CHAPTER V
THE PROBLEM, METHODOLOGY AND SAMPLE OF RESEARCH

This chapter states the objectives of the research and the problem investigated. It describes the steps, sequence and the process of the development of the instrument for the research. The author presents the rationale of the selection of the sample organizations and the managerial sample in the organization. The later sections of the chapter describe the statistical techniques used to process the data generated.
CHAPTER V
THE PROBLEM, METHODOLOGY AND THE SAMPLE OF RESEARCH

The theoretical framework in postulating a matrix of role coordinates and role acts provides an analytical device to understand how individuals in a society distribute themselves on the five orientation continua of the role coordinates. It is expected that the process of transition in modern Indian society will continue to push more and more individuals toward the points on the orientation continua of role coordinates which are associated with the rubric of work identity. The assumption being that the transition is having a deep impact and is being internalized through primary as well as secondary periods of socialization.

The primary objective of the present research is to explore the "Emergence of Work Identity in Indian Organizations" in the context of manifest social, psychological and cultural transition taking place in the Indian society.

It postulates that emergence of work identity results through the resolution of role coordinates and their associated orientations toward point of - role actualization, multi-person authority orientation, inclusion of peers and work identity -.
Taken together this convergence leads to the emergence of work identity. The resolution of the role coordinates toward the rubric of work identity can take place primarily under three situations:

1. Influences of primary socialization
2. Influences of secondary socialization
3. Joint influences of both

In order to understand the emergence of work identity due to processes of primary socialization the present research assumes that the agrarian ethos of Indian society still prevails very dominantly in the family systems of India. It is being partially modified in the adaptation of forms and modes of behaviour, but at the process level change and adaptation are slow. In keeping with the above assumption, the social contextual variables of an individual representing a configuration of forces in the field of individual's growth i.e. the family and the education system have been taken as an independent variable. It is assumed that the Indian agrarian ethos which promotes the convergences of the role coordinates toward the points - role boundedness, one person authority orientation, exclusion of peers, and social identity - continues to operate. As such, it is expected
that regardless of the impact of work organizations and their culture the shift on the continua of role coordinates toward the points reflecting the emergence of work identity will vary from coordinate to coordinate. Theoretically, it seems possible that the continuum of role boundedness and social identity will show the least change.

In order to understand the impact of secondary or adult socialization which begins at the entry to work organizations, the organization culture has been treated as the independent variable. It is assumed that the individuals experience exposure to the western education, exposure to the life style and the world view of the technological societies of the west. They also experience the over-emphasis on the techno-economic, econo-political and techno-scientific coordinates of reality. This is experienced through the developmental thrust and such other cognitive inputs during the later educational stages and at the point of entry into organizations. All these exposures will tend to generate enough field forces to bring about a change and modifications in the identity concept of the individual which is developed and brought forward from the family and the early school years. The work organization would help him consolidate these inputs into behavioural expressions as well as in the processes that determine the behaviour.
It is assumed that the impact of the organization culture would show differences in the role acts of the managers as well as in the role coordinates of equality and authority. The rationale for these assumptions are due to the nature of the work organizations. The work organizations are systems where the convergence of interaction with peers and the authority are more frequent and intense. They also demand patterns of relationships which have not been experienced in the familial situation.

A lack of congruence between the processes of the primary and secondary socialization implied above will subject the individuals to the pulls and pushes of two competing ethos and their processes. The chances are that the individual will fail to develop a coherent and a consistent identity configuration. He will display in his behaviour and thought dominance of 'Social Identity' rubric in certain spheres of life and dominance of the rubric of 'work identity' in other spheres of life. There are also chances that the individual will experience a split between the affective-cognitive stance and the affective connative stance.
In view of the transitional character of Indian society it is possible that even work organizations as systems may develop cultures:

1. that tend to foster processes closer to the primary socialization. As such, individuals in these organizations may develop an overall integration of role coordinates expressed in behaviour and thought akin to the rubric of social identity. In their case the shift toward work identity will be minimal.

2. that tend to foster processes promoting the impact of work and task emphasis of the work culture. The culture of these organizations will promote a resolution of role coordinates towards points representing the rubric of work identity. Thus, the individuals in these organizations will display a greater shift in behaviour and thought toward work identity.

However, the organizations may fail to provide consistent inputs of either direction stated above. It may happen that organizations may promote cultures encouraging partial, sectorial or functional resolutions. This would influence the individuals to reflect work identity patterns at affective-cognitive level while the patterns of social
identity continue to dominate at the affective-connative level. Thus, a culture promoting a rift between behaviour and thought may evolve. The individuals in such situations will be subjected to the process of double-bind and may reflect diversely inconsistent patterns of shift and entrenchment between the two identities.

The very transitional character of Indian society suggests that it would be difficult to obtain clear and distinct organization cultures of type one (1) and two (2) as described above. The chances are that most organizations will tend to take a functional approach, and thus promote a mixed kind of culture. The individuals in these organizations will then respond to the mix according to the strength of their primary socialization. Wherever the processes of primary socialization are strong the individuals will continue to operate from the social identity orientation. In areas where the impact of the processes of primary socialization is less clear the individuals may integrate the organization message.

As the strength of primary socialization is difficult to assess it is assumed that the nature and configuration of social contextual variables will indicate some direction as
to the quality of primary socialization. For example, the chances that individuals who in their periods of growth spend longer time of their lives in rural or semi-urban setting, acquire their education in vernacular schools and non elite colleges, and whose kinship system is on the whole low in education level may retain the dominance of the traditionally promoted social identity orientations of the agrarian ethos.

Similarly individuals who in their periods of growth spend longer time of their lives in urban setting, acquire their education in elite schools and colleges, and whose kinship system is largely educated may develop the emerging processes of work identity. Thus in organization cultures where no clear cut emphasis has emerged, individuals may respond differentially from each other.

In their functional adaptation to work and task cultures organizations may also show variance. Some organizations may retain the orientations of social identity to a larger extent than others, while other organizations may adopt the emergent processes of work identity in larger segments of their work processes. Thus, organizations
of different level of adoption of work identity may be found simultaneously in the current Indian society.

The experiences in the field of organization development of prominent behavioural scientists as well as the author have suggested that the dominance of the social identity in the role coordinates and role acts of the individual and the overall culture of the organizations is qualitatively valid. But to what extent an individual or a group of individuals in an organization have moved on each role coordinates and its corresponding orientations is unclear.

It is also unclear as to what extent organizations as systems foster a culture which within the context of each individual moving at different pace enforces a consistency of pattern both in the manifest role acts and role coordinates.

It is assumed that the processes of transition in Indian society have led to the fragmentation of life space into two role spaces. During the period of growth the individuals in Indian society are more likely to be governed by the processes of socio-psychological role space. It is assumed that individuals internalize these processes and thus acquire the convergence of role coordinates toward the rubric of
social identity. With the entry to work the individuals may then be confronted with the following conditions:

1. The organization culture may continue to foster the processes and orientations of socio-psychological role space in the sector of role and inter-personal relations. However, the nature of the task in the work organization may demand processes which are more in keeping with the processes and orientations of socio-temporal role space. This would make the emergence of work identity difficult. The individuals will then respond with only partial modifications.

2. The organization culture may demand and foster processes and orientations which are more in keeping with the processes and orientations of socio-temporal role space, in inter-personal relations as well as task situations. This would demand change from the individuals in their processes and orientations towards work identity. The individuals may respond to this need of change in an experimental manner. The consistency in organization messages and processes of reinforcement for such a change would be necessary for effective change. However, the change may also result in only partial modifications on part of the individual.
Objectives of the research

The present research seeks to explore and establish the nature and the direction of the resolution of the role coordinates in the role performance (role acts) of the managers. It seeks to establish the extent to which the social variables and the organization cultures have impact on the resolution of the role coordinates in the role performance of the managers. The study of the resolution and its directionality would determine the degree of shift from the rubric of social identity to the rubric of work identity.

The objectives of the present research can be elaborated in terms of the following questions:

1. Whether the experientially and diagnostically observed findings of the O.D. programmes suggesting the dominance of social identity among the managers would hold good through systematic and rigorous research.

2. To what extent role coordinates and their resolution into the rubric of social identity continues to operate in the role performance of managers in the organization.
To what extent the organization culture mediates through work processes and influences the individual to bring about a change in the orientations associated with role coordinates. What is the extent of change toward the rubric of work identity.

4. Do the social variables in their configurations contribute toward the shift from social identity to work identity.

5. Do different organizations with distinct cultures lead to different degrees of shift in the managers.

In order to fulfill the above objectives, following sequence of Methodology was adopted.

Methodology I

I. The development of the Instrument

Below are described the sequential steps toward evolving the final questionnaire for the study.

1. Identification and Construction of first set of questions

Step 1: Two hundred (200 managers, some as participants in
the programme "Role Stress and Organization Conflict"* and some as participants in in-company training programmes - provided intensive personal data of their organization behaviour. The data was summarised from time to time. Later seventy five (75) managers were intensively interviewed. The managers represented middle and senior level of management from public sector organization as well as private sector, both family owned and with foreign equity holdings. These interviews were open-ended and the discussions ranged from the individual manager's attitudes, values, beliefs and feelings in the role toward the task, the superior, the subordinates and the total organization. Their observations about the role processes and the dominant processes of the organization were recorded. A content analysis of these experiential statements provided two hundred fifty (250) statements which could be classified in the different cells of the matrix of the theoretical framework.

Step 2: These 250 statements were given to a panel of ten judges. Six of the judges were social scientists and four

* The programmes were conducted as part of Management Development Programme offered by the Indian Institute of Management, Ahmedabad. These programmes were conducted with experience based learning technology as the major pedagogical method during 1974, 1976 and 1977 where the author was one of the faculty members.
were senior managers who taught or had taught at the schools of management. They were asked to examine the statements for conceptual congruence with the theoretical framework and thus establish face validity of the items.

The statements which seven judges out of ten chose to mark as congruent with the theoretical framework were retained. The numbers so retained was 192. A critical review of the 58 rejected statements showed that most of them fell in the role act of scanning and control and also had reference to the role coordinate of location. The remaining 192 statements agreed upon by the judges showed an uneven distribution in the cells of four role coordinates and five role acts. The distribution was:

Table 5.1
Distribution of items on each cell of role coordinate and role acts according to the judges

<table>
<thead>
<tr>
<th>Role coordinates</th>
<th>Decision Making</th>
<th>Exercise of Authority</th>
<th>Communication</th>
<th>Evaluation</th>
<th>Rewards and Punishments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>7</td>
<td>.46</td>
</tr>
<tr>
<td>Authority</td>
<td>10</td>
<td>7</td>
<td>11</td>
<td>8</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Equality</td>
<td>14</td>
<td>10</td>
<td>9</td>
<td>13</td>
<td>11</td>
<td>57</td>
</tr>
<tr>
<td>Identity</td>
<td>9</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>36</td>
<td>39</td>
<td>35</td>
<td>192</td>
<td></td>
</tr>
</tbody>
</table>
The rejection of all the items on role act of scanning and control and large part of the items on role coordinate of location raised issues about the difference of interpretation of these categories of theoretical framework between the practising middle manager and the academically oriented ten judges. Group discussion with six judges, and individual discussions with other two, (the two other judges were not available for this round) were held. Their comments suggested that in their evaluation the statements referring to these two categories, one of role coordinate location and one of role act scanning and control do not seem to have independent standing. In their judgement the statements in these categories were mere second level reflections of other cells of the matrix and could be classified there. In view of their comments these two categories were dropped from the theoretical framework for the purpose of the present research.

The categories of role act, as stated earlier in the Theoretical framework are empirically generated from observational research of Mintzberg (1973) and others including the earlier work of the author in the field of organization development. As such, though this is direct evidence for the category of role act scanning and control, the experiential
statements classified in this category do not appear to have independent status.

A re-look at the interview data suggested that even managers perceive the scanning and control role acts as integral parts of decision making and exercise of authority aspect of their organization behaviour. Thus there was some support for the assessment made by the judges. As such the items referring to the role act category of scanning and control were dropped.

Similarly, though there was clinical and observational validity available for the role coordinate location and its associated meaning orientation the judges found the thirty six statements classified in the category of role coordinate location secondary reflections of responsibility and identity orientations. A review indicated that the role coordinate 'location' does operate at a different level than the other four role coordinates. In fact the theoretical framework assumes that the culture of transition fragments the life spaces into two kinds of role spaces. The socio-psychological and socio-temporal. It further assumes that the individuals derive meaning from one or the other role space. It is in this context that the other role coordinates converge to form the rubric of identity as social and work identity.
As a result of the judges evaluation 192 statements were left. They were classified as follows:

**Pilot Study**

**Step 3**: The 192 statements identified by the judges were given in a questionnaire form to forty (40) managers representing following kinds of organizations:

1. Large, multi-regional family owned organizations
2. Nationalized Banks
3. Large scale public sector organizations
4. Large, private sector multi-national organizations.

**Step 4**: The data of these 40 managers was subjected to statistical analysis of two kinds:

1. Test for internal consistency Reliability
2. Pearsons Product Moment Correlation

The internal consistency reliability was carried out to identify congruent items for each cell of the matrix.
The total pool of these items numbered 145 items. Their distribution is as follows:

Table 5.2
Post Pilot Study: Distribution of Items in the cells of role coordinates and role acts

<table>
<thead>
<tr>
<th>Role Coordinates / Role acts</th>
<th>Decision Making</th>
<th>Exercise of Authority</th>
<th>Communication</th>
<th>Evaluation</th>
<th>Rewards and Punishments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>7</td>
<td>6*</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Authority</td>
<td>6*</td>
<td>6*</td>
<td>9</td>
<td>8</td>
<td>6*</td>
<td>35</td>
</tr>
<tr>
<td>Equality</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>39</td>
</tr>
<tr>
<td>Identity</td>
<td>6*</td>
<td>8</td>
<td>8</td>
<td>6*</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>27</td>
<td>33</td>
<td>29</td>
<td>28</td>
<td>145</td>
</tr>
</tbody>
</table>

As there were six cells out of twenty with 6 items, it was considered that for convenient statistical operations a decision was made that all cells be reduced to 6 items each. This decision was implemented on the nature of correlations between items of each cell. It was felt that the sacrifice of items which showed correlation of 0.7 or
more would not lose information and will add to the parsimony criteria. Items which showed a reliability above 0.65 were retained. The test for internal consistency reliability led to the rejection of seventy two statements from the pool of 192 statements. Thus a total of 120 statements were kept.

In order to test the independence of each role coordinate, Parson Product moment coefficient of correlation was calculated. The following table presents the correlation coefficient worked out.

Table 5.3
Role Coordinates : Coefficient of Correlation

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Authority</th>
<th>Equality</th>
<th>Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>- 0.3980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority</td>
<td>0.3192</td>
<td>0.3127</td>
<td></td>
</tr>
<tr>
<td>Equality</td>
<td>0.2233</td>
<td>0.2019</td>
<td>0.2657</td>
</tr>
</tbody>
</table>

**The formula for internal consistency reliability is*
\[
Y = \frac{\sum \epsilon x y}{\sqrt{(\sum x^2)(\sum y^2)}
\]

The above formula is the modified form of Kuder Richardson formula. The modification is in order to handle multi-point scaled items as against the dichotomously.
As is obvious the only correlations that indicates some degree of overlap is between responsibility and equality and authority and equality. Similarly, the correlation between responsibility and authority is inverse. In pure statistical terms the overlap is significant but the strengths of the correlation is so low as to suggest that the role coordinates are fairly independent.

In view of the fact that the coordinates had clinical validity in their very formulation, had face validity in the assessment of the ten-judges and fairly clear validity in the experiences of 200 managers it was decided to carry out no further test of independence than the strength of correlations between the role coordinates.

**Step 5: Review and finalising of the study questionnaire**

On review of the data another twenty four (24) statements which did not fall in any clear category of role acts, but indicated intra item consistency were identified. These 24 statements were found congruent with the role orientation associated with the role coordinates. These 24 statements were incorporated into the questionnaire as theme statements which reflect consistency on the four role orientations. Thus the final questionnaire was augmented to 144 items.

* The questionnaire is given in Appendix I.
The 144 items were to be responded on a five-point scale. The score implied the following:

5. I strongly agree with the statement
4. I agree with the statement
3. Neither agree nor disagree
1. Strongly disagree

All the items were so worded that high agreement indicated a position on the orientation continuum of each role coordinate reflecting the rubric of social identity.

Thus, each of the 144 items could be classified in the following table:

Table 5.4
Final Item distribution on the Matrix of role coordinate and role acts

<table>
<thead>
<tr>
<th>Role coordinates</th>
<th>Decision making</th>
<th>Exercise of Authority</th>
<th>Communication</th>
<th>Evaluation and Reward and Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority</td>
<td>Responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the final form each of the cell of this matrix contains six items.*

* Appendix II, III, & IV following the appendix I reproducing the questionnaire provides the classified items in each cell of each coordinate as well as each role act.
It must be noted here that in the analysis of the data of the present research preliminary findings indicated that the 24 items for consistency continued to have high correlation with total scores of each individual over 120 items. The strength of correlation was found to be between .61 to .92. Similarly the correlation between the 24 items with the 30 items of each role coordinate ranged between .48 to .85. Hence further inclusion of these 24 items in the analysis was not done. The analysis, findings and interpretations was restricted to the 120 items of the final questionnaire. The theme items are:

Themes

Responsibility :  5, 10, 25, 55, 71, 72.
Equality          :  14, 31, 61, 80, 100, 110.
Methodology II: Social Context Variables

The pilot study questionnaire had a section on social context of the manager. The data from the 40 managers on these social contextual variables was tabulated and presented to a panel of five judges. They were requested to evaluate which of the social variables seemed to be directly relevant to the nature of the study. The panel, after three sessions of discussions, identified four sectors of social variables which seemed relevant for the study. This was included in the final questionnaire.

1. Information about Career*

   This category seeks information on age, number of years of work, breakdown in terms of years of work and number of organizations worked in. It also seeks information on the nature of organization and the level of management the individual manager is currently occupying.

2. Information about the Social Context*

   This category seeks information on the individual manager's movement from rural to urban setting. It traces the mobility over three generations that of his grandfather, father and self. Similar information is sought of the individual's style of living, that is whether the individual

* See Appendix I.
lives in a joint family or nuclear family and the nature of its linkages with the kinship system. One more question is asked on the distribution and allocation of time on six categories of the work and life space of the individual.

3. Social Occupational Background*

This category seeks information about the occupation of the grandfather, father and self. Similar information is sought of the wife's grandfather, and father. Social background of the family in terms of occupation is also sought.

4. Social Educational Background*

In this category information is sought about the level of education of the grandfather, father, mother, self and the wife. Information is also sought about the general educational level of the kinship members of both paternal and maternal side. Information is sought about educational institutions at which the individual spent his time during growing up period.

As the sample was exclusively drawn from middle and senior middle management levels, many of the variables in each of the four sectors did not show appreciable difference.

* See Appendix I
For example, among the social variable 'Information about Career', age, number of years of work, number of organizations worked, and the level of management currently occupied had very little variance.

Age varied maximum to 3 years, i.e. between 35 and 38.

Number of years worked varied from 13 years to 16 years.

Number of organizations worked in except in case of public sector people was stable between 3 and 4.

Longest number of years worked in one organization varied from 7 to 10.

On review it was felt that measuring the impact of each social variable separately seemed to make little sense specially as the hard core demographic factors of the individuals in the sample were comparatively stable. The social contextual and social occupational variables which included information about three generations, other than the self, made the issue of measuring the impact of each social variable singly almost irrelevant or difficult to assess. The problem, thus, as to how the impact of social variables on the role coordinates can be assessed was referred to literature.

Significant studies on the social variable of the life space of Managers have been done by (Dayal 1975; Sheth and Shah 1975; Jain 1971; Subramaniam 1971; Dhingra and Pathak 1972;
Ghosh and Manerikar 1974; Sharma 1970, 1972, 1974, 1976, Saiyadain and Monappa, 1977; Sharma and Sheth 1971; Shamsuddin 1971; and Rao T V 1976) on various aspects of social background of various levels of blue collar, white collar workers, managers, academicians and others.

Many of these studies have linked the social variables with the nature of motivation, expectations and aspirations, need for monetary gains, and status within and outside the organization. Of late relationship of social variables to organizational climate, culture, task and technology in terms of selection and mobility are increasing in number.

The studies provide a sociological profile of the Indian manager and describe an average manager as being highly educated, often descending from urban middle class families and having very little direct experience of what it means to be a blue collar worker.

These attitudes either remain at the descriptive level of who and what is an Indian Manager, or establish correlations of some of the demographic variables with motivations, expectations, needs, achievements, etc.
In view of the fact that individual social variables, especially the ones which have in the past sociological research shown critical differences between groups of people in this behaviour showed very little variance in the sample, decision was made to scale the variables of each individual and then do a profile analysis. It was argued that social variables are the vectors of the socio-psychological field of the individuals. In their resolution they configure and converge in the individual and become to some extent the determinants of his life style, attitudes and orientations toward life and in general fashion his world view. In this convergence different social variables may acquire differential weightage in terms of influence. However, it is the total pattern of these variables that contribute toward the quality of the individual. As such, though some of the social variables may be more dominant than others in the life space of an individual it is still the total pattern and the configuration that is more relevant in order to understand their influence on the role coordinate orientations. It is in the dynamics of their configurations that the character of role coordinates may finally be determined.

It is this particular gestalt view of the social variables that suggested the method of profile analysis to identify
and cluster individuals with similar social contextual variables. The clusters of similar people can then be compared with each other for assessing the impact of social variables. The above rationale led to the search of methodology. After some trial of various ways of doing a profile analysis, one that was identified as appropriate is:

The hierarchical grouping to optimise an objective function described by Ward (1963)*. The objective functions defined in the technique accomplish the clustering of persons to maximise their similarity with respect to measured characteristics. The objective function is the grand sum of squared deviations about the means of all measured characteristics. Ward (1963) suggests that the hierarchical grouping procedures are based on the promise that the greatest amount of information is available when a set of 'n' members is ungrouped. Hence the grouping process starts with as many groups as the members. The first step in grouping is to select two of these 'n' sub-sets, which when united will reduce by one the number of sub-sets while producing the least impairment of the

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optimal value of objective function. The \( n \)'-1, sub-sets thus obtained are further examined to determine whether a third member should be united with the first pair or another pairing be made to secure optimal value of objective function for \( n \)-2. The process is repeated till it is felt that mutually exclusive groups have been arrived at in such a fashion as to minimise variance within the group and maximise distance between groups.

This method was selected over principal component of method of segmentation as well as segments based on response sets. The segmentation on response sets was rejected because grouping was based on the independent variable social context which was constituted by 19 different elements. The segmentation on principal component was rejected because the nineteen elements could not be ranked in their importance to determine the basic values. As such, it was assumed that all nineteen elements may initially be equally influential before a dynamic configuration of these emerges in the individual's behaviour.

In order to carry out this analysis the following steps were taken:
1. Scaling of the social variables.

The data on each variable was provided to a panel of five judges. They were instructed as follows:

a. The task for this assessment is to transfer data on each social variable to a point scale from 1 to 5.

5 represents the longest or the highest component of the particular social variable and 1 being the least and the lowest component or the particular social variable.

In scaling the variable please use your awareness of general social perception in rating the variable component. For example, education can be scaled in terms of social perception as follows:

- Upto High School: 1
- Intermediate: 2
- B.A. or B.Sc Graduate: 3
- B.E. or other professional degree with five years duration or MA and M.Sc.: 4
- Doctoral: 5

The five judges through joint discussion arrived at certain scaler values.*

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* The details of the scaling of the final sample are given in Appendix V.
Once the social variable component was transposed to a scalar number the normal statistical procedures of mean, standard deviation were carried out in order to transpose these values into standard scores.

The transposition of standard scores made the scores on each variable and across individuals comparable. It also made it possible to plot the profile of each individual. A profile of a cluster was then plotted. An example of a profile of a cluster which emerged is given below.

** The formula for calculating standard scores used is:

\[ Z = \frac{X - \bar{X}}{\sigma_X} \]
The technique grouped individuals according to the similarity of their total contextual variables regardless of their organization membership. In the final sample the analysis formulated 10 clusters of people.

Sample of the study: Selection of Organizations

As one of the important objectives of the present research is to test and establish the validity of the experiential and qualitative findings of the O.D. Programmes through systematic and scientific rigour, it was considered functional for matter of research economy to choose distinct organizations which in terms of beliefs generally held could be rated to have different organization cultures. This was done in order to study the variance that organization cultures may introduce in the role coordinates and their manifestation in role acts. Of course, a separate instrument to identify the overall organization culture and climate could have been used. However, it was felt that such a step is not necessary for two reasons:

1. The instruments available for this purpose e.g., Likert, are well-known in the organizations. Moreover, even if they have been infrequently used they are biased towards theory based on universalized concepts. Their culture specificity for Indian conditions has not been established.
2. Distinct belief patterns about the nature and overall culture of organizations seem to exist and operate in Indian conditions. According to these beliefs family owned and family managed organizations, in spite of use of highly trained professionals tend to display cultures of obedience, conformity and authoritarianism. Similarly, organizations in public sector by the very nature of bureaucratic set-up and direct and indirect intervention by the government machinery at the top seem to generate a culture of response to accountability, less risk-taking, over staffing etc., besides investing energy to deal with political encroachments in decision-making. Organizations which have foreign equity and whose parent companies continue to influence personnel policies, organization methods and practices, seem to be associated in the minds of most as having distinct culture where some degree of participative management with greater autonomy and task orientation seem to flourish.

These beliefs are strong enough and almost create a set for expectation, evaluation and even behaviour.* As such,

* These beliefs were commonly stated by (200) managers participants in programme whose data provided the primary universe of items. These 200 managers came from all the significant kinds of organizations operative in India.
it was felt that a choice of organizations one from each of those categories will be sufficient for a first level research of this kind. Of course, more than one organization in these categories could have been chosen. This would have established the representativeness of selected organizations in each category. However, it must be noted that in view of the total number of organizations in the organised sector of industry (71705) the sample size in order to include a representative class of organizations in each category of organization would have been far beyond the resources, both monetary and time of the author.**

Furthermore, it was felt that the sample size of one from each category of the organizations can provide enough support to the restricted objectives of the present study. These objectives as stated earlier are:

1. Translating the theoretical framework based on qualitative data into a diagnostic questionnaire instrument.
2. Test the instrument so developed in terms of its ability to differentiate between the manifest inputs of the organization culture and social variables.

** Total Number of Factories - 71705, Statement No.20, p.37, Annual Survey of Industries, 1975-76
After due consideration the following three kinds of organizations were selected for the study:

1. An organization with modern technology with foreign equity, but Indianized and having professional management tradition. (This will be referred as Organization 1 = 01).

2. A family owned and family managed organization representing traditional technology such as textile. (This will be referred as Organization 2 = 02).

3. A public sector organization with professional management. (This will be referred as Organization 3 = 03).

Sample of the Study: Selection of Managerial Population

The study has been restricted to the middle and senior middle managers only. The junior and senior most managers in the hierarchy of the organization have not been included. The reasons for restricting the study to a sample of middle and senior middle managers are:

1. Junior managers are new entrants. Many of them are mobile and generally have not spent many years to internalize the organization culture through the processes of secondary socialization. As the present research is concerned with the testing of the impact of the organization culture as well, it was felt that the inclusion of junior managers may leave the picture vague.
2. Senior most managers were excluded because their number in each organization did not exceed above six. This number was too small for any conclusions to be drawn.

3. The managers representing the middle management were considered the ideal group for the present study. It was felt that they will represent in their organization behaviour the impact of the organization culture as well as the impact of their own social variables.

The middle and senior middle managers having spent larger number of years in the same organization are more squarely grounded in the organization culture as well as operational realities. They neither have the 'hope-oriented', and part idealistic orientations of the junior managers, nor the 'policy-oriented' and 'should' oriented idea of the senior most managers.

The population of middle and senior middle managers were as follows:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization 1</td>
<td>45</td>
</tr>
<tr>
<td>Organization 2</td>
<td>39</td>
</tr>
<tr>
<td>Organization 3</td>
<td>47*</td>
</tr>
</tbody>
</table>

* Public sector organization is a very big organization.

As a research strategy the total number of middle and senior middle managers of the western region were included in the
sample. The ethnic and educational mix among the included was wide enough to represent the mix in the other two organizations. Moreover, both organization 1 and 2 are also from the western region. Their entire production system and major organization set up are localised in the Western region, more so in the case of organization 2.

Methodology III: Data Collection

Once the organizations were selected the questionnaire was individually handed over to all the middle and senior middle managers from each organization. The purpose of the questionnaire and the study was explained either individually or in small groups. They were asked to read each statement carefully. They were requested to answer all questions. They were also requested not to consult each other as to the responses they have made on the questionnaire.

The following table provides the information about the response by the middle and senior middle managers to the request to participate in the research.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Number of middle and senior middle managers available in the organization</th>
<th>Number of managers who accepted the questionnaire</th>
<th>Number of managers who returned the questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization 1</td>
<td>45</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Organization 2</td>
<td>39</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td>Organization 3</td>
<td>47</td>
<td>42</td>
<td>38</td>
</tr>
</tbody>
</table>
On examination of the returned questionnaire it was found that three questionnaires in organization (0₁), and one questionnaire in organization (0₂) and four questionnaires in organization (0₃) have left 12 to 15 items unanswered.

Table 5.6
Organization wise distribution of returned questionnaires

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
<th>03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned Questionnaire</td>
<td>36</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>Incompletion items</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Incomplete on Social variables</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

A further scrutiny indicated that the same people have also not given information on generational aspects of education and mobility. In addition there were 4 other individuals in organization 3 who have not responded to items on social contextual variables. In the final review it was considered that the non-response on the social contextual variables would imply loss of critical information. Thus, the questionnaires of these managers were excluded. It left the following distribution:

Table 5.7
Organization wise distribution of usable questionnaires

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
<th>03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable question</td>
<td>32</td>
<td>31</td>
<td>30</td>
</tr>
</tbody>
</table>
In view of the fact that the number of returned and usable questionnaire from one organization was thirty, the sample size was randomly reduced to thirty (30) in each organization.

Methodology : IV

IV. Analysis of sample data

The data from the sample was subjected to two-fold analysis:

1. To assess and partial out the impact of specific organization cultures on role coordinates and role acts.

2. To assess and partial out the impact of social variables on role coordinates and role acts.

1. Impact of Organization Culture

In the first level of analysis concerning organization culture and its impact had two steps:

1. Intra-organization analysis of the scores on rows i.e., role coordinates and columns i.e., the role acts in order to understand the differential characteristics of each organization.

2. Inter-organization analysis of scores of rows i.e., role coordinates and columns i.e., role acts of each cell.
The choice of methods of analysis was between using a) multiple regression across the three organizations and across the hierarchical groups obtained, b) analysis of variance 'F' test, and analysis of differences of means of each cell by one tailed 't' test.

Obviously, a multiple regression model which would identify dominant structures in each organization and each cluster and whose differences could be tested by the test of significance is the most desirable method. It was however not considered optimal in view of the limited objectives of the research. As such, the second alternative, i.e., analysis of variance and 't' test, was carried out.

2. Impact of Social Variables

As indicated earlier, the total population of 90 in the sample was segmented into hierarchical groupings. The method produced many groupings. A scrutiny of them suggested that 10 clusters with the value of objective function at 2.116435 was chosen. The next two groupings i.e., 9 and 8 evolved by the method were rejected for two reasons:

1. The value of objective function enlarged to 0.25322075 and again .30151453. The increase in the value of the objective function between 10 and 9, and 10 and 8 implied greater loss of information.
2. In reducing the 10 clusters to 9 and 8, the method only combined the individuals in cluster number 2 and 5 and individuals in 7 and 8 together. This clubbing reduced the number of clusters but increased the loss of information. Hence a decision was made to retain 10 clusters as the optimal value. Here also an analysis of variance and 't' test on rows i.e., role coordinates, was carried out.

Another level of analysis which could have been done was analysis of variance of the order SX4 i.e., the matrix and 3 x 10 i.e., the organizations and clusters in order to understand how social variables in the context of organization cultures find adjustment and modifications. However, the size of the sample being small, the level of analysis of variance appeared too unrealistic. Hence it was not carried out.

To further assess the impact of social variables, the data as indicated in Methodology III, was scaled. After their conversion to standard scores, profile distance analysis using the minimum variance technique of Wishart and Ward was carried out. In the final analysis 90 individuals from the three organizations were distributed into 10 clusters. The process was stopped at 10 clusters as further collapsing
only led to combining membership of two or more clusters as one cluster. The next chapter presents the analysis, findings and interpretations.