjects falling in the age- groups II (i) and II(ii) is greater than those falling in the latter two groups, since the student population which by and large comprises groups (i) and (ii) is greater in number than the teaching and non-teaching population of the University.

The subjects whose family income is below Rs.1000/- are all students. They are just eleven in number because with revised grades all over the country, few families, at least families of those who can afford university education, have income below Rs.1000. Yet some students belonging to the low income group are studying through financial sponsorship and self earning programmes. Their number, however is very few.

On the whole, the sample is representative of the University population at Aligarh.
TOOLS

1. PERSONALITY MEASURE: CATTELL'S 16 PF SCALE

The area of human personality has justifiably been called by Cattell (1977) "the most challenging of all scientific problems", the personality measure constructed by him took decades of hard labour in which years of factoring of ratings and questionnaire data was undertaken in order to define concepts to be measured, before a single source trait was constructed. Consequently, it has become one of the most trusted personality measures and we may say the challenge of tackling one of the most complex scientific problems was well taken.

The investigator has used Cattell's 16 PF scale to measure personality.

The 16 PF Test is a multidimensional set of sixteen questionnaire scales arranged in omnibus form designed to make available in practicable testing time information about the individual's standing on the majority of primary personality factors. It covers 16 primaries, some eight derivatives there from as second stratum, higher-order, broader secondaries. The personality factors measured by the 16 PF are not just unique to the test but instead rest within the context of a general theory of personality. Nearly ten years of empirical, factor-analytic
research preceded the first commercial publication of the test in 1949. The 16 primaries and secondaries derived from them, constitute central concepts in personality theory and many predictive equations and "natural history" laws have begun to accumulate around them.

The personality factors are being very briefly enumerated below in traditional bi-polar descriptions -

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>LOW STEM DESCRIPTION</th>
<th>HIGH STEM DESCRIPTION</th>
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<tbody>
<tr>
<td>A</td>
<td>Sizothymia</td>
<td>Affectothymia</td>
</tr>
<tr>
<td>B</td>
<td>Low Intelligence</td>
<td>High Intelligence</td>
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<tr>
<td>C</td>
<td>Lower Ego Strength</td>
<td>Higher Ego Strength</td>
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<td>E</td>
<td>Submissiveness</td>
<td>Dominance</td>
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<td>F</td>
<td>Desurgency</td>
<td>Surgency</td>
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<tr>
<td>G</td>
<td>Weaker Superego Strength</td>
<td>Stronger Superego Strength</td>
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<td>H</td>
<td>Threctia</td>
<td>Parmia</td>
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<td>I</td>
<td>Harria</td>
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<td>L</td>
<td>Alaxia</td>
<td>Protension</td>
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<td>M</td>
<td>Praxernia</td>
<td>Autia</td>
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<td>N</td>
<td>Artlessness</td>
<td>Shrewdness</td>
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<tr>
<td>O</td>
<td>Untroubled Adequacy</td>
<td>Guilt Proneness</td>
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<tr>
<td>Q1</td>
<td>Conservatism of Temperament</td>
<td>Radicalism</td>
</tr>
<tr>
<td>Q2</td>
<td>Group Adherence</td>
<td>Self Sufficiency</td>
</tr>
</tbody>
</table>
Q3  Low Self Sentiment Integration  High Strength of Self Sentiment
Q4  Low Ergic Tension  High Ergic Tension
Q-I  Invia  Exvia
Q-II  Adjustment  High Anxiety
Q-III  Pathemia  Cortertia
Q-IV  Subduedness  Independence

The test is present in six parallel forms, each measuring the same 16 personality dimensions. Forms A and B suitable for literate adults, Forms C and D posing less vocabulary demands, suitable for average literate adults, and Forms E and F for the low literate groups. Form A of the test was used by the investigator.

The test consists of 187 items, each with three possible response categories. The response to each item is indicated by the subject in the appropriate box on the answer-sheet provided. By superimposing the scoring keys A and B, the score on each of the sixteen primaries can be obtained.

By referring to the appropriate table in terms of age and sex the sten of each raw score was found out. These sten norms help to locate the position of the subject on a ten-point continuum. They constitute an important step in the standardization of the scale and have been arrived at through
rigorous procedures based on statistical logic together with considerations of sex and age which have been found to operate in certain predictable ways in some of the characteristics.

The dependence, stability and validity of the test has been determined extensively and intensively on different samples and against exacting criteria and the large body of literature available in this regard has convinced psychologists of its utility.

2. MEASURE OF SATISFACTION: SELF-ANCHORING LADDER SCALE

The methodological problem faced in this aspect of the study was essentially that of devising some means to get a picture of the experience of satisfaction (which is an aspect of the individual's own reality world), in the individual's own terms, yet in a manner that allows for quantitative comparisons.

It may be recalled that a similar problem was confronted by Cantril (1965) in his study of the patterns of human concerns, which aimed at studying the fears and aspirations of people belonging to different countries. The Self-Anchoring Striving Scale which was devised by Cantril, Kilpatrick and Lloyd Free was used in that study. The scale has been discussed extensively by the authors in the "Journal of Individual Psychology (November
1960) "The American Behaviour Scientist" (October 1962) and "Scientific American" (February 1963). Its applicability to a wide variety of problems, particularly those which involve discovering the spectrum of values and subjective evaluations a person is preoccupied or concerned with, has been strongly suggested.

It was felt that this device would enable us to measure satisfaction adequately for as has been pointed out earlier we have defined satisfaction operationally as the individual's perceived satisfaction. This approach is totally in order, for as Barrow (1980) points out after evaluating critically varying opinions in this regard (McPeck 1978, Von Wright 1963, Lloyd Thomas 1968), that provided the agent knows what satisfaction means and is not faced by problems of comparison, it is difficult to conceive of anyone else better placed to determine whether he is or is not happy.

Retaining the concept contained in Cantril's scale but modifying it in consonance with the concept we are studying, the self-anchoring device was used. The permissability of such modifications, where the essential concept is retained has been upheld by the authors.

The first step in the administration of the scale is to ask
the person to define on the basis of his own assumptions and experiences the two extremes or anchoring points of the spectrum on which some scale measurements is desired, in this case he was asked to define on the basis of his own experiences as well as his assumptions the top of the scale (highest satisfaction) and the bottom of the scale (lowest satisfaction). Through this a "self-defined continuum" as Cantril calls it, comes into existence.

This defining and probing into his reality world prepares the subject for the next phase and is an important precursor to it, since it helps him to form a somewhat cogent picture of his reality world which he may not otherwise have given thought to this next phase is presenting a non-verbal ladder device (see appendix- I), symbolic of the "ladder life" and asking him where he thinks he/she lies on it in terms of satisfaction, the top rung indicating the highest and bottom rung the lowest, with reference to his definition of them. The experimenter moves the finger up and down rapidly while asking him this question.

In the first phase, the subject was allowed to write down his definition of the two extreme points of satisfaction as conceived by him as we found that this helped the subject to organize himself and respond with coherence. Further even when the scale is administered with instructions for oral response,
the subject is told that he may take his time in giving his definitions about the two extreme points of the continuum. Moreover, our interest is to conduct a more in depth study, with a much greater idiographic bias than was found in most of the sociologically - biased investigations, and if responses of the subject remain available to add further to our understanding, we would be facilitated in our purpose. In the second phase, it was important that the spontaneous, uncensored response in the context of the reality world just visualized by him be obtained, therefore his response was obtained by moving the finger rapidly up and down the ladder.

Since the two extreme points of the continuum indicated the highest and the lowest perceived states of satisfaction, we defined dissatisfaction in terms of low ladder positions on the self-Anchoring scale.

The investigator's choice of instrument is thus in consonance with the nature of the variable studied as well as the merit of it as a measuring device. Cantril's scale has been used in almost twenty six countries, and valuable information with regard to aspirations, happiness, fears and concerns as existing in different nations have been obtained through it.
DESIGN:

The major focus of the study was to probe if individuals perceiving themselves as satisfied differed from individuals who perceived themselves as dissatisfied in terms of personality configurations as well as specific personality dimensions. Satisfaction constituted the dependent variable in the study, and twenty personality factors (measured by Cattell's 16 PF) together with sex, age and socio-economic status constituted the independent variables.

Information with regard to sex, age and s-e-s was obtained from the subject on the title page of the satisfaction questionnaire. With regard to the measurement of the twenty personality (independent) variables and the dependent variable (satisfaction) necessary information has been provided under "tools".

In a study such as ours, which is encompassing a problem that cannot be meaningfully reduced to orthogonal designs in the laboratory setting, we must, after identifying the variables and purpose of the study, spell out the steps and procedures followed, so that the manner in which the purposes of the study are met are clearly outlined.
As has been pointed earlier, Cattell's 16 PF scale was used to measure the subjects's personality. Although the scale came into existence through studies that cut across different cultures, and the universality of the traits measured by it have been established, the authors themselves have recommended, (and it is desirable from the view of ensuring methodological soundness as well) that the manner in which the traits are distributed in the sample being studied must be taken into consideration, and the decision regarding the norms to be used, be taken accordingly.

Step one of the study was, therefore, to correlate among the 16 PF traits as scale scores and factor this matrix.

Step two of the investigation was to compare the "satisfied", with the "dissatisfied" subjects in terms of personality configurations. P73 and P27 of the distribution of scores on satisfaction were selected as cut out points to demarcate the satisfied group from the dissatisfied.

Thus, operationally, the satisfied group was defined as the group which was comprised of subjects whose score on the satisfaction scale placed them above the seventy third percentile point and the dissatisfied group as the group comprising of subjects falling below twenty seventh percentile.
Subjects falling between p73 and p27 constituted the "average satisfaction" group.

In order to answer the question if the groups differed in personality configurations, we calculated the coefficient of profile similarity (r_p), developed by Cattell.

Cattell had pointed out that whether we are talking of personality profiles at the individual level or the group level, comparisons must take into account that with every increase in the factor up to the highest score, the relationship does not continue in one direction to an indefinite extent but there is an optimum point; so curvilinearity rather than linearity is a better approximation of the relationship between profiles. In view of this, two procedures have been suggested by Cattell to approach profile comparisons - (a) computation of pattern similarity coefficient (r_p) (b) a higher degree equation, e.g. quadratic which requires more complex computations with the help of the curvilinear "qualification grid".

In view of the personal limitations of the investigator in the area, calling for mastery in mathematical concepts and logic, and in the absence of appropriate programmes at this juncture, we computed the r_p coefficient. It has been used extensively by investigators, in fact the author of the 16 PF has used it much
more frequently than the other procedure. The \( r_p \) index provides information of similarity in terms of shape, level and accentuation or steepness of the profile (thus giving more information than simple correlation measures would have provided), takes into account the "matrix" and "number of dimensions" together with being easy to interpret. It is similar to \( r \) in its distribution, varying from +1 (indicative of complete similarity among profiles) through 0 to -1 (indicative of complete dissimilarity).

Cattell has suggested procedures for calculating the \( r_p \) for individual to individual, individual to group and group to group comparisons. The difference is slight in the three procedures and is based on the fact that relative to the variations among individual profiles on any factor, the variations among group profiles are much smaller.

\[ r_p = \frac{4K - \sum w_j d_j}{4K + \sum w_j d_j} \]

(where \( K \) is the median of the chi-square distribution with degrees of freedom equal to the number of factors used, \( d \) denotes...
the differences of the two groups on each trait mean sten and w is the already calculated integer weight, which is different for every source trait).

The coefficient of profile similarity (for the 16 PF dimensions) was computed for the following groups:
1. The "Satisfied" and the "Dissatisfied" groups.
2. The "Satisfied" and the "Average Satisfaction" groups.
3. The "Dissatisfied" and the "Average satisfaction" groups.

The resultant rp of the different groups of subjects gave an index of the pattern of similarity between the personality profiles of the two groups. It will permit us to arrive at a broad conclusion with regard to a similarity or dissimilarity in the general pattern. In order to elicit information about the particular personality dimensions which contribute in a significant manner to satisfaction, it was necessary to apply procedures that would elicit more indepth, meaningful information.

The personality measure used by us, namely the 16 PF scale, measures sixteen primaries. The authors have, however, pointed out that whenever possible, second-stratum personality factors should also be computed since they provide important information. Although eight such factors have been identified, four of them
are still at the statistical processing stage, so the four that are in use were derived from the primaries, in accordance with the prescribed procedure (please refer Appendix-III). We thus have twenty personality factors as Independent variables.

The second step of our study was concerned with eliciting more indepth information regarding the intervention of personality in the experience of satisfaction.

To answer our basic question as to do personality factors have at all a relationship with satisfaction, if so which particular personality factors would predict an individual's position on the satisfaction scale, multiple regression analysis was conducted. Multiple regression procedures are a powerful set of statistical techniques which provide a very useful way of categorizing the multivariate procedures that are primarily correlational in nature. They are a powerful set of techniques which allow one to assess the relationship between one dependent variable (DV or criterion) and several Independent Variables (IV or predictors). The choice of the technique also rests on a quality of prime importance possessed by the technique, namely its flexibility. The technique does not impose any restrictions of the Independent variables being correlated or uncorrelated, and is equally applicable in both conditions, it is of special importance to the researcher who is interested in real - world or
very complicated problems that cannot be reduced to orthogonal designs. This exactly is the position of the present investigation.

In view of the large number of IV's (there were twenty personality factors - sixteen primaries and four second - stratum factors), the first step was to reduce their number, since the possibility of the regression equation reflecting chance relationships increases with an increased number of predictors. Reducing predictors could have been a theoretical decision, but in view of the relative absence of a sound information base in the area, the subjectivity of arguments of the investigator would have played too major a role. So we opted for the more objective decision of discarding independent variables on the basis of their correlations with the DV. The product moment coefficient of correlation was computed for each of the twenty IVs with the DV. A criterion of \( r = p < .05 \) was adopted in retaining an IV.

The strategy of standard multiple regression was used by the investigator. It answers satisfactorily the questions which the investigator wished to answer; further, since the independent variables are by and large not correlated (part of the theoretical framework on which the 16 PF scale is based) the procedure would yield relevant information with economy of effort.
Multiple Regression Analysis was done to determine the relationship of the independent variables with the dependent variable on the total sample, the two sex-groups and the four age groups.

An important aspect of the study was concerned with investigating the intervention of the independent variables of sex, age and S-E-S in the incidence of satisfaction (DV).

The t-test was applied to ascertain the differences amongst the various sex, age and S-E-S groups in terms of their satisfaction scores.

The variables of age and sex, which have been considered very meaningful by the authors of the 16 PF in terms of their implications on personality factors were taken into account in the multiple regression analysis also. There was no theoretical basis to do the same for the S-E-S factors, and only direct comparisons between the means was done in that case.

Subjects reporting satisfaction through experiences of a "self-oriented" nature and those reporting satisfaction through experiences of an "other oriented" nature were identified. The chisquare test was applied to assess if the sex, age and S-E-S
groups differed in the occurrence of these two categories of experiences.

The steps and procedures described in the preceding paragraphs were designed to make available to us information through which we could venture to throw some light on various aspects of the phenomena under study.