THE APPROACH TO THE STUDY

In advocating the approach to be adopted for the study in Chapter V, the researcher was following the simple but effective epistemological model provided by Caws (1959) in a classic essay on the dialectics of theory and methodology. Paraphrasing Caws and extending his basic premise a little, we may summarize:

(a) It is the fundamental need of the human species, determined by its highly evolved cerebration, to seek a cognitive mastery of its environment.

(b) The cognitive mastery requires descriptions of states of nature to greater and greater degrees of accuracy.

(c) Accurate descriptions of states of nature may be accomplished by either of two commonly employed means, represented by two highly developed systems of symbols -

- the language system of the society, leading to definitions of states of nature,
- the number system employed, leading to measurement of states of nature.
(d) Both of the tasks above work towards the same objective of satisfactory description or, in scientific terms, theory building and both require the same cognitive processes of inductive and deductive reasoning, discrimination and generalization.

(e) However, in many areas of study, the task of theory building is greatly aided if the two means are brought into a mutually reinforcing cyclical relationship, i.e., definition aiding measurement and, in turn, being reinforced by it.

In organizational studies, as in many other areas of study in the behavioural sciences, a sustained programme of research (in contrast to single ad hoc investigations) does set in motion the theory-methodology couple. A specific investigation within such a programme may therefore begin with a set of definitions (assumptions, hypotheses) and seek better and alternative means to measure the phenomenon or, conversely, it may begin with a set of measures (instruments, indices) and explore generalizations and specificities in the observation. The former variety of research typically makes contributions to methodology in the field, and the latter to the set of assumptions to be held or, in Caws' terms, to definition.

An important observation to make at this stage is that the 'theory spiral' above is evolutionary in character - many unwarranted assumptions and invalid measures fall by the wayside, and the definition-measurement combi-
nation carried forward reaches higher and higher levels of abstraction.

The obvious significance of the observation is, of course, in the choice of a theory-methodology frame for a research study or, more specifically, in the computability of the measure chosen with the assumptions or hypotheses under study. The relevance of a measure (or its 'psychometric properties') is often determined by the theoretical mould in which it is cast and may have limited sensitivity with changed definitions. Likewise, a hypothesis might well be "method-bound" and not necessarily deficient in being so. Thus an inadequate appreciation of the longitudinal history of either the definition or the measure and the circumstances of their development may easily lead to wasteful trial-and-error explorations of fitting variations in hypothesis to variety in instruments and vice versa.

In the study reported here, the researcher has taken the approach of first identifying a set of measures that seem to have some evidence of relevance and some record of consistency in usage, and then explored refinements in definition. We may now turn to a discussion of this task.

ON ASSUMPTIONS AND METHODS IN CLIMATE STUDIES

The end interest in all studies of organizations is in improving the quality of organizational functioning and organizational effectiveness, whatever the definitions used for effectiveness and whatever the measures employed.
Therefore, most studies attempt to establish causal relationships between a set of variables that may be termed environmental and another set of variables that may be termed behavioural outcomes. Environmental variables constitute a range of specific conditions, and researchers have variously identified specific scalable features constituting the work environment. (e.g., Schneider and Bartlett, 1968; Friedlander and Marguiles, 1969; Taguiri, 1968; Kahn, et al., 1964; Litwin and Stringer, 1968; Schneider, 1972). The model below summarises the assumptions:

One continuing difficulty in the study of environmental variables has been in the identification of meaningful system-entities and boundaries. For instance, for an individual in a large work organization, the relevant environment (the source of influence for the behavioural outcomes) might be anywhere in his section of work, his department, his plant, his corporate organization and, indeed, even the economic environment in which his organization functions. The environment is thus a series of fields within fields, in the tradition of socio-technical, field, and system theories.
It might be argued, quite correctly, that some features of the environment at the level of the section may be negated by features at the level of the organization and vice versa. The question that arises (and never answered satisfactorily) is therefore one of the appropriate choice of system-level and variables to define an environment.

Since the configuration of variables that will constitute the influencing environment across several system levels might be infinite in variety, another line of argument appears. Here it is said that the only "relevant" environment is the environment as the individual perceives it.

In this approach the "measure" of the "independent variables" is itself a perceptual one through suitable self-reporting instruments, rather than through independent/objective measures. The underlying assumptions in this line of investigation would be summarized in the model below.

On the surface it would appear that the model above neatly overcomes the problem of definition and measurement of appropriate environmental features functioning as independent variables. However, a closer view reveals certain other difficulties:
(1) An acceptance of the tautological bind between environmental variables and behavioural outcomes for purposes of definition.

(2) An acceptance of a possibly fallacious causal relationship between the independent and dependent variables; for the appearance of perception as an intermediate process makes it equally possible for behavioural outcomes to "cause" perceptions of organizational variables.

(3) The inability of research findings based on the model to provide prescriptive guidelines for controlling and varying the behavioural outcomes; for in the end the action implication amounts to manipulating the perception of individuals and groups concerned.

In psychometric terms, the tautological difficulty above may be viewed as a problem of instrument validity. Some researchers (e.g., Hackman and Oldham whose Job Characteristics instrument has been retained in the study) have satisfied themselves with correlations between self-reporting instruments and independent observations to assert that the perceived organizational variables are acceptable as the real organization variables. Such research may be said to be encouraging and on the right lines. However, it does not overcome the other difficulties identified above.

It must become evident from the observations above that the two-fold differentiation in approach results also in a corresponding differentiation in methodology for attempting change in organizations. The
first approach, typically, relies on structural change to bring about parallel behavioural changes. The second approach, because of its high reliance on the phenomenological basis of the organizational system, requires cognitive and experiential methods to bring about change via changes in the psychological states. (Indeed, a direct attempt at changes in end behaviours through routine training and communication programmes might be said to represent the oldest and the most common/conventional approach. The approach reveals an underlying assumption of the relevance of intervention directly at end behaviours, independent of organizational variables.)

Further, the first approach makes assumptions of a "global personality", the environmental influences being more powerful in determining behaviour than individual differences - in terms of variance accountability. The second approach suggests the significance of individual differences and psychological variables in determining the perceptual states, and leads to a search for those determinants in studies of personality, attitude, learning, values, etc., concealing an assumption of "universal environments".

The dichotomy of approaches above is classic and, perhaps, as old as the study of behaviour itself. Of the several reviews of the literature on these lines, the one by Lichtman and Hunt (1971) is particularly incisive.
A third approach attempts to estimate the interaction effects of organizational and individual/personality variables in predicting behavioural outcomes, through appropriate innovations in instruments, experimental and quasi-experimental designs, and statistical methodology. A simplified and general model to illustrate the approach would be as follows:

```
  Personality variables
      ↓
  Psychological and Perceptual States
      ↓
  Behavioural outcomes
```

Some instruments and methods of study in the two earlier approaches lend themselves to adaptations to the third approach more readily than some others.

THE INTERACTION MODEL REVIEWED

The interaction model may be said to be appropriate in conception, but less than satisfactory in yield. The researcher's continued search in the literature since the Lichtman and Hunt review has identified a
surprisingly small number of studies that might be regarded as truly interactionist in both conception and methodology, i.e., in explicit statements regarding the variables chosen for the study and in the choice of appropriate multivariate analytical procedures to determine the relative contributions of organizational and personal variables towards stated outcomes.

Retaining the essential ingredients of both field theory and phenomenological perspectives in the simple interaction model presented above, the researcher would like to attempt an extended model based on a review of findings and research so far.

To start with, it is proposed that we chart three, and not two, primary sources of influence to account for a set of behaviours that might be regarded as typical, predictable, and recurring over time. The areas provided to the three sources of influence in Figure 7 are not to scale and do not represent proportions of influence. It may be argued that most organizational settings constituting the "immediate environment" are really sub-sets of the macro environment. Figure 7 merely illustrates the pertinence of identifying three separate sets of determinants.

The distinction may be important on at least two counts. First, the traditional compartmentalization of sub-disciplines within psychology and the behavioural sciences tended to offer explanations for 'personality' from either the individual-differences perspective or the culturo-personality perspective. It might have been expected that the emergence of
FIGURE 7: EXPLAINING PERSONALITY AND TYPICALITIES OF BEHAVIOUR

DETERMINANTS IN IMMEDIATE/ORGANIZATIONAL ENVIRONMENT
("BEHAVIOURAL FIELDS")

TYPICALITY OF BEHAVIOUR

CONSTITUTIONAL DETERMINANTS
("INDIVIDUAL DIFFERENCES")

DETERMINANTS IN SOCIAL/CULTURAL ENVIRONMENT
("CULTURAL GESTALT")

173
organizational behaviour as an integrative discipline would remove this shortcoming; but the explanations for typicalities in behaviour in terms of variables in the immediate (organizational) environment also have underlying assumptions about variables in the other two sets that may be questioned - empirical studies assuming *ceteris paribus* conditions, and theoretical constructs assuming that the organizational variables act over and above the other influences.

Secondly, since perceptual states play a central 'black box' role in the interaction model, the pervasive influence of the cultural gestalt on such perception must be accounted - an observation amply supported in all field studies. As an illustration, let us consider one aspect of the macro environment and see how that might provide the perceptual context for textile organizations:

1. The labour intensive nature of the technology and organizational set-up in a textile mill has been described in the Chapter IV. The organization thus presents a high technician-operative ratio (see Figure 4).

2. In such a set-up the role of the supervisor may be expected to be very important and the quality of departmental leadership crucial.

3. In the pre-independence era, the distinction between operative and supervisor was more technical in nature and referred, strictly, to
the nature of duties handled. Operative staff often became supervisors and a good number advanced to departmental manager positions.

4. In the early 50s, the country invested heavily in enlarging its educational and training infrastructures and a network of polytechnics, industrial training institutes and trade training centres emerged, along with specialized departments in larger engineering institutions.

Very rapidly, the practices in selection, placement, rewards and promotions also changed in the industry. Trained technicians made lateral entries into the organization at supervisory positions and the advancement opportunities for labour were drastically reduced.

5. In the altered conditions, labour or operatives cannot and do not advance beyond the level of jobber; qualified technicians start careers as supervisors, but cannot and generally do not advance beyond the level of departmental head. Technical-supervisory staff and operative staff are, effectively, two widely separated socio-economic classes. Young technicians have to take work from operatives who are much older, far more experienced, and undoubtedly more knowledgeable in the substantive details of departmental operations.

Here, then, is a powerful macro environment context, precipitating hopes,
aspirations, anxieties and frustrations, that cannot but provide response sets and selective perceptual frames in any model of work motivation and performance. An entire programme of research at ATIRA on problems of supervision spread over fifteen years has amply corroborated the observations above (ATIRA, 1969; Padaki, 1973).

Another common situation in the textile industry is the community homogeneity in operative groups with entire departments being manned by operatives from the same ethnic group, often from the same geographical area - Bhaiyyas from U.P., Muslims, Harijans, etc. Here, again, the end outcomes from personality-organization interactions seem to be moderated substantially by perceptions of organizational variables that have the cultural gestalt as their basis.

Notwithstanding the qualifications above, the interaction model still appears useful as a construct. An attempt may now be made to elaborate on the model on the basis of the findings of the present study and a review of research elsewhere, and to seek refinements in its comparative value.

PRESENT FINDINGS: COMMENT

Chapter VII was restricted to a factual description of the results of the various analyses carried out on the data gathered in the study. We may now examine the findings for possible interpretations and their
implications. In spite of the analyses being carefully limited to serve only the stated objectives of the study, the results assumed a considerable volume, and it appeared useful to separate the statement of the results from their interpretations into two successive chapters.

In the following sections of this chapter, the findings may be taken up in the order of their appearance for comment.

Factor Analysis

The main observations in the factor analysis exercises have been:

(a) the orthogonality of the OC and JC scales;

(b) the consistent yield of three factors each from either instrument.

The Instruments

Extending the first observation above to a closer examination of the two instruments suggests very strongly that the "environment" being assessed by the two instruments might actually be two system-levels of organization— the immediate (or micro) environment of the job or section of work as assessed by the JC scales, and the larger (or macro) organizational environment as assessed by the OC scales.

This differentiation in the sensitivity of the two instruments suggests, correspondingly, their differential diagnostic value at two system-levels
of an organization, corroborating the observation made at the start of this chapter that the work environment needs to be viewed not as a single field but as fields within fields of more specific and more general sources of influence for behavioural outcomes.

The Factors

The consistency with which scales and sub-scales from the two instruments have grouped themselves to yield factors warrants an interpretation in itself. We may begin with the factors in the OC instrument.

The three factors derived from the OC scales appear to be concerned with three distinct facets of role as determined by the structural parameters of the organization, and may be seen as corroborating earlier formulations in role theory and concept of role stress (e.g. Kahn et. al., 1964; Pareek, 1976).

OC I is comprised of the scales:

1. Structure (structural clarity)
2. Reward (performance based)
3. Warmth (social relations/work group)
4. Support (facilitative)
5. Identity (positive)
6. Conflict (resolution)

An examination of the constituent items of the scales, their affective
directions and their semantic connotations suggests that the factor is concerned primarily with the structural clarity essential for role effectiveness. The factor may therefore be named: ROLE CIARITY.

OG II is made up of two scales:

1. Responsibility (content, extent)
2. Risk (encouraged, supported)

This factor appears to be concerned with the supportive process essential for responsibility and discretion to be accepted and exercised. The factor, may therefore be named: ROLE DISCRETION.

OG III is derived from a single scale: Performance Standards (positive/high). The items constituting the scale connote job challenge and organizational traditions that promote an achievement orientation. The factor may therefore be named: ROLE CHALLENGE.

The three factors derived from the JC scales, on the other hand, appear to be particularly concerned with the man-job interface, the "meaning" of the job, the psychological identification with the job and, in summary, those consequences of work organization commonly referred to within the framework of alienation. The underlying premise of alienation occurs in the theoretical formulations of several schools of researches and has influenced both theory and methodology in intervention. (e.g. Schacht, 1970; Blauner, 1964; Finifter, 1972; Fromm, 1970; Argyris, 1957a; Maslow, 1965).
JC I is made up of a single scale - Dealing with others which, in essence, concerns the opportunity provided on the job for social relations and the fulfillment of social and communicative needs. This factor may therefore be named: ALIENATION - SOCIAL.

JC II is comprised of the scales:

1. Skill Variety (wider requirement from job)
2. Task Identity (control over whole, closure, identifiable contribution)
3. Autonomy (discretion, decisions on the job)
4. Feedback from Others (task related)

The constituent scales and items reveal that the factor provides an assessment of job content and the extent to which it might provide intrinsic satisfaction from the job. The factor may therefore be named: ALIENATION - CONTENT.

The constituent scales of JC III are:

1. Task Significance (perceived importance)
2. Feedback from Job (knowledge of results, monitoring facility)

This factor is clearly related to the psychological importance of feedback regarding the outcome of one's endeavours and the perceived significance of the effort. The factor may therefore be named: ALIENATION - MEANING.
As obvious as it might appear we may still note that the three alienation factors might be regarded as three types of need deprivation. The psychological ends served by JC I on the job bears a striking resemblance to the fulfilment of social and esteem needs in the Maslowian hierarchical scheme, and JC III and JC II together appear to serve the growth/autonomy needs.

In passing, it needs to be stated that the names attempted for the two sets of factors from the OC and JC scales imply a change in direction in the interpretation of scores of the OC factors from the JC factors. Higher scores in the OC factors would refer to greater extents of role clarity, role discretion and role challenge. On the other hand, higher scores in the JC factors would reflect lesser extents of alienation in its social, content and meaning aspects.

Multiple Regression Analysis

The 3-step linear model of

Job characteristics \(\rightarrow\) Psychological states \(\rightarrow\) Motivational and behavioural outcomes

was extended to the following sequence for analysis in the study:

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Intermediate variables</th>
<th>Dependent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Job and Organizational</td>
<td>Psychological and affective states, including motivation</td>
<td>Behavioural outcomes</td>
</tr>
<tr>
<td>(b) Personality</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

181
The series of multiple regression analysis undertaken yielded findings that suggested strongly that:

(a) Work environment variables at both the organizational and job levels as well as the personality variables of Locus of Control do influence the psychological states assessed by the JIS instrument. In other words, the psychological states can be predicted by assessments of the work environment and personality.

(b) The affective states do not directly result in behavioural outcomes in terms of individual effectiveness on the job. In other words, individual effectiveness cannot be predicted by assessments of psychological states.

Work Environment

It appears significant that both the macro and the micro work environments, as assessed by the OC and JC scales respectively, influenced psychological states. When the findings of the factor analysis and regression analysis are examined together, they suggest that although the immediate job environment may be viewed systematically as a sub-set of the larger organization, the "climate" factors at these two system-levels may produce affective states separately and independently. Further, the findings in the present study do not suggest factors at either system-level to be any greater or lesser influence on affective states, although they may
be so differentially. We may now consider, briefly, two implications of the observation above.

First, with the possibility of the macro and micro work environments operating independently in producing individual affective states, at least four extreme and contrasting combinational climate situations may be conceived:

<table>
<thead>
<tr>
<th>Macro Climate</th>
<th>Favorable</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorable</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Unfavorable</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

It must become immediately evident that the two main directions of enquiries to be provoked by such a proposition would be:

(a) on definition - concerned with the relevant psychological and structural boundaries for micro and macro environments;

(b) on measurement - concerned with the sensitivities of instruments to reflect real differences in affective states and other outcomes from macro and micro levels of the work environment.

Secondly, one may ask the question how the micro climate can operate independently of the macro. One possible explanation is in the larger
socio-technical structure of a textile mill. It may be argued that because the composite textile mill is (a) large in size and (b) has considerable departmental specialization, the departmental socio-technical organization can be expected to have considerable differentiation, coupled with a strong tendency to maintain department autonomy and identity. In such a situation, the micro climate is likely to be largely a function of the departmental leadership. (Indeed, the very occurrence of variation across departments might have been important in establishing the orthogonality of the JC and CC scales.) It may be conjectured, conversely, that in smaller and less differentiated organizations the difference between the macro and micro climates might be further reduced to insignificance.

Personality

The inclusion of the measure of Locus of Control in the multiple regression analysis might be regarded as a beginning in a more purposive and quantitative exploration of the personality-organization interaction.

The findings did not suggest consistent predictability of all psychological and affective states from Locus of Control; but wherever the associations were observed, they were significant in both statistical and conceptual terms. We may revert to the role of personality and the personality-organization interaction in a later section of this chapter.
Affective States

The preparatory step of obtaining intercorrelations among all the variables under study (Plan of Analysis, Chapter VI) revealed that 38 out of the 45 correlations among the 10 variables of psychological states and motivation were significant at the level of \( p < 0.05 \). This suggested that the differentiation among these variables might not be particularly significant and that experiences of satisfaction and motivation might be aspects of common affective states.

In the remaining sections of the chapter, we may use the term affective states to refer to both the psychological states and the motivational variables.

Individual Effectiveness

The absence of a predictable link between affective states and individual effectiveness on the job is probably best interpreted as the failure of the measure employed for assessing individual effectiveness.

Utilizing available assessments of performance had to contend with the problem of reliability - ranging from non-comparability of measures from mill to mill to the absence of formal performance appraisal in some mills. On the other hand, the attempt in this study at employing a standardized set of rating scales for performance appraisal appears to have left the question of measurement validity unanswered. There are, in addition,
several operational difficulties in designing a set of rating scales with academic objectives and employing them in a group of mills with varying organizational conditions.

Given the interpretation above, we might venture a concluding statement in this section that the findings of the study can be regarded as insufficient in establishing a predictive link between affective states and the supervisory ratings elicited; but the findings do not eliminate such a predictive link with individual effectiveness.

**Personality - Climate Perceptions and Affective States**

That the Locus of Control may be associated with both perceptions of the work environment and resultant affective states is indicated with sufficient significance in the series of difference tests carried out between the contrast groups of Externals and Internals. Out of 33 't' tests conducted the differences in 23 of them have appeared statistically significant. The differences are observed on

(a) one OC factor,
(b) six OC scales,
(c) two JC factors,
(d) five JC scales, and
(e) nine scales of psychological states.

The immediate interpretation of these findings is that Locus of Control (as one of an unknown number of personality variables) may provide
response sets determining the perceptions of job and organizational variables on the one hand and the arousal of affective states on the other hand.

Climate and Organizational Effectiveness

The supplementary analysis planned in the study was with the objectives of (a) undertaking such additional analyses as might be suggested by the findings in the principal analyses, and (b) seeking correlates of climate at the inter-mill level of analysis. The first task in the supplementary analysis was to see if the instruments employed in the study revealed any inter-mill differences in score distributions. Without significant inter-mill differences in score distributions the search for correlates would be weakened considerably. However, it must be noted here that the absence of significant inter-mill differences in score distributions might not be interpreted conclusively as the absence of climate differences as it might be a reflection of the poor sensitivity of the scales.

Sensitivity of Instruments

The first important finding in the supplementary analysis was that the OC and JC scales and factors and the scales assessing psychological states did reveal significant inter-mill differences in several distributions. In other words, the instruments appeared sufficiently sensitive
to yield differences in distribution across a small sample of mills, notwithstanding the stereotyped image of the industry predicating a narrow spectrum of low climate scores. With the sensitivity of the instruments established, the pursuit of replications over larger samples and across other industries for extensive comparative studies becomes more feasible.

Organizational effectiveness

The most significant findings in the study pertained to the differentiation of mills on a measure of effectiveness and differentiation on scores of climate and affective states. To recapitulate, the two groups of two mills each designated "high" and "low" on effectiveness on the basis of a productivity index also exhibited significant differences in the score distributions of

- OC I factor
  - Structure Clarity
  - Identity
  - Standards
- OC scales

- JC I factor
- JC III factor
  - Task Significance
  - Autonomy
  - Feedback from work
  - Dealing with others
- JC scales
All of the differences were in the expected direction, i.e., the "high" effective mills having higher means on the given attributes.

The significance of the findings is to be stressed on at least three counts:

1. The differences in scores of climate and psychological states were indeed reflected in a differentiation of mills on a measure of operational efficiency.

The literature in organizational behaviour and effectiveness provides several alternatives in models and schemata to explain end behaviours in work organization, but the underlying assumption in all explanations is a set of causal links across structures, processes and behaviour (Bvan, 1971). Yet, the last link to actual productive behaviour has remained the most difficult to establish on an empirical basis. Even in the Hackman and Oldham model cited earlier, the link established was up to a step referred to as 'motivational outcome', but not behavioural or performance outcome. This gap in the research evidence is understandable and not in any way alarming, given the multitude of measures and indices relevant for commenting on the "effective-
neqqess" of an organization, and the host of circumstances contributing to a given index of effectiveness over and above human effort.

2. The productivity index chosen for differentiating mills into the "high" and "low" categories happened to be appropriate. The index succeeded in keeping variations on account of technical parameters under control, and highlighted the human contribution to productivity. A corollary observation would be that in research of this type the choice of indices for effectiveness is very critical, and the researcher's familiarity with the technology employed and the socio-technical organization is an essential prerequisite. The "failure" in establishing causal links to performance and output might indeed be a failure of the measures of performance chosen. There is no assurance, for instance, that the productivity index employed in this study will be a "successful" index in another industry with another socio-technical organization.

3. The productivity index of one manufacturing department was a pertinent representation of the whole mill.

The "effective" performance of all the other departments in a mill is related to the effectiveness with which the weaving department carries out its tasks. This is reflected both in the king-pin function of "loom programming" in production planning and in the
significance of the effect of weaving productivity in the mill's profitability.

The choice of the weaving productivity index might justifiably have been taken as a "contaminated" measure of organizational effectiveness. Correspondingly, differences in climate and affective states between the "high" and "low" effective mills might have been acceptable for tentative hypotheses at considerably relaxed levels of probability. Yet, in 14 tests of difference, the significance of the difference was established at the conventional level of $P < 0.05$, of which six, including OC I (Role Clarity), were significant at the level of $P < 0.01$.

Finally, we may note that although all the scales and factors in the OC and JC instruments provide measures of attributes at the individual-level of assessment, their association with the individual level of effectiveness remained questionable while the possibilities of association with organization-level effectiveness was opened up. This appears significant in itself because the OC and JC instruments may be regarded primarily as measures of organizational variables, but compelled to arrive at such measures via aggregates of individual assessments.
Dispersion of Climate Scores

The last of the supplementary analyses were an attempt to examine the significance, if any, of the variation in climate perceptions in organizations. Although investigations in this direction are limited (e.g. Payne et al., 1971; Gavin and Howe, 1975; Drexler, 1977; Gavin, 1975), there is a prima facie case for expecting low dispersions to reflect clear, widely shared, perceptions and for high dispersions to reflect scattered and amorphous climate perceptions. Indeed the definition of climate itself appears to imply some degree of consensus and, therefore, a statistical concept of a representative range in perception.

In seeking correlations between dispersions of scores on climate and psychological states and (a) the respective means, and (b) the productivity indices, the unit of observation was the mill. The limitations of attempting such an analysis with 5 mills must be obvious. A rho value of 0.95 had to be obtained for an observed correlation to be deemed significant. Therefore, the five correlations with means and the two with productivity may at this stage be treated as inconclusive, but providing some indication of possible associations in these directions.

SIGNIFICANCE OF THE FINDINGS FOR THEORY

The objectives of the study stated in Chapter V may be seen as separate facets of the task of theory building. The study began with a specific
interest in exploring the interaction model. The review of the literature suggested that evidence from Indian research with explicit interaction orientations was yet inadequate for studies with hypothetico-deductive designs. Therefore, more purposive replication to generate viable hypotheses would be quite in order. We may now attempt the formulation of a few hypotheses on the basis of the findings of the present study:

- **Hypothesis 1:**

  A differentiation can occur in OC as a function of the objective dimensions of size and departmental autonomy in the organization's structure, resulting in two sets of climate perceptions at the levels of the immediate (or micro) work environment and the organizational (or macro) work environment.

- **Hypothesis 2:**

  As a corollary to the hypothesis above, it can be hypothesized that in organizations with the structural conditions of large size and departmental autonomy, changes may be brought about independent of the climate of the macro environment.

- **Hypothesis 3:**

  In organizations in which the macro and micro environments are both favourable, there will be corresponding behavioural outcomes both in organizational effectiveness and in individual effectiveness if suitably assessed.
Hypothesis 4:

Conversely, in organizations in which the macro and micro environments are both unfavourable, there will be corresponding behavioural outcomes of poor effectiveness at both organizational and individual levels of assessment.

Hypothesis 5:

In organizations in which the macro environment is favourable, but the micro environment unfavourable, individual and organizational effectiveness will not be clearly predictable, but will benefit from intervention for leadership style and departmental organization.

Hypothesis 6:

In organizations in which the micro environment is favourable, but the macro environment is unfavourable, individual and organizational effectiveness will not be clearly predictable, but will benefit from intervention for structure, design and systems.

Hypothesis 7:

Outcomes in affective states will be more significant from favourable micro environment for those with a locus of control more external.
Hypothesis 8:

Outcomes in affective states will be more significant from favourable macro environments for those with a locus of control more internal.

Hypothesis 9:

There will be no significant difference in the content of affective states (specific areas of satisfaction) between those more external and more internal in locus of control.

Hypothesis 10:

In both micro and macro assessment of climate, the score distributions representing aggregate perceptions of employee groups will display narrower dispersions with increasingly high and low mean scores and wider dispersions with the middle order mean scores.

The formulations of hypotheses attempted above are in the nature of explicit statements aimed specifically at stimulating more direct hypothetico-deductive, experimental and quasi-experimental research investigations. A few extensions of the present study as suggested by the findings are considered in a later section. We may now examine some general clues to theory arising out of the study.
Towards a Phenomenological Interaction Model

Even if not explicitly stated, when the researcher accepts the assessment of organizational variables through self-reporting instruments he endorses, in fact, a larger perceptual-phenomenological model for the explanation of behaviour in organizations. The validity of the perceptual approach may be sought to be justified from a variety of innovations in connecting predictor variables with criterion variables as summarized in earlier chapters. The essential research task in all of the methods employed may thus be generalized as:

(1) To identify scalable verbal representations of perceptions,

(2) applicable to members of many organizations,

(3) sufficiently sensitive to yield ranges of scores representing differences in perception of degree,

(4) leading to generalizations regarding the causal or casual associations of those perceptions.

Reviewing the findings of the present study it may be stated with considerable confidence that both the OC and JC scales satisfy the above conditions adequately.

Further, it would appear that not only should we accept the validity of "global" or "aggregate" perceptions for an assessment of climate and,
therefore, of the influence of organizational variables on behaviour, we should accommodate the dynamic, black-box, quality of perception into any theoretical explanation of organizational behaviour. Accordingly, a revised model is here attempted in which the perceptual gestalt is integral with personality-organization interactions in influencing behavioural outcomes (see Figure 8). The figure is self-explanatory. However, an elaboration of a few points would be in order.

Organizational Variables

In the present study those were the separate variables assessed by the OC and JC scales. In the abstract, however, these variables may be referred to as variable features of the content or context of the job in the immediate or larger organizational system-level as represented, for instance, by the two sets of three factors each emerging in the study.

Personality Variables

For convenience and by convention the term personality has stayed. However, a more correct term would perhaps be personal variables, to include -

(a) constitutional differences in influencing typicalities of behaviour; e.g. extroversion-introversion, emotionality, patterns of intellectual functioning;
FIGURE 8: REVISED INTERACTION MODEL AS SUGGESTED BY THE RESEARCH STUDY

ORGANIZATIONAL VARIABLES
(measured by)
1. JDS - Job characteristics (3 factors found)
2. OC - Climate (3 factors found)

PERSONAL VARIABLES
(measured by)
Internal vs. External locus of control

PERCEPTUAL GESTALT

AFFECTIVE STATES
(measured by)
1. 3 scales from JDS on states/experiences
2. 7 scales from JDS on satisfaction/motivational outcome

BEHAVIOURAL OUTCOME
(measured by)
1. Supervisory ratings (individual effectiveness)
2. Productivity indices (Organizational effectiveness)

(Reasonably well established in the study)
(b) Value-attitude configurations as determined by culture, socialization; e.g. locus of control, authoritarianism, transaction ego-grams, achievement motivation;

(c) demographic variables, such as age, education, designation, income.

Affective States

To include all intermediate outcomes arousing affect and providing emotional experiences including arousal and changes in beliefs and attitudes, either peripheral or central.

Behavioural Outcome

For convenience, the behavioural outcomes have been combined into a single outcome category in Figure 8. However, the findings of the present study have already suggested the usefulness of separating outcomes of individual behaviour from outcomes of collective behaviour and the difficulty of simple extrapolations from effectiveness of individuals to organizational effectiveness. A more careful statement of differentiation and association between the two on an empirical basis would be highly desirable in the future. At present, we may only note the types of assessment commonly attempted for these two levels of effectiveness.

Individual effectiveness is usually assessed on two types of attributes—cognitive/affective attributes and behavioural/performance attributes.
It is usually assessed with two types of measures—self reported and externally assessed. The basic 2 x 2 matrix suggested by the classification is presented below.

<table>
<thead>
<tr>
<th></th>
<th>Cognitive/Affective</th>
<th>Behaviour/Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self reported</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Externally assessed</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

It will be seen that the measures (commonly available from performance appraisal) in cells 1 and 3 are, strictly speaking, not pertinent to our view of individual effectiveness in the revised model. The measures that matter are in cells 2 and 4, and for research purposes the more important measures might be in cell 4. Even within that cell, a 2-fold classification is possible:

- External assessments of performance that are more subjective — e.g. supervisory ratings
- External assessments of performance that are more objective — e.g. man-days worked/lost, output indices, etc.

Organizational effectiveness, on the other hand, is normally estimated entirely through indices and statistics that are expected to be objective, even if there is not complete agreement on the validity of the index chosen. Here we may choose from several measures commonly employed, e.g. cost structures, profit, return on investment, production efficiency,
productivity, growth indices. In addition, there are a few indices employed that are aggregates of individual behaviours; e.g., absenteeism, grievances, loitering, etc.

Feedback in the Model

It should also be stated that the revised interaction model suggested accommodates the main premises of both the "cognitive" and the "learning" models of behaviour through the feedback from the outcomes of affective states and behaviour to the perceptual gestalt. In other words, the perceptual gestalt may be seen as serving both the attitude-behaviour and the behaviour-attitude sequences. Further, given the attribute of high selectivity of perceptual mechanisms, progressively "deteriorating" and progressively "blooming" climate conditions may really be explained as vicious or virtuous cycles in the attitude-behaviour and behaviour-attitude sequences.

SIGNIFICANCE OF THE FINDINGS FOR ACTION

The most obvious question that arises out of the proposal of an interaction model is the one regarding its action implications. If personality accounts for a considerable extent of variation in climate perceptions and, further, these perceptions do influence and behaviour via affective states, what can the management of an organization do about it? Can one design jobs and job conditions to accommodate most, if not all, individual differences in personality-determined needs? Can we have selection, placement and training
procedures that ensure a better personality fit with the given job conditions? Would such an induction programme not amount to an indoctrination programme?

We cannot say we have answers to all of the practical and ethical questions that arise in an exercise of work organization. However, the single most important direction for action opened up by the research findings appears to be the differentiation between the macro and micro environments and their climates. Should this distinction be valid, then it can be proposed that actions for more favourable climates need also to be differentiated:

- The task of top management is to appreciate the common requirements of a meaningful work environment and to arrive at general policies of organization and practice conducive to the employee force as a whole, over and above individual differences.

- The task of line leadership is to appreciate and be concerned about individual differences and to seek innovations in the task organization by which satisfaction, innovation and individual effectiveness are maximised.

The factorial differentiation between the OC and JC scales must become particularly significant in this light. It would appear that it is well within the purview of top management to provide the broad policy guidelines by which role effectiveness throughout the organization is promoted through the factors of role clarity, role discretion and role challenge.
The principal requirement of top management to attempt changes in this direction would be a change in orientation and values in itself, which defines also the intervention task at this level. At the departmental level, it can be said that it is the legitimate task of the manager to enrich the job so that the social, content and meaning factors on the job are enlarged and alienation is controlled. Among other things, the counsellor role of the manager must become more important, in the broadest sense of the term. The emphases in training and development for management at this level suggest themselves correspondingly.

The evident diagnostic value of the OC and JC instruments as well as their differentiation of climate at the organizational and departmental levels thus provide a useful basis for planning and executing a job enrichment type of change programme.

EXTENSIONS IN RESEARCH SUGGESTED BY THE STUDY

Before concluding the report on the present study, we may consider a few lines of investigation in future research as suggested by the findings in this study. In addition to specific investigations to test the hypotheses proposed earlier in the chapter, the following areas of research are suggested:
Further Explorations in Theory

1. Causal Association Between Personality and Climate Perception

Is it possible that personality configurations cause differential perceptions of organization and job variables in OC? Multiple regression analyses with personality variables and work environment variables as independent and dependent variables would be useful.

2. Possible Differentiation Within Affective States

The assumption in this study that the psychological states and the satisfaction and motivation outcomes assessed by JDS might all be regarded as affective states may be re-examined with greater statistical rigour. A factorial study of these scales would be useful.

3. Other Personal Variables

This study restricted personality assessment to the dimension of Locus of Control. It would be useful to extend the study to other personal variables within the interaction framework. For instance:

- The associations with demographic variables
- The factorial structure of assessments made with instruments with apparent overlaps; e.g. n-Ach, Locus of Control, Authoritarianism, etc.
Methods and Measures

1. Fresh Climate Scales

The findings of the study suggest the possibility of constructing a new 2-part scale for OC of the macro and micro work environments around the 2 sets of 3 factors each emerging, including the preliminary tasks of reliability testing and item analysis.

2. Individual Effectiveness

The challenge in the task of arriving at an appropriate measure of individual effectiveness is one of compatibility between two assessment objectives. First, we must identify the relevant job-related criteria, amounting inevitably to departmental differentiation. Then we must arrive at a scoring system by which inter-departmental comparability may be achieved. This is a very difficult task indeed, as any researcher or practitioner in the area of performance appraisal will agree. The first stage in this task is to arrive at a measure that is at least industry-specific, because general purpose rating scales have served little or no purpose so far for any meaningful assessment.

3. Organizational Effectiveness

In this study the sole indicator of organizational effectiveness was the productivity index. It happened to appear a relevant index. However,
given the limited relevance of the index to the specific socio-technical organization of a composite textile mill, it would be useful to test the relevance of other indices of organizational effectiveness as dependent variables.

**Design of Studies**

1. Replication with Larger Sample

A replication with a larger sample of mills should be very useful for arriving at indications of causal association with organizational effectiveness with greater confidence. Instead of the high-low dichotomy, organizational effectiveness may be viewed as a continuous variable and a considerably extended range over a number of mills would provide more sensitive analyses of correlation and regression.

2. Experimental Design

We may attempt a change programme with an experimental design with some or all of the following features.

- an experimental group of organizations
- one or more control group of organizations
- carefully designed "treatment" administered to the control group; e.g., a productivity programme or a job enrichment programme
refined climate measures, perhaps with fresh instruments around the 6 factors as mentioned above, for before-after measurements

- extended measures of personal variables

- improved and extended measures of individual and organizational effectiveness