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THE MOTIVATIONAL PROPERTIES OF TASKS

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Abstract

Although job enrichment has become a popular strategy for improving the quality of working life, there is an absence of a clear understanding of how jobs influence the level of employee motivation. What appears to be needed is a conceptual model which can both guide research and provide the practitioner with greater insight into the motivational implications of changes in the nature of jobs. This paper reviews six conceptual models of the motivational properties of tasks which have been presented recently in the literature. Each model is examined in terms of its scope and specificity in explaining motivational processes associated with task design. Following this examination, specific suggestions are offered for future research aimed at improving the utility of such models to both investigators and managers.

Dating from the time of the industrial revolution, concern has been shown by managers for discovering new and more efficient methods of task accomplishment. During the scientific management movement of the early 1900's, this concern reached its zenith as managers increasingly fractionated employees' jobs in attempts to maximize productivity. The human relations movement that followed raised concern for the effects of such job fractionation on both employee attitudes and performance. Today, many contemporary approaches to management on the shop floor have attempted to satisfy the concerns of both scientific management and the human relations advocates by stressing the need to improve simultaneously "concern for people" and "concern for production". Many see job redesign or job enrichment as the answer to this dilemma.

Increasing interest in job design has prompted considerable research on the effects of task variations on employee performance and attitudes. These studies have generally been of two types. First, a small number of field experiments have been conducted to evaluate longitudinally the actual implementation of job enrichment in organizations. Although these studies vary widely in terms of methodological sophistication, the results generally--but not always--suggest that increased employee motivation and satisfaction often result from job enrichment (Ford, 1973; Lawler, Hackman & Kaufman, 1973; Paul, Robertson & Herzberg, 1969; Umstot, Bell & Mitchell, in press). Unfortunately, studies employing field experimental procedures are relatively rare and some of the largest and best known job redesign efforts in organizations have never been systematically evaluated. In many

instances, we are left with anecdotal evidence (generally positive) upon which to evaluate job enrichment as an organizational change strategy.

The second and more common type of study involves examining the relationships between perceived job characteristics and employee reactions at a single point in time. The general conclusion that emerges from these correlational studies is that "enriched" jobs lead to reduced turnover and absenteeism, improved job satisfaction, improved quality of performance and--in some but certainly not all cases--improved productivity (Brief & Aldag, 1975; Hackman & Lawler, 1971; Porter & Steers, 1973; Steers & Porter, 1974; Turner & Lawrence, 1965). Although such studies abound, the type of research methodology typically employed suggests that caution be exercised in interpreting the results. Correlating perceived job characteristics with employee satisfaction at one point in time provides a static comparison and thus tells us little about how employees react to changes in their jobs. Further, the practice of asking job incumbents to describe their jobs along a number of prespecified dimensions (e.g., amount of variety, autonomy and feedback) makes it difficult to assess whether such perceptual measures reflect the actual objective characteristics of the job or characteristics of the individual providing the perceptions. For instance, it is not possible to determine whether enriched jobs lead to increased satisfaction (as most authors suggest), or alternatively, whether highly satisfied employees described their job more positively (i.e., more challenging) than those who are less satisfied.

While empirical research examining the impact of task characteristics on employee reactions is extensive, theoretical or conceptual models which attempt to predict and explain the results of this research remain relatively limited. Emphasis on repeated correlational studies of perceived task characteristics at the expense of model development has impeded our understanding of this important area of organizational behavior. In the absence of such models, it is difficult for both the researcher and the practicing manager to develop a comprehensive understanding of how changes in the job affect employee motivation. Further, it is not possible to state precisely under what circumstances changes in the job would be expected to result in improved satisfaction and performance and when such positive outcomes would not be expected. Increased attention to these issues is necessary if job design efforts are to move beyond the simple assertion that "job enrichment works".

CONCEPTUAL MODELS OF TASK DESIGN

In view of the limited amount of work that has been done on conceptual models of the motivational properties of tasks, it appears that two contributions would assist in our understanding of this important topic. First, it would be useful to summarize and evaluate the currently available models of task motivation. Second, based on this analysis, it would be helpful to identify specific directions for future research and model-building. This paper is aimed at contributing toward both of these needs.

Six existing conceptual models will be reviewed here which explicitly examine the way in which task design influences motivation, performance,

and satisfaction. These models are summarized in Table 1. Each model will be evaluated in terms of its utility for understanding motivational processes. Following this review, conclusions will be drawn and recommendations for future research will be suggested.

Two-Factor Theory

Herzberg (1968) was one of the first to suggest a model of the motivational properties of task design based on his two-factor theory of satisfactions. In a study of the determinants of job satisfaction, Herzberg and his associates found that individuals tended to describe satisfying experiences on the job in terms of factors that were intrinsic to the content of the job itself. Termed "motivators", the factors most commonly associated with high satisfaction were achievement, recognition, the work itself, responsibility, advancement, and growth (Herzberg, 1966). The implications of this research for task design are fairly obvious. If one wishes to improve motivation and satisfaction, jobs should be designed to allow greater scope for personal achievement and recognition, more challenging and responsible work, and increased opportunities for advancement and growth.

Although Herzberg's approach to job enrichment has proven intuitively appealing to many managers, his work has been criticized by researchers as deficient in several major respects. First, King (1970) identified five alternative interpretations of the theory and noted that each implied a different criterion of "proof" to establish the empirical validity of

INSERT TABLE 1 ABOUT HERE

the model. This suggests that Herzberg failed to provide an unambiguous statement of the two-factor theory. Second, Herzberg failed to take individual differences into consideration in predicting the outcomes of job enrichment (Hulin, 1971). This failure and the somewhat limited sampling of jobs in his original study has made the theory difficult to reconcile with the results of other research (Vroom, 1964). Third, Herzberg's theory has generally not been supported by subsequent research using different research designs. Finally, the model provides little in the way of an explanation of how such factors as responsibility and achievement result in higher satisfaction, let alone higher motivation.

For these reasons, there is considerable doubt about the efficacy of the two-factor theory as either a model of the determinants of job satisfaction/dissatisfaction or as an empirically-verified guide for job redesign efforts. Herzberg's theoretical statement and research have, however, stimulated a significant amount of interest in job design on the part of others and this may represent one of his most significant contributions to the field.

Requisite Task Attributes Model

Turner and Lawrence (1965) developed a classification of job characteristics that were believed to lead to higher levels of satisfaction and attendance on the job. Six important task characteristics were identified as a result of a two-way classification based on Homan's elements

of behavior (activities, interactions, and sentiments) and the prescribed versus discretionary aspects of the task. The job characteristics resulting from the classification were: (1) variety; (2) autonomy; (3) responsibility; (4) knowledge and skill; (5) optional interaction; and (6) required interaction. Turner and Lawrence measured incumbents' perceptions of their jobs on each of these dimensions and developed a measure of "task scope" (i.e., a weighted index of the job characteristics). They found that task scope was positively related to attendance but had no simple relationship to job satisfaction. When individual differences in the form of urban/rural background were taken into account, however, it was found that employees from urban settings were more satisfied with low scope (i.e., "unenriched") jobs and employees with rural backgrounds reported higher satisfaction in high scope (i.e., "enriched") jobs. In addition, their model takes into consideration the influence of situational factors (e.g., satisfaction with supervision, work group, etc.) as moderating the task scope-employee reaction relationship.

Although Turner and Lawrence's work has proven to be influential among researchers in subsequent job design studies, their model fails to adequately take into account many process considerations. Specifically, it does not provide clues concerning the process through which task characteristics influence employee attitudes and behavior. In addition, the task characteristics identified in their research were based on an a priori classification scheme and little attention was given to establishing empirically their importance to respondents. In the absence of such in-

formation, it is not possible to conclude that the six task attributes they identified are the most important ones from a motivational standpoint. Despite these concerns, however, the work of Turner and Lawrence has made a substantial contribution to subsequent job design efforts by focusing attention on the need to consider the influence of individual and situational differences on the reaction of employees to their jobs.

Socio-Technical Systems Model

Trist (1970) and his colleagues have for a number of years been engaged in research on the relationship between the individual, the job, and the larger organizational system. In their work they have been highly critical of the "machine theory of organizations" inherent in scientific management for its general failure to consider the social and psychological consequences of job design. Rather than stress either the technological requirements of the organization or the needs of the individual, they suggest that the important concern in job design is optimizing the match between the two. This is done largely through an analysis of group processes as they relate to individual outcomes.

Trist offered a set of general socio-technical principles of job design that are based on the "psychological requirements" of the job. These psychological requirements are described as the need for the job to provide;

- (1) reasonably demanding content;
- (2) an opportunity to learn;
- (3) some autonomy or discretion in decision making;
- (4) social support and recognition;
- (5) a relationship between what is produced and the employee's social life;
- and (6) the feeling that the job leads to a desirable future.

The general psychological requirements of the job translate into several job design "principles". These principles include: (1) an optimum variety of tasks within the job; (2) a meaningful pattern of tasks that relate to a single overall task; (3) an optimum length of work cycles; (4) discretion in setting standards of performance and feedback on results; (5) extending the boundary of the job to include "boundary tasks"; (6) tasks that require some degree of skill and are worthy of respect in the community; and (7) tasks that make a perceivable contribution to the overall product.

The socio-technical approach facilitates our understanding of task design by focusing attention on the interaction between the individuals, groups, and the nature of the tasks as they relate to other subsystems and the larger organization. Before this approach can serve as a useful guide to research and practice, however, further refinements in the theory appear necessary. First, consideration must be given to specifically identifying how individual differences affect employee reactions to task design. For example, it is not clear whether the psychological requirements of the job are the same for each individual. Second, greater specificity is necessary concerning the influence of situational factors on task design-outcome relationships. Although the socio-technical approach differentiates between several types of systems in terms of their impact on task design, the discussion remains somewhat abstract. Third, the theory does not specify how task characteristics influence employee reactions and thus more attention needs to be given to process considerations. The origin and empirical validity of the psychological requirements of the job as one

process explanation remains somewhat in doubt. Finally, as it stands the theory is difficult to translate into specific organizational change strategies designed to improve satisfaction and performance. For instance, it is not clear what is meant by "optimum" variety or a "meaningful" pattern of tasks. Before the socio-technical approach can serve as a useful guide to research and practice it appears necessary to define operationally the task design principles and build increased specificity into the theory.

Job Diagnostic Model

Hackman, Oldham, Janson and Purdy (1974) recently presented a new strategy for job enrichment that builds upon the earlier work of Turner and Lawrence (1965) and Hackman and Lawler (1971). Their model includes both content and process considerations and represents one of the most detailed approaches to the implementation of job enrichment in the work place.

The model begins by identifying the "critical psychological states" associated with high levels of internal motivation, satisfaction, and quality of performance. These psychological states are believed to be: (1) experienced "meaningfulness" of the job; (2) experienced "responsibility" for outcomes; and (3) knowledge of actual results. When these psychological states are present, they are thought to lead to such outcomes in the work place as low absenteeism and turnover and high levels of internal motivation, satisfaction and quality of performance.

Five characteristics of the job, or "core job dimensions", are viewed as leading to these psychological states. Skill variety (i.e., tasks that

challenge the individual's skills and abilities), task identity (i.e., completing a "whole" and identifiable piece of work) and task significance (i.e., impact on the lives of others) lead to experienced meaningfulness of the job (see Table 1). The experienced responsibility for outcome on the job is dependent on the amount of autonomy or discretion given the employee. Finally, feedback concerning the effectiveness of the employee's efforts provides a knowledge of results on the job. The model further specifies that these job characteristics are built into the task through five "implementing concepts" of job design: (1) combining tasks; (2) forming natural work units; (3) establishing client relationships; (4) vertical loading; and (5) opening feedback channels.

Thus, the model specifies that job characteristics lead to critical psychological states which, in turn, lead to positive outcomes in the work place. However, Hackman and associates are careful to point out that this may not be true for all employees or in every work situation. The extent to which job enrichment can be expected to have positive consequences is dependent on the "growth need strengths" of employees. The model predicts that employees who have a strong need for personal accomplishment, learning, challenge and growth will respond favorably to job enrichment. Individuals who are low in growth need strengths will not respond in a similar fashion.

In subsequent research, Oldham, Hackman and Pearce (1975) have examined the moderating influence of several situational factors on the task characteristic-employee reaction relationship. They found that employees who are satisfied with the work context (e.g., pay, job security, co-workers and

supervision) were more likely to respond favorably to enriched jobs. Such results are suggestive of a "two-factor" theory of job design (cf., Herzberg, 1966) in which employee reactions to contextual factors are viewed as a necessary but insufficient condition for satisfaction with the work itself to result from enriched jobs (content factors).

Although the Hackman and Oldham (1975) model is fairly recent, it has in a short time made an important contribution to the field of job design. For the practicing manager, it provides a detailed procedure for conducting a diagnosis of the work place to determine whether or not job enrichment is a useful organizational change strategy. From a conceptual standpoint, however, their model appears incomplete. In particular, the explanation of how task characteristics "cause" high internal motivation and satisfaction does not appear to be well integrated with current theory and research on motivation. Moreover, the empirical status of such concepts as "experienced meaningfulness of the job" and "experienced responsibility" is somewhat ambiguous. Even if it were possible to develop operational definitions of such concepts, the present model does not go far enough in specifying how such "critical psychological states" affect motivation. Even so, the work of Hackman and Oldham represents a major advancement over the earlier and more simplistic prescriptions for job design (e.g., "job enrichment works"). Before their theory can be widely accepted as a general model of the effects of job design, however, more research is clearly needed (see discussion below).

Activation Theory

This model represents a physiological process explanation for the effects of task design on performance and affective responses in the work

place. Scott (1966) reviewed the results of research on brain stimulation which suggests that the degree of "activation" of an individual is a major determinant of a number of behaviors. Activation is defined as "the degree of excitation of the brain stem reticular formation" (Scott, 1966) and it has been found to have a curvilinear relationship to performance on a variety of tasks. Research has shown that performance suffers at very low or very high levels of activation. Optimal behavioral efficiency is predicted when activation is at a moderate or "characteristic" level. The "characteristic" activation level is viewed as a function of biochemical structure and thus can be expected to differ across individuals.

Based on this line of research, it can be seen that jobs which are dull, repetitive and call for habitual responses (i.e., provide low levels of activation) may lead to decreased levels of performance. As jobs are enriched to include more variety and responsibility, activation would be expected to increase to a point that more closely approaches an optimal level in terms of behavioral efficiency and thus result in improved levels of performance.

Activation theory presents an intriguing explanation for the effects of job design on individual reactions. However, at this time its utility in the work place appears limited. As Scott concludes, at its present level of development activation theory does not allow precise statements to be made concerning how or when to enrich jobs in the work place. Research is needed to provide measures of activation level and to define the "optimal" level of activation for each individual before this theory can serve as a useful guide in organizations.

Expectancy Theory

A model that appears to hold particular promise for understanding how task variations influence motivation is expectancy theory (Porter and Lawler, 1968, Vroom, 1964). Expectancy theory posits that human behavior in organizations is a function of three related factors: (1) an employee's belief that effort on his part will lead to a desired level of performance (termed "effort → performance expectancy"); (2) an employee's belief that such performance, if attained, will lead to the receipt of desired rewards (termed "performance → outcome expectancies"); and (3) the value or "valence" associated with performing the task, task accomplishment, and extrinsic rewards resulting from performance. It is generally believed that when these factors are combined they reflect the employee's desire or motivation to perform the task.

Expectancy theory represents one of the most comprehensive motivational models that has been developed to date. For this reason, it appears to be a valuable model for explaining why variations in task characteristics influence an employee's motivation to perform. An expectancy theory approach to job design was first suggested by Lawler (1969) and later by Hackman and Lawler (1971), Staw (1976) and Schwab and Cummings (1976). Staw's (1976) expectancy theory model of the effects of task design on employee motivation and attitudes is discussed here because it is felt that it represents the most explicit explanation of the effects of task design on employee motivation and performance.

Staw (1976) like others, views job enrichment as a strategy designed to increase a person's level of intrinsic motivation by altering the characteristics of the work they perform. Such an approach can be contrasted with techniques designed to increase extrinsic motivation (as can be seen in many wage incentive, or piece-rate, pay plans). As a motivational strategy, increasing intrinsic motivation appears to have several advantages over extrinsic approaches. First, there is a reduced need for extrinsic rewards to motivate behavior and this may represent a cost savings to the organization. Second, there is a reduced need to monitor task behavior since the motivation to perform at high levels has been internalized by the individual. Finally, such intrinsic approaches avoid many of the problems that have been associated with the introduction of incentive systems in organizations (see, e.g., Lawler, 1971).

Within an expectancy theory framework, task characteristics are viewed as influencing motivation through three factors: (1) the intrinsic valence associated with task behavior; (2) the intrinsic valence associated with task accomplishment; and (3) the perceived probability that effort will lead to task accomplishment. This influence process is shown in Figure 1.

INSERT FIGURE 1 ABOUT HERE

As suggested by this diagram, greater employee effort and performance is expected when task characteristics "cue" motivationally relevant responses in terms of expectancies and valences. Such a conclusion follows from existing research on expectancy theory.

A consideration of the amount of autonomy on the job provides one example of how task characteristics can influence motivation within an expectancy theory framework. Previous research has fairly consistently pointed to a positive relationship between autonomy and employee performance (Brief & Aldag, 1975; Hackman & Lawler, 1971; Turner & Lawrence, 1965). The explanation for this finding is relatively straight-forward. An employee with more autonomy on the job has by definition greater control over the means of task accomplishment. Fewer outside sources of influence and interference exist. Consequently, it would be logical to assume that the employee's beliefs that effort will lead to actual task performance ($E \rightarrow P$ expectancy) should be higher than for an employee who has less autonomy. In addition, increased autonomy may also increase the performance-outcome expectancy due to the increased ownership of the task by the employee. Given greater control over the task, the act of task accomplishment may lead to increased intrinsic rewards. In other words, the employee would have a feeling of accomplishing something important and worthwhile. Finally, autonomy may in some cases increase the valence which an employee attaches to successful task accomplishment. Research by Vroom (1960) and others suggests that when an employee plays a more central role in developing the means to task accomplishment, he or she may become more ego involved in the outcome and place a higher value on actual accomplishment.

Another example is provided by the task characteristic of feedback on performance. Some research has shown that providing employees with greater knowledge of results on task performance tends to lead to increases in both

effort and performance (Cummings, Schwab & Rosen, 1971; Locke, Cartledge & Knerr, 1970; Steers & Porter, 1974). It is likely that feedback on performance serves a gyroscopic function vis-a-vis expectancies by continually clarifying effort-performance beliefs. The more feedback an individual receives, the greater will be the understanding of the relationship between effort and performance. Moreover, feedback may at times serve as an extrinsic reward (e.g., supervisory praise) for employees by providing positive reinforcement for task performance.

Similar arguments can be advanced for the other task characteristics (e.g., variety, task identity, social interaction opportunities, etc.). The general conclusion to be drawn from an expectancy theory approach to job design is that variations in an employee's task characteristics influence effort because they affect the major components which determine the willingness to perform. In general, higher levels of performance can be expected when employees demonstrate increased intrinsic motivations.

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The above review demonstrates that at least six conceptually distinct models of task motivation can be identified. While the origins of these models are diverse, their major thrust remains the same: to explain the manner in which task variations influence employee effort and performance. The a priori assumption of all of the models is that task design represents an important factor in determining such behavior.

When the various models are examined and compared, several important conclusions emerge. Recommendations for future research on the topic follow directly from these conclusions:

1. Content vs. process models. First, no firm conclusion can be drawn concerning which model is "best". The answer to this question lies in the uses to which one wishes to put the model. Some models, like the two-factor theory, tend to offer very specific recommendations for managers who want to redesign jobs. These models, called "content theories" by Campbell et al. (1970), simply identify those variables (e.g., achievement, recognition, etc.) which have been found to be related to performance. They say little about the underlying processes by which such variables influence behavior. Other models, like activation theory and expectancy theory, place greater emphasis on understanding motivational processes and the enduring relationships between major variables. These models are called "process theories" by Campbell et al. While useful from an analytical standpoint, process theories are often too abstract to be of much use to managers. What is needed in the future are models which simultaneously satisfy both the need to understand motivational processes and the need for action recommendations for management. The models proposed by Hackman and Oldham (1975) and Trist (1970) have attempted such an integration, but more explicit formulations are necessary.

2. Derivation and importance of task characteristics. Second, the derivation and importance of the various task characteristics remain somewhat

ambiguous. The task characteristics that are typically studied are based most often on conceptual (rather than empirical) classification schemes. Such non-empirical approaches raise questions concerning the relevance of the selected task characteristics for motivation and performance. Perhaps other more important characteristics exist which were not defined into the model. Moreover, few serious attempts have been made by the investigators to examine the relative importance of each task characteristic in influencing behavior. While the determination of such weights is easily accomplished, it remains to be done.

3. Role of individual differences. Three of the six models allow for little, if any, explicit recognition of the role of individual differences as potential moderators of the effects of task design (two-factor theory, socio-technical systems, and activation theory). Of those models that do explicitly recognize such differences, little systematic examination of their magnitude or diversity is provided. (The one possible exception here is expectancy theory which lends itself easily to an examination of the role of individual differences). Most often, we are simply told that individuals with "higher-order need strengths" respond more positively to enriched jobs than individuals without such need strengths. Such a conclusion is ambiguous both in terms of identifying what is involved in such a loose "construct" and in terms of suggesting implications for management.

Future research should examine a wider array of individual factors which potentially influence the way in which employees respond to their jobs. Several such factors can be identified. To begin with, the level of skills

and abilities of employees may influence the way in which they react to changes in the job. For individuals whose skill and ability levels are low relative to the demands of the job, providing greater amounts of autonomy and variety may increase frustration in task accomplishment and actually result in decreased performance.

In addition, Dubin's (1956) research on the central life interests of industrial workers suggests that not all employees seek intrinsic satisfaction in the work setting. Providing increased opportunities for intrinsic satisfaction through job enrichment may not result in higher levels of motivation and satisfaction for individuals with a "non-work" central life interest. Such individuals are more likely to bring an instrumental orientation to the job and are believed to seek primary satisfaction in settings other than the work place.

Finally, individual differences may also affect the influence of task characteristics through the perceptual process (see, for example, Schwab & Cummings, 1976). In other words, different employees may see the same job in quite different ways in terms of task scope. This suggests that individual differences may act as an independent variable influencing perceived task characteristics, instead of a variable moderating the relationship between task characteristics and motivational outcomes. Although there is presently little research bearing on this question, employee personality characteristics and satisfaction with the job may influence how the task is perceived independent of its actual characteristics. If, as has been suggested by Vroom (1964) and others, employees behave in accordance with

their perceptions of a job (instead of how it "really" is), then perceptual variations across employees represent an important concern for both researchers and managers. For instance, if a high need achiever does not believe that the job is challenging, he or she may lower expectancies and valences accordingly. Thus, not only do managers have a responsibility to redesign jobs so they are more motivating to employees, in addition they must see to it that employees realize the extent and nature of such changes. If job redesign does not result in a more enriched job in the eyes of the employee, there is little reason to believe they will respond in the predicted fashion (Lawler et al., 1973).

4. Role of situational differences. Besides individual differences, variations in the immediate work environment must also be considered as potentially important moderators of the effects of task design. It was pointed out earlier that several authors (Hackman et al., 1974; Trist, 1970; Turner & Lawrence, 1965) have recognized that job redesign efforts must be viewed within the context of the subsystem in which it takes place. For instance, increasing the amount of autonomy on a job already characterized by high role ambiguity may result in increased frustration and decreased satisfaction and performance. Further, increasing the amount of feedback and knowledge of results on very simple and repetitive tasks may not increase performance because it does not provide information that is not already available to the job incumbent.

Moreover, there is a great deal of research which demonstrates that work group and supervisory relations represent important influences on how

employees react to their job. For instance, research on employee compensation (Lawler, 1971) has repeatedly shown how peer group pressure, a situational factor, can negate the motivational potential of a piece-rate incentive system and result in employees intentionally restricting their income. Similar consequences may follow when job enrichment is introduced into a work environment characterized by a high degree of employee suspicion and distrust of management's intentions. Moreover, negative attitudes by employees toward one aspect of the work environment (e.g., supervision) may generalize into negative attitudes toward the job as a whole, again affecting effort and performance (Oldham et al. 1975). At a minimum, employees may expect that increased demands placed upon them as a consequence of job enrichment should be met with compensation increases (Foy & Gadon, 1976). Perhaps it is because of such concerns that many job redesign efforts (particularly the most successful ones) have only been attempted in specially chosen locations or were preceded by extensive employee selection processes and attempts to develop a suitable "climate" into which job changes were to be introduced (Fein, 1974).

5. Lack of empirical support. A disturbing feature found in all six models is the dearth of empirical support. Theories are often accompanied by a scant array of correlational findings of modest magnitude. Based on such meager data, support for the model is claimed. Instead of continuing in this path, it seems more beneficial to treat each of the models as a set of hypotheses and to test such hypotheses under experimental (as opposed to correlational) conditions. Moreover, it would be most helpful

to examine several of the models simultaneously to determine their respective power in predicting effort and performance. Schwab and Cummings (1976) have taken a useful first step here by suggesting several specific hypotheses regarding expectancy theory. The next logical step is to examine how well these and other hypotheses are supported in a variety of organizational settings.

6. Costs of job redesign. Finally, future research should examine the costs associated with job redesign efforts relative to the benefits that are likely to accrue. There is a notable tendency to stress the positive benefits to the organization that are likely to result from enriching jobs (e.g., reduced turnover and absenteeism, increased performance). However, there is evidence that such efforts may also result in increased training time and costs of production (Fein, 1974). From the organization's perspective, the critical question is whether the benefits to be derived from job enrichment outweigh the costs involved in implementing and maintaining the program. It is doubtful whether organizational change strategies such as job enrichment can continue to be taken seriously when fundamental questions of costs and benefits are ignored.

In summary, what is needed at this time to advance our understanding of the motivational properties of tasks is a greater willingness by researchers to move beyond simplistic research designs and a theoretical analysis and spend the time necessary to develop more sophisticated and empirically validated models of the effects of task characteristics. In

addition, practicing managers must exhibit a greater openness to experiment with job design changes and systematically evaluate the outcomes of such efforts. In other words, what is needed in the future are more rigorous studies, not just more studies. Such efforts would benefit not only the field of organizational behavior but would also have useful implications for the practice of management.

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FOOTNOTE

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Table 1
Conceptual Models of the Motivational Properties of Tasks

Models	Basic Components of the Model
Two-Factor Theory	Job Content/Motivator Factors → High Motivation High Satisfaction High Performance
Requisite Task Attributes Model	Requisite Task Attributes → Individual Differences → Attendance Situational Differences → Satisfaction
Socio-Technical Systems Model	Psychological Requirements of Tasks → Job Design Principles → High Performance Low Work Stoppages Organizational Systems
Job Diagnostic Model	Implementing Concepts → Core Job Dimensions → Critical Psychological States → Personal and Work Outcomes Employee Growth Needs Strengths and Situational Factors
Activation Theory	Job Characteristics → Activation Level → Performance Affective Responses
Expectancy Theory	(See Figure 1)

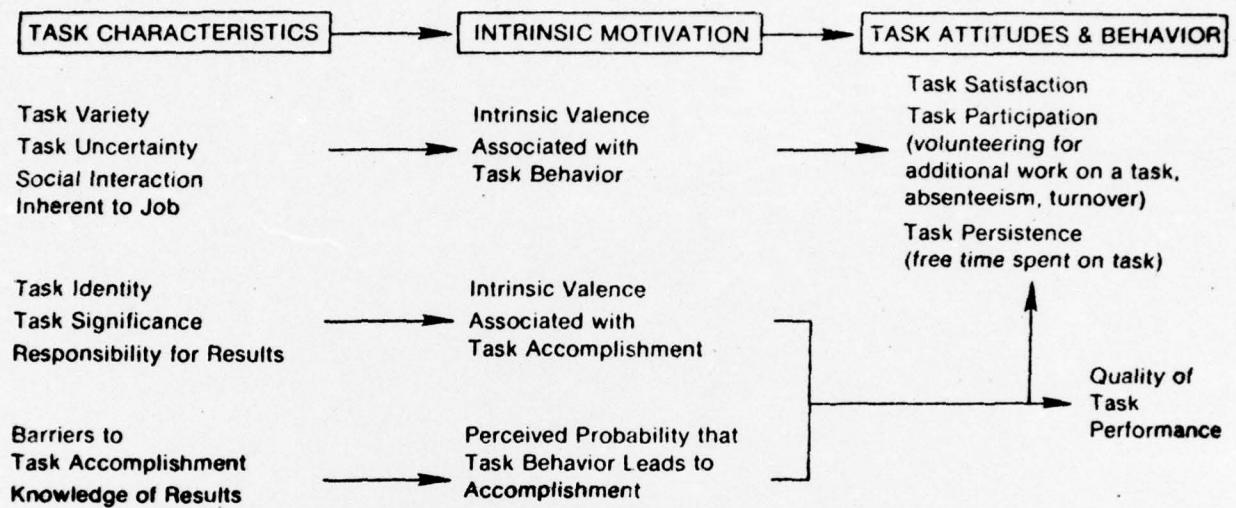


Figure 1. Expectancy theory model of the motivational properties of tasks (Staw, 1976)

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