

## Chapter II

### REVIEW OF LITERATURE

Investigators in the field of job-enrichment and employee growth have concerned themselves with establishing relationship between motivating potential (MPS) of a job and work motivation, between MPS and psychological states - like internal work motivation, satisfaction with the work, growth satisfaction, employee reaction to jobs and so on.

This chapter summarizes the findings of various researches based on job characteristics, job motivation, internal psychological states, and individual as well as organisational outcomes. According to the reports of Hackman & Oldham (1974), the Job Diagnostic Survey (JDS) instrument has been taken by more than 1,000 employees working on about 100 diverse jobs in more than a dozen organisations over the last few years. These data have been analyzed to test the basic motivational theory - and especially the impact of the core job dimensions on worker motivation, satisfaction, and behaviour on the job. An illustrative overview of some of the findings is given below :

Study conducted by Hackman and Oldham (1974), was concerned with the relationship of core job dimensions and motivation and satisfaction on the job. It was seen that

people who worked on jobs high on the core dimensions were more motivated and satisfied than were people who worked on jobs that scored low on these dimensions. Employees with jobs high on the core dimensions (Motivating Potential Score (MPS) greater than 240) were compared with those who held unmotivating job (MPS scores less than 40). Employees with high MPS jobs were higher on (a) the three psychological states, (b) internal work motivation and (c) general satisfaction. It was also found that both the groups of employees showed increases in internal motivation on MPS increases, the rate of increase was significantly greater for the group of employees who had strongest needs for growth.

A job-enrichment project conducted by Hackman and Oldham (1974) at "The Travelers Insurance Companies", revealed dramatic results. The Travelers Project was designed with two purposes, viz. to achieve improvement in morale, productivity, and other indicators of employee well-being, and to test to the general effectiveness of the strategy for job enrichment based on Job Diagnostic Survey (JDS) model. The work group chosen was keypunching operation. The group's function was to transfer information from printed or written documents onto punched cards for computer input. The work group consisted of ninety-eight keypunch operators and verifiers (both in the same job classification), plus seven

assignment clerks. All reported to a supervisor who, in turn, reported to the assistant manager and manager of the data input division.

The size of individual punching orders varied considerably, from a few cards to as many as 2,500. Some work came to the work group with a specified delivery date, while other orders were to be given routine service on a predetermined schedule.

Assignment clerks received the jobs from the user departments. After reviewing the work for obvious errors, omissions, and legibility problems, the assignment clerk parceled out the work in batches expected to take about one hour. If the clerk found the work not suitable for punching it went to the supervisor, who either returned the work to the user department or cleared up problems by phone. When work went to operators for punching, it was with the instruction, "Punch only what you see. Don't correct errors, no matter how obvious they look."

Because of the high cost of computer time, keypunched work was 100 percent verified - a task that consumed nearly as many man-hours as the punching itself. Then the cards went to the supervisor, who screened the jobs for due dates before sending them to the computer. Errors detected in

verification were assigned to various operators at random to be corrected.

The computer output from the cards was sent to the originating department, accompanied by a printout of errors. Eventually the printout went back to the supervisor for final correction.

A great many phenomena indicated that the problems being experienced in the work group might be the result of poor motivation. As the only person performing supervisory functions of any kind, the supervisor spent most of his time responding to crisis situations, which recurred continually. He also had to deal almost daily with employees' salary grievances or other complaints. Employees frequently showed apathy or outright hostility toward their jobs.

Rates of work output, by accepted work measurement standards, were inadequate. Error rates were high. Due dates and schedules frequently were missed. Absenteeism was higher than average, especially before and after weekends and holidays.

The single, rather unusual exception was turnover. It was lower than the companywide average for similar jobs. The company had attributed this fact to a poor job market in the base period just before the project began, and to an

older, relatively more settled work force-made up, incidentally entirely of women.

DIAGNOSIS :

Using some of the tools and techniques a consulting team from the Management services Department and from Roy W. Walters & Associates was formed. They observed that the keypunch-operator's job exhibited the following serious weaknesses in terms of the core dimensions :

Skill variety : there was none. Only a single skill was involved-the ability to punch adequately the data on the batch of documents.

Task identity : virtually nonexistent. Batches were assembled to provide an even workload, but not whole identifiable jobs.

Task significance : not apparent. The keypunching operation was a necessary step in providing service to the company's customers. The individual operator was isolated by an assignment clerk and a supervisor from any knowledge of what the operation meant to the using department, let alone its meaning to the ultimate customer.

Autonomy : none. The operators had no freedom

to arrange their daily tasks to meet schedules, to resolve problems with the using department, or even to correct, in punching, information that was obviously wrong.

Feedback : none. Once a batch was out of the operator's hands, she had no assured chance of seeing evidence of its quality or inadequacy.

#### DESIGN OF THE EXPERIMENTAL TRIAL

Since the diagnosis indicated that the motivating potential of the job was extremely low, it was decided to attempt to improve the motivation and productivity of the work group through job enrichment. Moreover, it was possible to design an experimental test of the effects of the changes to be introduced : the results of changes made in the target work group were to be compared with trends in a control work group of similar size and demographic make-up. Since the control group was located more than a mile away, there appeared to be little risk of communication between members of the two groups.

A base period was defined before the start of the experimental trial period, and appropriate data were gathered on the productivity, absenteeism, and work attitudes of members of both groups. Data also were available on turnover;

but since turnover was already below average in the target group, prospective changes in this measure were deemed insignificant.

An educational session was conducted with supervisors, at which they were given the theory and implementing concepts and actually helped to design the job changes themselves. Out of this session came an active plan consisting of about twenty-five change items that would significantly affect the design of the target jobs.

#### THE IMPLEMENTING CONCEPTS AND CHANGES

Because the job as it existed was rather uniformly low on the core job dimensions, all five of the implementing concepts were used in enriching it.

Natural units of work : The random batch assignment of work was replaced by assigning to each operator continuing responsibility for certain accounts—either particular departments or particular recurring jobs. Any work for those accounts now always goes to the same operator.

Task combination : Some planning and controlling functions were combined with the central task of keypunching. In this case, however, these additions can be more suitably discussed under the remaining three implementing concepts.

Client relationships : Each operator was given several channels of direct contact with clients. The operators, not their assignment clerks, now inspect their documents for correctness and legibility. When problems arise, the operator, not the supervisor, takes them up with the client.

Feedback : In addition to feedback from client contact, the operators were provided with a number of additional sources of data about their performance. The computer department now returns incorrect cards to the operators who punched them, and operators correct their own errors. Each operator also keeps her own file of copies of her errors. These can be reviewed to determine trends in error frequency and types of errors. Each operator receives weekly a computer printout of her errors and productivity, which is sent to her directly, rather than given to her by the supervisor.

Vertical loading : Besides consulting directly with clients about work questions, operators were given the authority to correct obvious coding errors on their own. Operators were also allowed to set their own schedules and plan



their daily work, as long as they met schedules. Some competent operators were given the opinion of not verifying their work and making their own program changes.

#### RESULTS OF THE TRIAL :

The results were dramatic. The number of operators declined from ninety-eight to sixty. This occurred partly through attrition and partly through transfer to other departments. Some of the operators were promoted to higher-paying jobs in departments whose cards they had been handling something that had never occurred before. Some details of the results are given below.

The control group, with no job changes made, showed an increase in productivity of 8.1 percent during the trial period. The experimental group showed an increase of 39.6 percent.

To assess work quality, error rates were recorded for about forty operators in the experimental group. All were experienced, and all had been in their jobs before the job-enrichment program began. For two months before the study, these operators had a collective error rate of 1.53 percent. For two months towards the end of the study, the collective error rate was 0.99 percent. By the end of

the study the number of operators with poor performance had dropped from 11.1 percent to 5.5 percent.

The experimental group registered a 24.1 percent decline in absences. The control group, by contrast, showed a 29 percent increase.

An attitude survey given at the start of the project showed that the two groups scored about average, and nearly identically, in nine different areas of work satisfaction. At the end of the project the survey was repeated. The control group showed an insignificant 0.5 percent improvement, while the experimental group's overall satisfaction score rose 16.5 percent.

One of the most significant findings in the Travelers experiment was the effect of the changes on the supervisor's job, and thus on the rest of the organization. The operators took on many responsibilities that had been reserved at least to the unit leaders and sometimes to the supervisor. The unit leaders, in turn, assumed some of the day-to-day supervisory function that had plagued the supervisor. Instead of spending his days supervising the behaviour of subordinates and dealing with crises, he was able to devote time to developing feedback systems, setting up work modules and spearheading the enrichment effort-in other words- managing. It should be noted, however, that helping supervisors change

their own work activities when their subordinates' jobs have been enriched is itself a challenging task. And if appropriate attention and help are not given to supervisors in such cases, they rapidly can become disaffected - and a job - enrichment "backlash" can result.

By applying work-measurement standards to the changes brought by job enrichment - attitude and quality, absenteeism, and selective administration of controls - Travelers was able to estimate the total dollar impact of the project. Actual savings in salaries and machine rental charges during the first year totalled \$ 64,305. Potential savings by further application of the changes were put at \$ 91,937 annually. Thus by almost any measure used - from the work attitudes of individual employees to dollar savings for the company as a whole - The Travelers test of the job-enrichment strategy proved a success.

The results summarised above suggest that both the theory and the diagnostic instrument work when used with real people in real organizations.

The results of various other researches also revealed that job enrichment was moving beyond the stage where it could be considered "yet another management fad." Instead, it represented a potentially powerful strategy for change that could help organizations to achieve their goals for higher quality work-and at the same time further the

equally legitimate needs of contemporary employees for a more meaningful work experience. Yet there are pressing questions about job enrichment and its use that remain to be answered.

Prominent among these is the question of employee participation in planning and implementing work redesign. The diagnostic tools and implementing concepts presented are neither designed nor intended for use only by management. Rather, it was believed that the effectiveness of job enrichment is likely to be enhanced when the tasks of diagnosing and changing jobs are undertaken collaboratively by management and by the employees whose work will be affected.

Moreover, the effects of work redesign on the broader organization remain generally uncharted. Evidence now is accumulating that when jobs are changed, turbulence can appear in the surrounding organization - for example, in supervisory--subordinate relationships, in pay and benefit plans, and so on. Such turbulence can be viewed by management either as a problem with job enrichment, or as an opportunity for further and broader organizational development by teams of managers and employees. To the degree that management takes the latter view, the oft-espoused goal of achieving basic organizational change through the redesign of work may come increasingly within reach.

Claims for the success and usefulness of job enrichment are based primarily on a number of job enrichment case histories and studies conducted over the past several years. These studies attempted to prove that workers really wanted job enrichment. However, when they were examined closely, it was observed that :

1. What actually occurred in the cases was often quite different from what was reported to have occurred.
2. Most of the cases were conducted with hand-packed employees, who were usually working in areas or plants isolated from the main operations and thus did not represent a cross section of the working population. Practically all experiments have been in nonunion plants.
3. Only a handful of job enrichment cases have been reported in the past few years, despite the claims of gains obtained for employees and management through job changes.
4. In all instances the experiments were initiated by management, never by workers or unions.

A review of some of the more prominent studies illustrate these points.

The study of workers' attitudes toward work and working conditions, conducted for the Department of Labour by the Survey Research Centre at the University of Michigan, (1971), is cited in numerous articles and is <sup>a</sup>mainstay of the Health, Education and Welfare (HEW) study. When examined closely, however, several errors are revealed which cast serious doubt upon the validity of its conclusions.

In the study, the workers polled were asked to rank twenty-five aspects of work in order of importance to them. They ranked interesting work first; pay, fifth; and job security, seventh. The researchers neglected, however, to indicate that these rankings averaged together the survey results for all levels of workers, from managers and professionals to low skilled workers. The researchers created a composite image that they called a "worker". The study, however, was based on a cross section of the United States work force rather than just lower-level workers.

When separated into the basis of occupational categories and analyzed separately, the data showed that blue-collar workers ranked pay and job security higher than interesting work. Interesting work was ranked so high in SRC's results because the responses of managers, professionals, and skilled people were averaged with the responses of lower-level workers.

It seems reasonable to suspect that the attitudes of managers and professionals toward their jobs might be different

from those of factory workers, and that there also might be differences between skilled and unskilled workers' attitudes within occupational groupings. When the data were compiled by SRC, each subject's occupation was identified, but the results presented in the final report were lumped together for all subjects.

The new data obtained by reanalyzing the SRC data by occupational categories is supported by another large scale study. In the first phase of a study covering 60,000/- people in more than fifty countries (excluding the Communist block), Sirota and Greenwood (1971), found that there was considerable similarity in the goals of employees around the world and that the largest and most striking differences are between jobs, rather than between countries. Most interestingly, the security needs of people in lower-skilled jobs were found to be highest. The final phase of the study is even more illuminating because the data include the full range of occupations, from managers to unskilled workers, reported separately by seven occupational groups. Unskilled workers in manufacturing plants abroad ranked their needs in this order : physical conditions first, security second, earnings third, and benefits fourth. A factor labelled "interesting work" was not included, but there were several which in total encompass this factor. These were ranked far below the workers' top four needs.

Study made by Walton (1972), at General Foods-Topeka has been widely cited to show how, when jobs are enriched according to organization development principles, productivity and employee satisfaction will rise. However, Walton's reporting of this case omits critical information which greatly affects the interpretation of what actually occurred and why.

Walton, attributes the success of the Topeka plant to the autonomous work groups, integrated support functions challenging job assignments, job mobility and rewards for learning, facilitative leadership, managerial decision making for operations; self-government for the plant community, congruent physical and social context; learning and evolution. He does not mention that the sixty-three Topeka employees are a group of very special people who were carefully selected from 700 applicants in five screening interviews. The fourth screening was an hour long personal interview, and the fifth was a four-hour session that included a complex two-hour personality test.

A study conducted by Ford R.N. (1969) on job enrichment and overall performance and grievances of the employees, (reported by Hingorani in his doctoral dissertation, 1988 page 39), reveals interesting result. In this study there was a group of forty men engaged in the wiring up of telecommunication's frames.



Originally there had been much trouble with this group of men. It had the history of low out-put, missed completion dates, poor quality, faulty work, high overtime and a large number of grievances by the men through their union.

The initial procedures and organisation were as follows :

An order was taken for a particular piece of work by the group of craftsmen who translated the order in to the frame-work, to be done. The group was divided in to three teams performing the three distinct and specialized functions: taking orders and design of specifications, wiring the frames, and test the circuits.

A plan for change was devised whereby all the formerly discrete functions of job were integrated.

The first stage was to integrate wiring and testing so that a testman was substituted for a cross-connection man in the wiring team and the team became responsible for both completing the wiring of the circuit and testing. The second stage was to link the team directly to the customer in order to receive direct orders, to write up and supply working circuit to the customer.

Thus, analysis of job functions was undertaken, work teams were recognised and meaningful module of work tackled the complete job rather than a set of separate, fragmented tasks.

The management achieved its objective after these changes : Orders were completed on time where earlier only 50 per cent of completion dates had been met, quality standards were consistently achieved and grievances dropped sharply.

A case of "Treasury Department" reported by Hingorani in his doctoral dissertation (1988) was concerned with job enrichment, job satisfaction and turnover. In this experimental work in job enrichment, there was a group of 104 young women, working in the American Telephone and Telegraph Company's Treasury Department which answered customer complaint letters concerning stocks and bonds.

In order to reduce turnover amongst these women, an experiment in job enrichment was undertaken. The change programme was undertaken in order to enrich job and enhance job satisfaction which would eliminate the reason for turnover.

The result of the study showed that changes introduced into the experimental group provided greater

satisfaction to employees than the satisfaction derived by the control group.

A case of Sales Representative; reported by Paul and Robertson (1973), wherein two groups viz; Experimental & Control group of sales representatives were selected to see the relationship between job enrichment and job satisfaction and performance. Six changes were introduced in their job so as to enrich it. The changes were:

- (1) No obligation to write reports on every customer call.
- (2) Responsibility for determining calling frequencies was placed wholly on the representative for him to judge what was appropriate for a particular customer.
- (3) The technical service department agreed to provide service 'on demand' from the representatives and to treat call as their first priority.
- (4) In case of customer's complaint about product performance, representatives were authorised to make an immediate settlement upto £ 100.
- (5) The complete authority to decide how best to deal with the matter if faulty material had been delivered.

- (6) Representatives were given discretionary range of about 10% in the prices of most of the products they sold.

The theme of all the changes was to build up sales representatives job so that it becomes more complete in its own right. They had authority to take decision of their own instead of looking to head quarters. Each change implied a greater responsibility, together they gave the freedom and challenge necessary for self development.

An experimental group of fifteen salesmen worked under these new arrangements and their performance and attitudes were compared with the rest of the sales force over the same period.

Results showed that during the trial period, the experimental group increased its sales by 18.6% compared with the same period of the previous year while the sales of the control group dropped by 5%.

Another case of Experimental Officers was also reported by Paul & Robertson (1973), which also reveals relationship between job enrichment, <sup>and</sup> increased performance and satisfaction. This exercise started with low morale in the research and development department, among experimental officers (EOS) whose job was to implement experimental

programmes devised by graduates. As non-graduates, their career prospects were limited but at the same time they felt that their experience and technical ability were being wasted. The chief aim of the exercise was to give them more scope to exercise their abilities in their existing organisational hierarchy.

This was attempted through the following changes. EOS were encouraged to write a final report on each project for which they had been responsible.

Officers were more involved in the planning of projects and experiments and given time to follow up their own ideas even if these went beyond the initial research outline. They took part in interviewing candidates for laboratory assistant's jobs, acted as first assessor on their own assistants and were made responsible for devising and implementing a training programme for junior staff. They were empowered to requisition materials and order services on their own signatures.

The experimental groups of fifteen and fourteen officers were set-up, and their performance compared with a control group of fifteen, over a period of twelve months. Variations in performance were evaluated by superior's assessments of monthly reports (requested from all groups

for the first time) and by the number and quality of minutes produced. After an initial period in which the performance of both experimental and control groups rose, that of the control group fell away while the experimental groups sustained their improvement.

The other researches involving design engineers, draughtsmen, production and engineering foremen were on the same pattern and showed the same results, i.e. job enrichment changes increased performance and satisfaction.

Study conducted by David Sirota (1973), was concerned with the core job dimensions, performance and job satisfaction of the employees working on silicon wafer slicing machine operation. In the beginning of the job enrichment project the employees were instructed to watch the process closely and if they saw anything wrong, immediately call their managers who informed maintenance. (This is particularly good illustration that even highly technologically constrained jobs can be enriched significantly).

The managers of this area first decided to discontinue the rotation of employees among all of the slicing machines and to give each employee his own machine to operate. The operators were given training and responsibility for minor maintenance of their machines. For major problems, they contacted maintenance directly rather than going through their managers.

The third change was to give the employees responsibility for deciding when the slicing blades (the most important components of the machines) should be changed. Previously, they had to follow rigid rule in the manufacturing engineering manual that specified precisely (in terms of number of slices) a blade should be changed.

Finally, a daily performance system was initiated to inform the workers to maintain sample measurements on work quality and to report these each night to the employee working on the slicers.

Results : (1) the 'Yield' (the ratio of good out-put to in-put) improved significantly. This measure had shown no change over the previous two years. (2) the cost of maintaining the machines declined to just about zero. There was now almost no need for replacement of the parts. The employees became more conversant to their machines. (3) Interview and attitude questionnaire indicated increased job satisfaction especially on those items dealing with skills utilization.

Hackman and Lawler (1971) described four core task characteristics and it was assumed that jobs must be high on all the four core dimensions. The strength of higher order needs (GNS) was measured which moderated the job-person relationship. It was found that when jobs are high on the four core dimensions, employees with strong desire

for higher order needs tend to have high satisfaction, better performance, low absenteeism and turn over.

Hackman and Oldham (1974) considered five core task characteristics instead of four (as was in Hackman and Lawler (1971) study) which were reduced to single Motivating Potential Score(MPS)Scale. The strength of higher order needs (GNS) was measured as moderating agent. The study concluded that job-person relationship to be strong with High GNS individuals and Vice-Versa. The three intervening psychological variables were : experienced meaningfulness of work, experienced responsibility for outcomes, and knowledge of results.

A study conducted by Sarveswara Rao and Ganguly (1971), dealt with the factors contributing to satisfaction and dissatisfaction and the relative importance of job factors to highly skilled and skilled employees. The following issues were studied :

- (i) Do highly skilled personnel differ from skilled personnel in their perceived need satisfaction?
- (ii) Do motivators and hygienes contribute differently to the perceived need satisfaction of the subjects?



- (iii) Do highly skilled and skilled personnel perceive similarly as to the importance of needs to them?
- (iv) Are motivators more important than hygienes for the perception of highly skilled and skilled employees?

The study showed that the differences between the means for the two occupational groups were significant for all the job factors. Highly skilled people had lesser need deficiencies and hence greater satisfaction than skilled personnel.

The differences between motivators and hygienes for both the occupational groups were not significant indicating that both motivators and hygienes contributed to perceived need deficiency (dissatisfaction) and/or to perceived need fulfilment (satisfaction). The contention that motivators contribute to satisfaction and hygienes alone contribute to dissatisfaction has not been substantiated in this study.

The two groups differed in their perceived importance of various job factors.

While both motivators and hygienes were perceived as important by the highly skilled subjects, hygienes were perceived as more important than motivators by skilled employees.

Various studies used different measurement of job characteristics and classification of jobs. For example JDS, Direct observation, constant tasks, Official records and information were used to measure the tasks.

Similarly various moderating agents have been used by different researchers. Some of the moderating agents apart from GNS have been : alienation, cultural variables, religious differences, work values, personality, achievement, functional speciality, career stage and so on. In these studies, the various behavioural responses have been measured in terms of satisfaction, motivation, absenteeism, turnover, role ambiguity, conflict, role clarity, boredom, company saving and so on.

The study conducted by Ashok Hingorani (1988), was concerned with the relationship of personality need and job involvement, job morale and job adjustment of workers, working on varied and repetitive jobs. The study was conducted in different industries situated around Baroda City (Gujarat). He used fifteen personality factors inventory to measure personality.

Job involvement was measured by the "Job Involvement Scale" which was designed by Thomas M. Lodahl & Kejner (1965). Job morale was measured by the Morale Scale developed by Qurashi Z.M. and Job Adjustment was measured by the 'Job Adjustment Inventory' developed by Wadia Zarina.

In this study it was found that Achievement, Autonomy change, Hetero-sexuality were highly correlated with Job Involvement, Job morale and Job Adjustment in varied Jobs.

There was no significant variation in degree of Job Involvement, Job Morale and Job Adjustment in the repetitive and varied groups in all the three organisations under study.

Similarly, Exhibition and order were highly correlated with Job Involvement, Job Morale and Job Adjustment in Repetitive Group. In this study it was concluded that an operative with high need for achievement and Low need for Hetro-sexuality when engaged in varied job had more job involvement, job morale and job adjustment compared to an operative who was engaged on a repetitive job. Similarly, an operative with high need for order and low need for exhibition was likely to have more job involvement, job morale and job adjustment compared to an operative engaged on a varied job.

These results are unexpected and they required more detailed probing and analysis. It was assumed that an operative with low need for change and autonomy would have more job involvement, job morale and job adjustment in the repetitive job rather than in the varied job. However, the results showed that change and autonomy frequently appeared highly correlated with varied job than with repetitive job.

The high correlation between autonomy and job involvement, job morale and job adjustment with varied job when the need for autonomy is low indirectly suggested that it was not necessary to have high strength for higher order needs to have job involvement, job morale and job adjustment from the varied job.

The research conducted by Sangeeta Pathak (1988), was concerned with the study of job characteristics - an application of job-diagnostic survey model of job enrichment. She tried to investigate the relationship among the variables involved in the job diagnostic survey model of job enrichment. These variables were studied in relation to persons' growth need strength. Various types of linkages were examined based on different assumptions from the theoretical model. In the above research, she had inferred the following conclusions.

1. The three task related variables did not contribute equally or sufficiently highly to experienced meaningfulness on the job. Skill variety contributed positively and task identity showed negative contribution to experienced meaning. The task significance failed to show any significance correlation. The total score based on the three variables also failed to correlate significantly to the experienced meaningfulness.

2. So far as the respective linkages of autonomy and feedback with experienced responsibility and knowledge of results are concerned, both are positively correlated. Autonomy contributes to responsibility to a significant extent. Feedback as the objective characteristic of the job also contributes positively to the experienced knowledge of result.
3. The Job Motivating Potential (JMP) which is based on the meaningful combination of the five core dimensions, correlates positively with the three psychological status viz. experienced meaning, experienced responsibility and knowledge of results.
4. The results indicated that the three psychological status have had their independent contributions to the internal work motivation but they do differ as regards the extent of their contributions.
5. So far as the combined effect of the three psychological states on organizational outcome variables was concerned, individual growth satisfaction was more strongly influenced by the three psychological states than contextual or

general satisfaction. Thus, pay, security, supervision etc. and over all feeling of satisfaction are not more strongly correlated with psychological states taken together. The only organizational outcome variable that was strongly linked up with the psychological states was satisfaction with growth opportunities.

6. The results clearly showed that the internal growth need strength i.e., the extent to which the worker aspires to grow and develop, does have the moderating effect in the relation between job motivating potential (JMP) based on core job dimensions and organizational outcomes variables. The correlations between JMP and the three organizational outcome variables viz., contextual satisfaction, growth satisfaction, and general satisfaction were all, positive and higher among high growth need strength respondents than among low growth need strength respondents.

The study conducted by Turner and Lawrence (1965) was concerned with the relationship of objective task characteristics to job satisfaction and absenteeism. Seven task dimensions were initially identified. They were motor variety, object variety, required interaction, knowledge and skill, autonomy,

operational interaction and responsibility. These dimensions were found to be interrelated and hence were combined to form a scale known as the Requisite Task Attribute (RTA). The single dimension scale is to be preferred to a multiple dimension scale but this type of scale is not likely to capture all important differences across jobs. Further, single items that appear to be reliable and valid in relation to one of the seven task attributes may be unrelated to the overall scale.

The characteristics model examines individual responses to jobs as a function of job characteristics moderated by individual characteristics. In other words, the interaction of job and individual characteristics determines job responses. The model states that task characteristics - job response relations - are moderated by the job incumbent's needs. Job responses included in the theory were the typical variables usually studied by industrial or organizational psychologists viz., satisfaction, turnover, absenteeism, and performance. As stated earlier, at first, four (Hackman, Lawler, 1971) and then five (Hackman & Oldham, 1974, 1975, 1976) core task characteristics, were posited : variety, autonomy, task identity, feedback, and task significance. It was argued that jobs must be high on all five dimensions, for positive outcomes to occur (Hackman & Lawler, 1971). However, these five dimensions

were reduced to a single Motivating Potential Score (MPS), that can be moderately high despite low positive values on one or more of the five dimensions. The MPS is defined as :

$$\text{MPS} = \frac{\text{Skill variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Feedback}$$

Drawing loosely on expectancy theory and Maslow's (1943) need hierarchy, an individual characteristic, viz., higher order growth need strength (GNS) was postulated to moderate the MPS - job response relationship. This relationship should be strong for high GNS individuals but weak or not significant for low GNS workers. The process linking the independent and dependent variables was further explicated by specifying three intervening psychological states : experienced meaningfulness, experienced responsibility, and knowledge of results.

#### PROBLEMS OF THE MODEL :

There are a number of problems involved in the job characteristics model. Some of the initial researches based on this approach could be criticized on the ground that there was no consistency across the types of relations which these researches were trying to establish, that they were ambiguous about the appropriate measurement and analysis of job characteristics, and that they ignored considerable amount of common variance among observed variables.



### INCONSISTENCY IN THE TYPES OF RELATIONS

The job characteristic model is based on expectancy theory of motivation. As such, it focusses on within person relations. It fails to specify the determinants of individual needs and perceptions of the task. Tasks are assumed to exist independent of the incumbent's perceptions, social and situational influences although specified are not included in the model. With the exception of some minor variations, task perceptions are assumed to be equivalent to objectively defined tasks. Thus, clear specification of particular situational and social influences on task perceptions are needed in the model. Person - situation relations between task characteristics and job responses were discussed as if they were same as within-person relations. Based on the observation of within - person relations between task perceptions and job responses, researchers have often concluded that a person - situation relation also held and suggested objective job changes to change job responses. Such changes cannot be recommended unless person - situation or situational relations are observed. This confusion seems to be the consequence of the lack of a clear distinction among within person, person-situation, and situational relations in the job characteristic model.

### MEASUREMENT AND ANALYSIS OF JOB CHARACTERISTICS

From the way the model is designed, it seems reasonable to assume that the model will be more useful only to those

individuals who are high in Growth Need Strength (GNS). It can also be assumed that the relation between Motivation Potential Score (MPS) and job response will be moderated by the GNS. In other words the MPS - job response relationship would vary according to variation in the GNS of the respondents. The theory does not state anything about desirable job characteristics for low GNS respondents. The utility of the model could be enhanced by actually specifying task attributes associated with positive outcomes (job response) for low GNS subjects. Moreover the measure of MPS is based on job characteristics either perceived or objectively assessed, it fails to take account of some important aspects of jobs like pay, security, status, safety, etc. It also fails to take account of the degree of importance attached to these aspects by the job holders. The utility of GNS as a construct was ascertained by computing correlations between task and response for the extremely high and extremely low GNS subjects, thereby neglecting the sizable proportion of the moderate GNS respondents. This reduces the generality of the findings.

The computation of MPS was not based on a sound theoretical foundation. To demonstrate the validity for combining task characteristics, the predictive utilities of five different combinations (MPS, multiplicative, additive, multiple regression, and cross validated regression) of task characteristics were compared. This analysis did not take

into account the GNS. No appreciable differences were reported in explaining variance in job responses. Given the moderate intercorrelations of the five job characteristics almost any reasonable combination strategy would produce similar results.

Other researchers accepted the company documents defining job classifications unquestionably. Individuals in the same job classification are assumed to perform the same objective tasks. Systematic study of each individual for the assessment of homogeneity within job classification would have given more objective evidence for the company's classifications of jobs.

Research on within - person relations is often plagued by common method variance in independent and dependent variables. Questionnaires are frequently used for all data collection. This problem is exacerbated when questions are similarly phrased and formatted. Given the usual attempts by respondents to remain consistent in answering questionnaires, it is high likely that some relations exist.

In short, the job characteristics model had received proper attention and praise. However, the model has not been sufficiently scrutinized and alternative explanations of research findings have not been explored. The three types of

relations inherent in the model (within person, person - situation, and situations) are often used interchangeably, resulting in considerable confusion.

Many theoretical, analytical, and operational problems that were apparent in exploratory task design research have been perpetuated in the formulation of the job characteristics approach. These include ecological fallacy, the use of job classifications from existing documents having unknown validity, the measurement of many job characteristics with multiple indicators for each characteristic, and combining these characteristics arbitrarily into a unidimensional job description, the use of this unidimensional job description as the sole indicator of tasks, the failure to indicate the inter-item reliability of the unidimensional scale, and the failure to contrast competing explanations in a single study. Several additional problems occurred in the development of the job characteristics approach : inconsistency across the type of relations hypothesized and observed, the use of moderator variables in some, but not all analysis; the neglect of social and situational influences on task perceptions and job responses; the presence of common method variance due to heavy reliance on questionnaire data; and the use of similar wording across several data.

#### SUBSEQUENT RESEARCH :

A number of researches prior to 1971 were directed

towards studying the relationships between organizational characteristics and individual responses - (e.g. Beer, 1968; Bishop & Hill, 1971; Campbell, 1971; Cummings & El Salmi, 1970; El Salmi and Cummings, 1968; Farris, 1969; Porter & Lawler, 1965). Although the job characteristics model posits job responses as a function of the interaction of task and individual characteristics (in other words, the effects of task characteristics on responses in supposedly moderated by the individual need strength) numerous studies have reported only the main effects of task characteristics on responses.

#### MAIN EFFECTS ON JOB RESPONSES :

In the study conducted by Hall, Goodale, Rabinowitz, and Morgan (1978) both organizational and task attributes were involved, observing the person-situation relationship. In this study, jobs and departments underwent more, less, or no enrichment. Departmental changes were rated by both researchers and administrators. Perceptual assessments by jobs were obtained from incumbents on four core dimensions. These authors did not find any direct relation between job change and GNS (GNS was not conceptualized as a moderator variable as it is in the job characteristics model).

Moch's (1980) investigation of organisational, task, and individual attributes was also consistent in theory and

assessment, focussing on task perceptions rather than objective task characteristics. A sociometric measure of network membership was associated with task perceptions and other attitudes as hypothesized. Thus perceptions of tasks, if not the tasks themselves, should be embedded in organizational context to fully understand task-response relations.

The fit between organizational and task characteristics was examined in several studies in which person - situation relations were conceptualised but within person - relations were observed (Keller, Szilagyi & Holland, 1976; Rousseau, 1977, 1978; Schuler, 1977). Organizational attributes were sometimes assessed independently of respondents, but task characteristics were only measured with job incumbent questionnaires. Organization-task fits were positively related to job responses, but this may be due to the fact that the composite of variables used to measure organization task fit shared common method variance with response variables.

Most main effect investigations examined impacts of tasks on responses or sets of responses without regard to organizational context (Hill, 1975, Baird, 1976; Farr, 1976; Locke, Sirota, & Wolfson, 1976; Robey & Baker, 1978; O'Reilly & Caldwell, 1979; Orpen, 1979; O'Reilly, Parlett, & Bloom, 1980).

In summary most of the studies showing main effects of tasks on responses, assessed both task and responses perceptually, providing more evidence for a within - person model than for a person-situation theory of task design. The study in which task and organizational characteristics were both changed offered no support for the notion that tasks and organizational characteristics influence responses. However, a number of studies suggested the importance of examining tasks in social milieus. Although the job characteristics approach is directed to questions of changing jobs, most of the investigations of task - response relations did not address this question. Tasks were not assessed independently of individuals providing response data. Very little has been revealed about person - situation relations and the effects of objective job changes.

#### INSTRUMENTATION :

The measures of various constructs cannot be independent of the models to which they relate. According to job characteristics model task perceptions are a function of objective task characteristics and an individuals responsiveness to tasks is a function of the need strength of the individual. In the literature on instrumentation no such attempt is observed to develop task assessments consistent with such a model. Much of the instrument development in the job characteristics approach has neglected the theoretical implication of various analytical strategies.

The job characteristics model required that employees must be high on at least two core task dimensions (Hackman & Oldham, 1980) if the correlation between GNS and other responses are expected to be positive. Many other investigations have been conducted to combine task dimensions into a unidimensional predictors of job outcomes (Arnold & House, 1980; Brief, Wallace & Aldag, 1976; Duncham, 1976; Peters & Champous, 1980). The predictive utilities of various combination strategies were unlikely to be substantially different. However, the appropriateness and comprehensiveness of the four or five perceptual task dimensions have gone unquestioned in several studies. There does not seem to be any agreement about whether an overall job complexity score is desirable and, if so, what combinatorial strategy to use. The validity of task dimension measures has been assessed by exploratory factor analysis. However, the convergent - discriminant validity of these measures should also be investigated with multi-trait/multimethod research (Bagozzi, 1978, 1980; Campbell & Fiske, 1959). Construct validity research in this area is sparse. Organizationally based job classification systems, rather than more empirical methods, have been used to assess antecedents of job characteristic. A few studies have examined additional determinants of JDS responses (O'Reilly & Caldwell, 1979; White & Mitchell, 1979). These studies have emphasized that



incumbent responses to the JDS reflect incumbents' task perceptions and only indirectly measure task characteristics. Thus, the construct validity of the JDS as a measure of job characteristics appears to be less than ideal.

Sims, Szilagyi, and Keller (1976) developed a perceptual measure of six job attributes, the Job Characteristic Index (JCI). In this research the basic JDS dimensions were only slightly modified in the JCI and were assumed to be inclusive of all important task dimensions. The JCI included 22 Likert-type items that were subjected to an orthogonal factor analysis within each of a number of occupational categories. The factor congruency scores were then compared across subsamples. Thus variance within occupational categories was examined and other than variance across jobs.

Pierce and Dunham (1978) compared the JDS and JCI on their supposedly overlapping scales, using a sample of 155 insurance company employees. Chronbach Alphas were higher for JCI than for the JDS scales. A four factor oblique rotation confirmed the four a priori dimensions (variety, autonomy, feedback, and identity) of the JCI but not the JDS.

The psychometric properties of the GNS have been given less attention than those of perceptual task assessments.

Aldog and Brief (1975, 1979) found high correlations among work motivation, growth satisfaction, and endorsement of the Protestant work ethic. Low correlations were observed between the two original formats of the GNS scale, suggesting that they measure different constructs.

Stone, Ganster, Woodman, and Fusilier (1979) compared responses to the Personality Research Form (Jackson, 1967), the survey of work values (Wollack, Goodale, Wijting, & Smith, 1971) and the two formats (preference and job choice) of the GNS measure. Internal consistencies (Cronback alphas and Kuder - Richardson 20s) were not striking across the scales. The two GNS scales were uncorrelated with the study of Work Values Scales, and there were significant but low correlations of both scales with scales in the Personality Research Form. All in all, reliability evidence for the most frequently used GNS assessments was unimpressive. Furthermore, these studies did little to address questions of validity.

The various studies and literature reviewed in this chapter show that the programme on job-enrichment does result in improvement of work performance and decrease in turnover, absenteeism, dissatisfaction, lack of motivation, etc. Most of the studies have failed to specify the nature of relationships which were studied. It was also observed

that the studies on enrichment failed to consider other organizational and contextual variables. In India studies on enrichment are very few and they are not strictly comparable with the present research. In the present research the Job Diagnostic Survey (JDS) model of job enrichment is tested in both public and private sector organizations. It is expected that the postulated relationships among the variables in the model will vary in these two types of organizations. The literature reviewed here will certainly serve as background information in interpreting the results.

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