Empirical research in the behavioural sciences proceeds in a variety of settings and contexts. As Festinger and Katz (1976) have suggested, these may be seen on a continuum ranging from the broad to the narrow. For the sake of convenience, we may divide this range arbitrarily into four sections: Survey, Field Study, Experiments in real life, and Experiments in laboratory. The boundaries between any two adjacent sections are never perfectly clear and sharp, but the division seems to have some validity in that different considerations and different techniques become important as we move from one to the other.

The broadest setting is, of course, one in which a large and perhaps spread-out population is designated for investigation. Here survey methods are usually employed. Intensive study of field situations usually requires a narrower setting, such as certain community or organisation or industrial plant. When experiments are to be done in real-life settings, it is usually necessary to narrow the focus even more. Laboratory experiments are usually done with small numbers of people in very narrow settings.

This piece of research utilised the survey method as well as the field study method during different phases of the project. The survey method was employed for the diagnostic and evaluation phases. Two questionnaires, personal interviews and group
interviews were conducted to collect the data. The field study approach was adopted essentially for the phase of intervention, where interventions and periodic assessment of their impact was carried out hand in hand on an ongoing basis.

Another way of looking at this research is from an action research perspective. As Lynton and Pareek (1978) have observed, "By research, we mean in the first place, a wish for improvement followed by action. But this action, second, is not off the cuff or based only on a hunch or an intuition. Research is systematic action to enhance knowledge and understanding. Its essence is not that it be abstract and erudite but that it be systematic and planned." According to Pareek and Khanna (1961), "Action research is an attempt to help the practitioners develop scientific ways of thinking and acting and to seek actions that will result in the improvement of practices." They outlined the following steps in the process of action research:

1. Dissatisfaction with the present state of affairs.
2. Identification of a problem area.
3. Identification of specific difficulty to be eliminated.
4. Formulation and imaginative testing of a hypothesis.
5. Choice of a hypothesis.
6. Design of action for testing the hypothesis.
7. Evaluation of effects.
8. Generalisation.

Furthermore, as Argyris (1973) had suggested, researchers agree
that an important quality of a theory should be its ability to predict accurately under different conditions. In the case of organisations, the theory should be able to predict how and explain why the system will behave differently under different conditions. One way to obtain this knowledge is to make comparative studies of different organisations under different conditions. Another way is to study change as the system undergoes it.

There is a third approach, however, which, if used effectively, can be more powerful. The researcher becomes an interventionist and actively helps to plan and execute the changes so that they test aspects of his theory. Such a change is more powerful for several reasons, namely:

1. An accurate diagnosis of the system is required that can explain the reason it exists the way it does.
2. Specific predictions are required that attempt to explain the system's present state of ineffectiveness and the factors that may increase the system's ineffectiveness in the future.
3. The changes that are necessary, the sequence with which they may be brought about, and the probable resisting forces need to be made explicit.
4. Theories of change and intervention are required which can be used to help bring about the desired changes.
5. Finally, a theory of evaluation is required in order to measure the effectiveness of the change.
The comparative approach was adopted for the first part of this study covering a plurality of organisations; while the approach of the researcher becoming an interventionist was used for the second half of the study wherein effectiveness of behavioural process interventions in an organisation was examined.

Before we go on to describe the methods and instruments employed, it may be useful to draw attention to the distinction between the behavioural significance of an event to the individual or group and the statistical significance of that event. An event is statistically significant when there is a high probability that it does not happen by chance. Behavioural significance has been less adequately and precisely defined. It is a category that denotes that the significance of an event is independent of probability. The events are significant in that (1) they make a difference in the behaviour and values of the individuals and (2) they may depart significantly from a previously defined steady state of a system (be it an individual, a group, or an organisation). Events that make a significant difference in the behaviour of individuals and systems we will call behaviourally-significant events.

According to Argyris (1973), for an event to be judged behaviourally significant, three criteria must be fulfilled. First, it must be shown that the event was rarely, if ever present in the steady state of the system before it occurred. But this is not enough. The empirical absence of an event could mean
that the event was not relevant to the steady state of the system. The second criterion, therefore, follows: the rarity of the event is a necessary condition for the steady state of the system, that is, the steady state of the system exists partially because the event rarely, if ever, occurs. This implies a third criterion. The existence of the event, even though rare, tends to upset the steady state and produce a new one.

This research has spanned over three phases—the diagnosis phase, the intervention phase and the evaluation phase. The methodology used during the intervention phase comprised of a series of interventions carried out on the basis of the diagnosis over a period of one-and-a-half years in the organisation. This is detailed in chapter 6. In this chapter, we describe the methodology adopted during the diagnosis and evaluation phases, which comprised of the following:

**PERSONAL INTERVIEWS**

Each organisation studied was stratified into different levels based on the designations and salary structure with Level 1 representing the Top Management and the lowest Level representing the workers.

A 25% stratified random sample was taken from upto the lowest Level of the Officers to gather qualitative data from the people regarding how they perceived the organisation. Open-ended exploratory questions were employed to understand how people
perceived the organisation—their visions, hopes, frustrations, problems and opportunities. Dimensions of organisation environment and motivational climate (described later) were also explored through the interviews.

These interviews helped in understanding the organisation from the experiential perspective of the people in the organisation.

GROUP INTERVIEWS

In addition to exploring some of the areas covered in the personal interviews, separate groups of 10-20 persons per group from each organisational Level were invited to share their perceptions about themselves and about how they saw the other Levels in the organisation. From each Level, everyone was invited to participate in these group interviews. The instructions for conducting this projective technique of group interviews are given at Annexure 1. This method was developed by Somnath Chattopadhyay. After collecting the adjectives from all the Levels, three independent raters were asked to classify these into positive(+), negative(-) or doubtful(?) categories. Wherever all three raters agreed that the adjective connoted a positive attitude, it was classified as positive. Similarly, the negative adjectives were classified. Wherever the three raters did not concur as to whether an adjective was positive or negative, or it was so descriptive that it did not reveal any attitude, or they were in doubt, that particular adjective was placed in the
doubtful category.

Taking the total number of adjectives into account, the positive and the negative adjectives were converted into percentages. A matrix representing the perceptions held by different Levels about the various Levels in the organisation gave the picture of mutual perceptions prevailing in the organisation. The total of the positive and the negative percentages in some of the cells in the matrix might not add up to 100—the difference indicating the percentage of adjectives classified as doubtful.

QUESTIONNAIRE

A survey questionnaire to measure different dimensions of the organisation environment and another for the motivational climate were used to collect quantitative data about the organisation. The questionnaires are annexed at Annexure 2. A description of the dimensions measured follows.

Chattopadhyay had developed an instrument for measuring organisation environment. He has revised the instrument five times. The present version of his instrument, Organisation Environment questionnaire comprising of 60 questions, was used to collect data on the perceptions of the quality of the organisation environment and work life as well as organisational functioning. The instrument has been used in different Indian organisations both for research and diagnosis purposes. (Pareek, Rao and Pestonjee, 1981).
DEFINITIONS OF ORGANISATION ENVIRONMENT DIMENSIONS

The organisation environment was studied on the basis of 12 dimensions. These were conceived as:

Personal - An environment characterised by an emphasis on development personal development enables people in the organisation to become what they like to be through a process of facilitating:

(i) acquisition of more knowledge, skills and expertise,
(ii) introspective awareness of internal dynamics,
(iii) transformation towards greater maturity, and
(iv) living towards one's cherished attitudes, beliefs and values.

A related aspect of such an environment is the belief that work is the medium of expression of the creative self and the work milieu (people, policies, conditions of work, etc) is inviting, urging and encouraging, and draws a person away from listlessness and stagnation. It is also based on the belief that development of individuals enables them to make a positive impact on the organisation environment and derive a sense that they matter.

Standard of- This aspect of the environment refers to exceptional performance levels of achievement and not the execution of work
yielding average quality. It includes a concern for excellence and for improving upon the processes of working. It involves the urge for going beyond past performance and showing high quality consciousness both in the process and the outcome.

Innovation - Refers to the characteristic of the organisational environment that reflects the concern for acceptance of new ideas, irrespective of their source (experts, customers, workers, managers, etc) and their adoption in practice. It includes the provision of opportunities for creative work, tolerance for deviation from set practices and precedents; and support for unusual ways of working and experimentation. An important element of such an environment is the proactive adoption of change, ushering in improvements at the micro and macro levels in the organisation.

Communication - This dimension of the environment deals with the conveying of information and meaning among individuals working in the organisation. It covers the message, the channel through which the message is relayed, and the level of noise in the channel. Related aspects are the correctness, distortions, adequacy, directionality and informality of information flow.
Trust - An environment characterised by a mental state among persons in associating with each other, where the association is based on an implicit faith coupled with predictive behaviour that no harm without justice would be done to a person. Another component of the concept is the confidence with which people think that they work in a free and open relationship with reliance on each other.

Team work - Refers to the aspect of the environment dealing with interpersonal relationships at the work-setting characterised by "espirit de corps"; concern for each other; being helpful in work relationships; encouraging each other at work; and not allowing personal jealousies to hinder work performance.

Supervision - Refers to the aspect of the environment dealing with job-related interpersonal processes between individuals at different hierarchical levels. It includes the processes of leadership, guidance and directing, as well as the dynamics of superior-subordinate relationships in the execution of tasks. The polarities that shape the process of supervision are: open versus close; enabling versus debilitating; providing freedom versus control; autonomy versus dependency; and sustaining versus thwarting initiatives. It also includes aspects like
Decision making

- This aspect of the environment focuses on the process of deciding the objectives and targets and strategies to achieve them. It does not deal with whether decisions are being taken or not, nor with the techniques adopted. The importance lies in the manner of involvement of individuals at appropriate levels in the making of decisions. It includes the perception of individuals about their participation in those decisions where they think they can contribute; the use of personal influence and position power in decision making; opportunities to express one's ideas about one's job; and the sense of responsibility and commitment to the decisions taken or arrived at.

Managing problems

- The aspect of the environment related to the efforts devoted to reduce the unacceptable gap between the desired and the existing level on any aspect of organisational life. These gaps may centre around the person, the task, the technology, the support systems, the entire organisation, or the interface between the organisation and its external
environment. Some of the manifest areas are: handling of grievances; distribution of justice; and the mode of settling interpersonal and interdepartmental conflicts with special reference to mutuality of effort and understanding.

Recognition- The aspect of the environment dealing with the discovery, acknowledgement, utilisation of the manifest capabilities and latent potentialities of persons working in the organisation, as revealed by some behaviour, act or performance by the persons. Recognition has three components.

(i) acknowledgement by the recogniser and its manifest expression
(ii) awareness in the recognised person that the recogniser has acknowledged, and
(iii) the feelings that accompany the process.

Recognition refers to the way a person's capabilities and potentialities are utilised and the manner in which performance is rewarded, particularly when a job is done in a better or innovative way. Indicators of recognition are the feelings related to rewards such as salary increments and promotions, and not to the fact of obtaining those rewards.
Structure - The aspect of the environment related to the organisational patterning of activities like line of authority and command and reporting relationships, which remain relatively constant despite changes in the incumbent. Structure also refers to the logical arrangement and sequencing of tasks and activities, as well as roles.

Overall identity - This aspect of the environment refers to the overall image of the organisation in the employees' minds. It also includes the sense of identification with, commitment to and belongingness to the organisation. It includes the employees' perception of the organisation's interest in them as persons—for their welfare and in their job.

Data were collected on these 12 dimensions.

Another instrument that has been used in different organisations is MAO (C)—Motivational Analysis of Organisation (Climate) by Pareek (1977). The questionnaire has 120 items. With MAO (C) one can collect data about the dominant motivational pattern in an organisation in terms of six motivations along with ten climate dimensions that are likely to foster the motivational pattern. In addition, one can also measure the degree of approach-avoidance strategies prevalent in the organisation. The six motivations and the approach-avoidance strategies are described below.
DEFINITION OF MOTIVATIONAL ANALYSIS OF ORGANISATION (CLIMATE)

MAO (C) measures the perception of employees on the aforementioned six motivations. The guiding cocepts of these six motivations with which they were used were:

Achievement - Refers to the concern for excellence and competition with others. Some of the features are: excellence is rewarded; information is available for decision making; people who achieve targets are trusted; people prefer to solve problems by themselves and learn from experience, as well as take moderate risks.

Affiliation - Such a climate is characterised by people striving for friendly, warm and affectionate relationships with tasks and methods for their accomplishment based on such relationships. An overriding concern is a good social relationship and the need to be emotionally close to each other.

Control - A climate in which people enjoy status, power and authority for its own sake; managers like to dominate over the behaviour of the subordinates; the choices are determined by the seniors; and loyalty and obedience are highly valued; communication is selective and is usually used as a mechanism in which people are used as instruments only. Contributions to decisions are dominated by a
powerful few.

Dependency - Characterises a climate in which people do not do things on their own, but look up to their seniors for orders or suggestions. Such a climate is characterised by strict adherence to orders, regulations, a clear line of communication, an excessive leaning on authority. Reference to people perceived as superior or to traditions and precedents is often made excessively. Left to one's own self, people find themselves inadequate, resourceless, losing sense of direction, and immobile.

Expert influence - Denotes a climate in which people with skills and expertise are held in high regard and their resource of expertise is used in decision making and the resolution of conflicts and problems. This state prevails when the value 'knowledge is power' or 'the pen is mightier than the sword' is operationalised in the organisational transactions and behaviour.

Extension - Refers to a high concern for developing people and groups and work for the larger good. People are treated as human beings rather than roles with a genuine concern for their welfare. People try to help each other in their growth and development, and they handle problems and resolve conflicts.
supportively.

In addition to these six motivations, approach - avoidance characteristics of the organisation was studied in the following sense:

Approach - Characterised by a proactive stance toward work life. People are guided by their own sense of inner control, and are more optimistic. They take calculated risks, rely more on their own abilities and take responsibility for their actions. They have a greater sense of personal causation.

Avoidance - Characterised by the need for self-preservation by avoiding responding to environmental stimuli. People perceive threats in the environment and their safety lies in escape rather than confrontation. They are guided mainly by the fear of failure. Their inner control is low and the locus of control is perceived as being external to them. Things happen to them, with them; they do not make things happen. Luck, fate and external situations are often responsible for the outcomes of an event.

Both the instruments [OEQ and MAO(C)] have been used widely as reliable, valid and published instruments.

The samples of people covered during different phases of the study have been highlighted in the subsequent chapters.
The study was conducted in two major phases:

(A) Diagnostic study of a plurality of organisations, and an
(B) In-depth study of a single organisation.

Since the methodology differs in these phases, further aspects of the methodology are reported in the appropriate sections later.