CHAPTER 2

PLAN AND PROCEDURE
Plan and Procedure

During the middle months of 1971, preparations were begun for the development of various measuring instruments for the study of person perception. 18 boys and 13 girls of one arts college situated in Ahmedabad, were requested to write on a separate sheet of paper, the statements, adjectives etc., concerning which they would like to offer opinions for themselves and for their friends. After careful screening of the statements thus received and removing the duplicate items from the list, one measuring instrument called Interpersonal Perception Inventory was developed, retaining 32 opinion items. On the basis of a list of adjectives, thus received, 10 favourable and 10 unfavourable adjectives were selected and retained in the test called Adjective Check-List. The Word Connection Test was prepared by asking the students in the sample mentioned above, to offer about 5 response-words, which they thought, would be best associated with each stimulus-word. Totally 15 stimulus-words were presented to the sample to obtain their "associations". 4 response words were selected for each stimulus-word and sufficient care was taken to see that all 4 response-words were more or less equally likely to be associated with the stimulus-word. The Values Test consists of six values described by Spranger alongwith a short description of each one.
Semantic Differential test (Osgood, Suci and Tannenbaum) The manifest Anxiety Scale (Taylor) and the study of values (Allport, Vernon and Lindzey: 3rd ed.) were translated into and adopted to Gujarati language for the present research.

The Sample:

The sample consists of eighty college students, equally divided in four groups. The first group consists of 10 pairs of boys, studying in F.Y.B.A. (2nd year in the college). The second group consists of 10 pairs of girls, studying in the same class. The third group consists of 10 pairs of boys studying in T.Y.B.A. (4th year in the college). The fourth group consists of equal number of pairs of girls from the same class. Each pair represents two best friends, mutually so selected, independently of each other.

A note on sample size:

Considering the ideal sample size with respect to conventional values of $\alpha = .05$, Power = .80 and $ES = .30$, the sample size to make an appropriate test of $R_g$ should be 68.

Considering $ES = .40$, the sample size required is 37.

The sample size of 20 for each group, in the present investigation may be considered relatively 'small'. Due to the following reasons, it was however, not possible to have an ideal size of the sample.
(1) Science and Commerce college Principals refused to spare their students for 3.25 hours of testing, as they thought that the testing would disturb their studies.

(2) Majority of the arts college principals also refused to spare their students for 3.25 hours of testing as they were hurrying to complete the course.

(3) Only one arts college Principal permitted the investigation to collect the data only after the regular college hours provided the students were willing to do so.

(4) Majority of the students were not willing to be the subjects, as they were approaching final examination.

(5) Majority of the male students in the selected arts college were serving, and therefore not available for testing.

(6) Majority of the female students in the selected arts college refused to participate in the project, saying that their parents would not allow them to spare time after college hours were over.

(7) The selection of large size of the sample also was restricted due to the fact that only best-friendship pairs were to be selected who satisfy the research requirements concerning best-friendship.
Procedure for the Selection of the Subjects:

The investigator approached each class in one arts college, situated in Ahmedabad, separately, and explained to the students the purpose of the research. The students were addressed as follows:

"For my research, I need a pair of two-friends, who are mutually best friends of each other and they should be from the same class. I want each one of you to write the name of one person from your own class whom you consider as your best friend. You have been given a blank-sheet of paper. Please write your own name on it. Before writing down the name of your best friend please remember that you should write the name of the best friend of your own sex and from your own class. If you do not have a best friend of your own sex from your class, do not write anything on the sheet of the paper, except your own name and hand it over to me, before you leave the class. If you decide that you have a best friend as required by me, please write his or her name on the sheet of the paper, bearing your name. After you write the name of the best friend, please mention very clearly and without fail, whether you knew him or her before joining the college or after joining the college. You are also requested, to mention the duration of your best friendship with him or her. When you finish writing on the
sheet of paper distributed to you, as required please hand over to me the same and leave the hall. You should feel free to ask me any question, in case you experience any difficulty in understanding, what I have told you."

After obtaining the desired information from the students of F.Y.B.A. and T.Y.B.A. the selection of the subjects was made on the following basis:

Only those pairs of students were selected in a sample if -

(1) Both the students were mutually selected as best friends, independent of each other's knowledge,

(2) Both the students became friends only after joining the college, and

(3) The duration of the best friendship between the two was roughly equivalent to the period for which they studied in the college. In other words, the best friendship pairs, selected for the present investigation had roughly One year-four months best friendship experience, if they come from F.Y.B.A. and about three years-four months experience, if they come from T.Y.B.A.
After selecting the pairs from each class, on the basis of the information received, the students were assembled on the next day in one hall and were asked if they had time and willingness to participate in the research. Only those pairs which expressed willingness to participate in the investigation were retained in the final selection of the students.

Following is the description of the tools:

**Description**

(1) **Interpersonal Perception Inventory** consists of 32 opinion items which could be in either category i.e. Yes or No.

(2) **Adjective check list** consists of 20 adjectives, half of which provide favourable descriptions and the remaining ones provide unfavourable descriptions of the person. The subject is expected to select any four from favourable adjectives and equal number of unfavourable adjectives.

(3) **The word - connection Test** consists of 15 stimulus words and each stimulus - word is suffixed by four appropriate equally likely to be associated with the respective stimulus word. The subject has to choose the most appropriate response word out of 4 words, which according to him goes best with the stimulus word.
(4) The values Test consists of listing of six values, proposed by Spranger, along with a short description of each one. The subject is expected to rank these values in order of importance that he attaches to them.

(5) The semantic differential Test consists of 12 bipolar adjectives and the same is adopted in Gujarati. The subject has to rate himself on each bipolar adjective by appropriately using a seven points scale.

(6) Taylor's manifest anxiety scale consists of 50 items and the same is adopted in Gujarati with minor changes.

(7) The study of values is also adopted to Gujarati by introduction in it several changes to make it suitable to Gujarat college students.

Test - retest reliabilities were calculated separately for 18 subjects after resting them at the interval of 15 days. Test - retest reliabilities were separately assessed for direct perspective score and meta-perspective score. Phi - values are calculated in terms of agreement for + patterns ++, +-, -+ and -- at t₁ and t₂. Test - retest reliabilities for VT, SD and SV were calculated separately for each subject and the median value for Rho is considered as the reliability. The results are shown in Table - 1.
### TABLE 1

Test - retest reliabilities for seven tools for direct-perspective scores & meta perspective scores.

<table>
<thead>
<tr>
<th>Test</th>
<th>Reliability</th>
<th>Statistic</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>I P P</td>
<td>.87 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.72 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>A C L</td>
<td>.68 Phi</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.58 Phi</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>V T</td>
<td>.62 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.59 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>W C T</td>
<td>.76 Phi</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.60 Phi</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>S D</td>
<td>.58 Rho</td>
<td>&lt; 0.050</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.52 Rho</td>
<td>&lt; 0.050</td>
<td></td>
</tr>
<tr>
<td>M A S</td>
<td>.78 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.30 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>S V</td>
<td>.76 Rho</td>
<td>&lt; 0.010</td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>.54 Rho</td>
<td>&lt; 0.050</td>
<td></td>
</tr>
</tbody>
</table>

* For Rho df = 16
For phi $x^2df = 1$
Validity of the tools:

Person perception measuring instruments i.e. IPP, ACL, VT, WCT and SD are assumed to be prima-facie valid, in measuring the variables of real similarity, assumed similarity and person perception accuracy.

All these measures are obtained by well defined operations on different scores and therefore the validity of these tools may be referred to as operational validity. Sinha (1963) has used MAS in India and has reported that the instrument possesses good reliability and validity. Raychoudhury (1959) has used 'study of values' in Indian settings and has found the instrument satisfactorily - reliable and valid.

Administration of tools:

The tools were administered in a particular order to the subjects. The order of administration of the Tools and the time required to complete the tools are shown in Table.2.

Scoring the tools:

Schema for calculating Accuracy scores, Real similarity scores and Assumed Similarity scores:
### Table 2

Presentation - order of tools and the mean time required

<table>
<thead>
<tr>
<th>Test</th>
<th>Order</th>
<th>Mean time in mts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPP</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>ACL</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>VT</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>SD</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>WCT</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>MAS</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>SV</td>
<td>7</td>
<td>25</td>
</tr>
</tbody>
</table>

**Total** 95
(1) Agreement between MP of subject A for his friend B and DP of subject B himself on a particular tool would give accuracy score for subject A.

(2) Agreement between DP of subject A and DP of subject B on a particular tool would give real similarity score which would be the same for both the subjects.

(3) Agreement between DP of subject A and MP of the same subject for his friend B would give assumed similarity score for the former.

Thus for each subject there would be totally three scores with respect to a particular test. As there are five tools designed to measure interpersonal perception, each subject would have 15 scores. Added to this, there would be one score on MAS and six scores on the SV. Thus each subject would have 22 scores.

Data analysis:

(1) The extension of the median test was applied to ascertain if the four groups or samples in the present investigation were drawn from the identical population, with respect to the dependent variable of judgmental accuracy. The said non-parametric test was applied separately for each of the five tests, designed to measure the judgmental accuracy.
(2) Intercorrelations were obtained among:
   a. Five accuracy scores;
   b. Five real similarity scores;
   c. Five assumed similarity scores, and
   d. Six values to trace out the significance and
      the direction of the relationship existing
      between the variables. The correlations of the
      judgmental accuracy variable, the real similarity
      variable and the assumed similarity variable with
      the variable of the manifest anxiety were also
      obtained.

(3) Intercorrelations of all the 22 variables were also
    obtained for the purpose of submitting the data for
    factor analysis, and the factor analysis of the
    intercorrelation matrix, thus obtained was conducted
    by using the centroid method proposed by Thurstone.

(4) The inter-correlation matrix of five judgmental
    accuracy scores was subjected to factor-analysis,
    utilising the principal component method proposed
    by Hotelling, to find out if reduction in the
    number of variables was possible.

(5) Due to the fact that there is always more than one
    score with respect to the variable of judgmental
    accuracy, real similarity, assumed similarity and
values, in the present investigation, the canonical
correlational analysis was conducted between the
following sets (For the present investigation and
for the sake of convenience, the set mentioned on
the left hand side may be considered as the -
criterion set (U) and the set mentioned on the
right hand side may be considered as the predictor
set (V). In reality either set can assume any
position).

<table>
<thead>
<tr>
<th>SET</th>
<th>The Criterion Set (U)</th>
<th>The Predictor set (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Five accuracy - scores: Five real-similarity scores</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Five accuracy - scores: Five assumed - similarity scores.</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Five accuracy - scores: Six scores in the study of values.</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Five real - similarity: Five assumed - similarity scores.</td>
<td></td>
</tr>
</tbody>
</table>

(6) Z - scores were computed for five judgmental
accuracy scores, to obtain a composite judgmental
accuracy score for each individual, by adding five
accuracy scores, with a view to finding out if with respect to composite accuracy score, the variable of sex and the variable of duration of best friendship made any difference. Similarly the composite measures of RS and AS were obtained and the investigation as to the role of the variable of sex and the best friendship duration in RS and AS scores was conducted.

(7) After testing the composite score - data for homogeneity of variances using Cochran's statistics the same were subjected to analysis of the variance.

(8) Several tests of post-hoc multiple comparisons were made to find out if the means between two groups did differ significantly.

(9) Intercorrelation between composite measures of RS, AS and ACC were calculated separately for four groups.

(10) Multiple regression analysis was conducted - separately for four group to assess the influence of the composite variable of RS and AS on judgmental accuracy.
(11) On the basis of the composite scores, the first ten subjects scoring the highest judgmental accuracy (hereafter referred to as a superior group) and the ten subjects scoring the lowest judgmental accuracy (hereafter referred to as an inferior group) were compared with respect to their median composite scores expressed in Z scores on the variable of real-similarity and the variable of assumed-similarity and with respect to their median based on original scores on the study of values, to find out which variables would differentiate a pair of groups. 'C' was calculated for each variable to measure the association between two extreme groups with respect to the variables considered.

(12) Several other comparisons of the two extreme groups mentioned above were conducted with respect to the variable of six and the variable of duration of best friendship.