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## Conditions Under Which Employees Respond Positively to Enriched Work

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This research tests the moderating effects of (a) employee growth need strength and (b) level of satisfaction with the work context on employee responses to enriched work. Data were collected from 201 employees who work on 25 jobs in a bank. Results show that employees who have strong growth needs and also are satisfied with the work context (i.e., with their pay, job security, co-workers, and supervisors) respond more positively to enriched jobs than do employees who have weak needs for growth and/or who are dissatisfied with the work context. Implications for the practice of work redesign are discussed.

Several studies have demonstrated that "enriched" jobs (i.e., jobs that are complex and challenging) often enhance the motivation, satisfaction, and productivity of people at work (see Hackman, in press-b, and Katzell & Yankelovich, in press, chap. 6, for reviews). We believe that it is now appropriate to examine the specific *circumstances* under which enriched jobs have the most (and least) beneficial impact on the people who do them.

This article examines two variables that can affect the degree to which employees respond positively to enriched work: the need states of the employees and their level of satisfaction with the work context—such as pay, job security, and relationships with peers and supervisors. It is predicted that when employees have weak needs for personal growth and/or when they are dissatisfied with contextual factors, the typically positive effects of enriched work are attenuated.

### *Effects of Job Characteristics*

To test the prediction sketched above, it is necessary to have a reliable and valid indicator of how enriched various jobs are. The measure used in this research is derived from a model of job design recently developed and tested by Hackman and Oldham (in press).

Specifically, Hackman and Oldham identify five measurable characteristics of jobs which, when present, improve employee work motivation, satisfaction, and performance. They are

1. Skill variety. The degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the person.

2. Task identity. The degree to which a job requires completion of a "whole" and identifiable piece of work—that is, doing a job from beginning to end with a visible outcome.

3. Task significance. The degree to which a job has a substantial impact on the lives or work of other people—whether in the immediate organization or in the external environment.

4. Autonomy. The degree to which a job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out.

5. Feedback. The degree to which carrying

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out the activities required by a job results in the individual obtaining direct and clear information about the effectiveness of his or her performance.

Following the Hackman-Oldham model, these five characteristics can be combined into a single index that reflects the overall potential of a job to prompt high internal work motivation on the part of job incumbents. This index (called the Motivating Potential Score or MPS) has been shown to relate positively to a number of beneficial work outcomes, such as employee satisfaction, motivation, productivity, and attendance (Hackman & Oldham, in press). MPS is used throughout this article to assess how "enriched" jobs are. It is computed as follows:

$$\text{MPS} = \left[ \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \right] \times \text{Autonomy} \times \text{Feedback}.$$

#### *Satisfaction with the Work Context*

The two theories currently most widely used in redesigning work are sociotechnical systems theory (Davis & Trist, 1974; Trist, Higgin, Murray, & Pollock, 1963) and motivation-hygiene theory (Herzberg, 1966, 1968). Both theories address the interdependencies between the work itself and the organizational context that surrounds the work. Yet neither approach identifies the specific circumstances under which the context of the work diminishes (or enhances) the likelihood that employees would respond positively to inherently motivating work *content*. Moreover, although numerous commentators (e.g., Beer, in press; Hackman, in press-a; Katzell & Yankelovich, in press; Sirota & Wolfson, 1972) have cautioned that the health of the broader work system must be carefully examined before improvements in jobs are installed, little presently is known about what specific aspects of the job context are problematic under what circumstances.

One contextual factor that may moderate the impact of enriched work is the degree to which the immediate work environment is satisfying to employees. Specifically, when employees are not satisfied with their pay, job

security, co-workers, and/or supervisors, their ability to respond positively to a job high in objective motivating potential may be severely diminished.

The reason is that active dissatisfaction with such contextual factors distracts the attention of employees from the work itself and orients their energy instead toward coping with the experienced problems. Only when such problems are resolved (or psychologically adapted to) do employees become able to experience, appreciate, and respond to the inherent "richness" of their work. For individuals relatively satisfied with the work context, on the other hand, more energy should be available for use in behaviorally exploring the rewards that can be gained from work on an enriched job.

It is expected, therefore, that the relationship between the objective motivating potential of a job and positive work outcomes should be stronger for individuals who are relatively satisfied with their pay, job security, co-workers, and/or supervisors than for people who are actively dissatisfied with these aspects of the work context. Recent findings by Oldham (in press) provide some support for this prediction—albeit only for satisfaction with interpersonal relationships on the job.

#### *Individual Growth Need Strength*

A number of studies have shown that individual growth need strength moderates the relationship between the motivating potential of a job and employee reactions to it (Brief & Aldag, 1975; Hackman & Lawler, 1971; Hackman & Oldham, in press; Oldham, in press; Wanous, 1974; Zierden, 1975). Specifically, individuals who have a high need for personal growth and development at work have been shown to respond more positively to enriched work than people with low growth need strength—apparently because high growth need individuals more strongly value the internal rewards that can be obtained from good performance on a challenging task. The present study provides an opportunity to replicate further this finding while examining for the first time how employees' need states and their level of satisfaction with the work context *combine* to affect reactions to enriched work.

### Summary

This research examines the moderating effects of (a) individual growth need strength and (b) satisfaction with aspects of the work context, separately and in combination, on the relationship between the objective motivating potential of a job (MPS) and positive work outcomes—specifically, internal work motivation and high productivity.

The predictions are as follows:

1. When employees are well-satisfied with the work context *and* have strong needs for growth, MPS–outcome relationships are strong and positive.

2. When employees are well-satisfied with the work context but have weak needs for growth, MPS–outcome relationships are moderately weak. The same prediction is made for employees who are dissatisfied with the contextual factors but have strong needs for growth. In both of these conditions the moderating variables counteract one another to prevent strong, positive MPS–outcome relationships from occurring.

3. Finally, when employees are dissatisfied with the work context *and* have weak needs for growth, MPS–outcome relationships are near zero. Under such circumstances, employees are expected to be simultaneously distracted from whatever richness exists in the work itself (because of their dissatisfaction with contextual factors) and oriented toward satisfactions other than those that can come from effective performance on enriched tasks (because of their low growth need strength). As a result, the level of motivating potential of the job should have no major effect on work motivation or productivity. Indeed, it is conceivable under such circumstances that a job high in motivating potential could actually impair work motivation and productivity—because employees whose needs and energies are elsewhere could find themselves psychologically overwhelmed by the demands of the work.

## METHOD

### Research Setting and Subjects

The research was conducted in a large metropolitan bank and involved employees who worked on 25 different jobs. All jobs were clerical in nature, at ap-

proximately the same level in the organization, and required little customer contact.

Data were collected from 242 employees. However, information from 41 respondents was incomplete, leaving the data from 201 subjects for use in analyses. The median age of the employees was 31, ranging from 18 to 63 years. The median education level was a high school diploma and ranged from having some high school education to holding a graduate degree. Sixty-four percent of the participants were women.

### Procedure

The primary data collection instrument used in the study was the Job Diagnostic Survey (JDS). Properties of the JDS (including descriptions of item format, content, and reliabilities of many of the scales) are detailed elsewhere (Hackman & Oldham, 1974, 1975).

All data were collected on site between November 1974 and January 1975. Procedural steps are outlined below.

1. The JDS was administered to groups of employees (ranging from 7 to 15 at a time). Before completing the questionnaire, each participant was assigned an identification number that appeared in the upper left corner of the questionnaire. Subjects were informed that the number was to be used by the researchers only to match questionnaire responses with archival data provided by the organization. All subjects were assured that individual responses would be held in confidence and were given the option of not participating. One participant refused to complete the questionnaire.

2. Supervisors of the employees completed the Job Rating Form (Hackman & Oldham, 1974), which measures the characteristics of the focal job as viewed by individuals who do not work on that job. This was done to provide an indirect test of the objectivity of employee descriptions of the characteristics of their own jobs. The Job Rating Form consists of job descriptive items nearly identical in form and content to those in the JDS itself.

3. Performance, salary, tenure, and biographical data were obtained from company records.

### Measures

Means, standard deviations, and internal consistency reliabilities of all measures are presented in Table 1; the intercorrelations are presented in Table 2. All variables in the JDS are measured on 7-point scales with the exception of growth need strength which is measured on a 5-point scale. Descriptions of the measures are provided below.

*Job characteristics.* Employees described the amount of skill variety, autonomy, task identity, task significance, and feedback in their jobs on the JDS. Three questionnaire items tapped each of these characteristics. The items measuring each job dimension were averaged to arrive at a set of five summary scores. A Motivating Potential Score was then formed for each employee by combining measures of the

TABLE 1  
MEANS, STANDARD DEVIATIONS, AND INTERNAL  
CONSISTENCY RELIABILITIES FOR  
ALL VARIABLES

Variable	<i>M</i>	<i>SD</i>	Internal consistency reliability <sup>a</sup>
Motivating Potential Score	76.57	53.19	—
Growth Need Strength	4.24	.68	.64
Pay Satisfaction	3.80	1.54	.82
Security Satisfaction	4.16	1.34	.62
Social Satisfaction	4.91	1.03	.52
Supervisory Satisfaction	4.60	1.52	.83
Sum of Contextual Factors	17.31	4.41	—
Performance	3.13	.80	—
Salary Corrected for Tenure	-66.04	1,858.27	—
Internal Motivation	5.16	1.01	.71

Note. *N* = 201.

<sup>a</sup>Reliabilities were computed by obtaining the median interitem correlation for all items which are scored on each scale and then adjusting the median by Spearman-Brown procedures to obtain an estimate of the reliability of the scale score.

five job characteristics according to the formula described previously.

Supervisor assessments of the focal jobs were compared to employee descriptions. There were nine jobs for which more than one set of supervisory ratings were available. The MPS ratings obtained from each group (i.e., supervisors and employees) were averaged for each of the nine jobs, and then correlations between supervisors and employees were computed using jobs as observations. A correlation of .85 was obtained, indicating substantial agreement on the job characteristics. Evidently, employees were able to provide rather accurate descriptions of the characteristics of their jobs. Because of this finding and the fact that it can reasonably be argued that it is the employee's *perception* of the objective job that is causal of his/her reaction to it (cf. Hackman & Lawler, 1971; Hackman and Oldham, in press), em-

ployee-generated measures are used in all further analyses.

*Moderating variables.* Questions are included in the JDS to measure both the employee growth need strength and satisfaction with the work context. The measure of growth need strength was obtained from the "job choice" section of the JDS. Briefly, employees indicate their relative preference for 12 pairs of hypothetical jobs (e.g., "a job where you are often required to make important decisions" vs. "a job with many pleasant people to work with"). For each item, a job with characteristics relevant to growth need satisfaction is paired with a job having the potential for satisfying one of a variety of other needs. Item scores are averaged to form the growth need index.

Employees also reported on the JDS their level of satisfaction with the pay, security, supervisory, and social (i.e., co-workers) aspects of the organization. Two or three items tapped the satisfaction with each of these contextual factors. Items measuring each variable were averaged to obtain summary scores.

Finally, an index was formed to measure overall satisfaction with the contextual factors. This index consists of the sum of the scores obtained from the four scales measuring specific aspects of the work context described above.

*Outcomes.* The outcome measures are as follows: employee performance effectiveness, salary (corrected for tenure in the organization), and internal work motivation.

The measure of performance effectiveness is the most recent overall evaluation of the employee by his/her immediate supervisor. Employees were rated on a 5-point scale ranging from "unacceptable" (scored 1) to "outstanding" (scored 5).

Because participants in the study were from nearly identical grade levels in the organization, it was possible to use salary data to derive a supplementary measure of performance. For individuals in a given grade in the subject organization, salary is determined by two factors: merit and tenure with the organization. Therefore, by statistically removing the effects of tenure on current salary (using covariance procedures) one obtains an estimate of the overall per-

TABLE 2  
INTERCORRELATIONS AMONG ALL VARIABLES

Variable	1	2	3	4	5	6	7	8	9	10
1. Motivating Potential Score	—									
2. Growth Need Strength	-.08	—								
3. Pay Satisfaction	.00	.06	—							
4. Security Satisfaction	.27	-.01	.42	—						
5. Social Satisfaction	.31	-.03	.32	.38	—					
6. Supervisory Satisfaction	.33	-.09	.35	.48	.48	—				
7. Sum of Contextual Factors	.29	-.02	.73	.77	.68	.79	—			
8. Performance	.16	-.02	-.07	-.01	-.05	-.17	-.11	—		
9. Salary Corrected for Tenure	.22	.11	-.02	.02	.00	-.01	.13	.19	—	
10. Internal Motivation	.36	.00	.15	.30	.34	.32	.36	-.06	.08	—

Note. *N* = 201. Correlations >.14 are significant at the .05 level (two-tailed).

formance effectiveness of the individual. The measure of salary corrected for tenure should provide a somewhat more stable estimate of performance than the supervisory ratings (described above), because supervisory ratings refer only to performance during the most recent assessment period.

Internal work motivation is the degree to which an individual experiences positive internal feelings when performing effectively on the job. A sample item is as follows: "I feel a great sense of personal satisfaction when I do this job well." Six JDS items are averaged to form the measure of internal work motivation.

## RESULTS

Results are reported in three sections. First, a test of the moderating effect of growth needs on the relationship between the job's Motivating Potential Score and the outcome measures is reported. Next, a separate test for the moderating effect of the contextual variables on relationships between MPS and the effectiveness measures is presented. Finally, a test of the *combined* moderating effect of growth needs and contextual factors is reported.

### *Test of the Moderating Effect of Growth Need Strength*

It was predicted that individual growth needs would moderate the relationships between the job characteristics and outcome measures; employees highly desirous of growth satisfactions at work were expected to perform significantly better on jobs with high motivating potential than employees not desirous of such growth satisfactions.

Hypothesis testing proceeded in two stages. First, following Hackman and Oldham (in press), employees in the top and bottom quartiles on the growth need strength measure were identified. Next, correlations between the Motivating Potential Score and outcome measures were computed separately for these two groups. If the hypothesis is correct, correlation coefficients should be higher for employees in the top quartile of the distribution of growth need scores than for those in the bottom quartile.

The results reported in Table 3 provide moderate support for the hypothesis. All differences between correlations for high versus low growth need employees are in the predicted direction. For one outcome measure

TABLE 3  
RELATIONSHIPS BETWEEN MOTIVATING POTENTIAL SCORE AND OUTCOME MEASURES AS MODERATED BY EMPLOYEE GROWTH NEED STRENGTH

Outcome measure	Growth Need Strength		
	Low	High	$z^a$
Performance	.00	.25*	1.31
Salary Corrected for Tenure	.03	.44**	2.26*
Internal Motivation	.21	.36**	.84

Note.  $n_s = 49$  and  $64$ , respectively, in the low and high growth need groups;  $n_s$  are unequal because of tied scores.

<sup>a</sup> Refers to the significance of the difference between  $r_s$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

(i.e., salary) the difference between correlations is significant. Also, as can be seen by comparing the correlations in Table 3 with those for all 201 subjects (presented in Table 2), the relationships between MPS and the outcome measures (with the exception of internal motivation) for employees with high growth needs are substantially higher than the same relationships for all employees in the sample.

### *Test of the Moderating Effect of Contextual Satisfaction*

It was predicted that individual satisfaction with the context of the job would moderate relationships between the job characteristics and the outcome measures. Specifically, employees satisfied with their pay, security, co-workers, and supervisors in the organization should exhibit higher motivation and performance when working on jobs with high motivating potential than individuals dissatisfied with these contextual factors.

To test this prediction, employees falling above and below the median on each of the work context measures (as well as on the summary index) were identified. Correlations were then computed between MPS and the outcome measures separately for these groups. For each relationship tested, it was predicted that the correlation would be higher for individuals high on contextual satisfaction than for employees who are relatively dissatisfied with the work context.

Results shown in Table 4 provide some support for the hypothesis. With two exceptions, the differences between the correlation coefficients for individuals satisfied with the contextual factors and those dissatisfied with the work context are in the predicted direction. Many of the differences are statistically significant. Additionally, all relationships between MPS and the outcome measures for employees satisfied with the work context are positive and significant, and in most cases greater in magnitude than the same relationships for all individuals in the sample (see Table 2).

*Test of the Combined Moderating Effect of Growth Need Strength and Contextual Satisfaction*

It was predicted that individuals who are desirous of growth satisfactions at work and satisfied with their work context respond more positively to jobs with high motivating potential than employees with weak growth needs who are dissatisfied with the work context. To test this hypothesis, correlations were calculated between MPS and the various outcome measures for employees in four separate subgroups in the sample. These subgroups consist of the following: (a) employees scoring in the lowest quartile on the growth needs scale and employees below the median on the particular contextual variable; (b) employees with low growth need strength and above the median on the contextual variable; (c) employees in the top quartile of growth needs and below the median on the contextual factor; and (d) individuals with high growth

needs and above the median on the contextual variable.

If the hypothesis is to receive support, substantially stronger relationships between MPS and the outcome measures should be present in subgroup d than in subgroup a. Results testing this hypothesis are shown in Table 5.

The results strongly support the hypothesis. With one exception, the relationships between MPS and the performance measures are significantly higher for employees satisfied with a particular contextual factor and having high growth needs than for individuals dissatisfied with the work context and having low growth needs.

The moderating effect was not as strong for the measure of internal motivation. Although most differences were in the predicted direction, only one reached statistical significance.

A closer examination of Table 5 reveals that the correlations between MPS and the outcome measures were positive and often of a very high magnitude in the subgroups consisting of employees with high growth needs and high contextual satisfactions. However, correlation coefficients for employees with low growth needs and low contextual satisfactions were in many cases negative and sometimes substantially so. Employees in the other groups (i.e., high growth needs and low contextual satisfactions; low growth needs and high contextual satisfactions) typically fell between these two extremes.

These results suggest that individuals are most likely to perform well on an enriched job when they are desirous of growth satisfactions and satisfied with the organization's

TABLE 4  
RELATIONSHIPS BETWEEN MOTIVATING POTENTIAL SCORE AND OUTCOME MEASURES AS MODERATED BY SATISFACTION WITH CONTEXTUAL FACTORS

Outcome measure	Sum of 4 Contextual Factors			Pay Satisfaction			Security Satisfaction			Social Satisfaction			Supervisory Satisfaction		
	Low	High	z <sup>a</sup>	Low	High	z <sup>a</sup>	Low	High	z <sup>a</sup>	Low	High	z <sup>a</sup>	Low	High	z <sup>a</sup>
Performance	.13	.26**	.95	.10	.21**	.78	.08	.25**	1.22	.02	.33**	2.24*	.08	.29**	1.52
Salary Corrected for Tenure	.13	.30**	1.24	.24*	.20*	-.29	.20*	.23*	.22	.05	.31**	1.88*	.17	.29**	.89
Internal Motivation	.25*	.36**	.85	.25*	.47**	1.77*	.33**	.32**	-.07	.26*	.33**	.53	.26**	.34**	.61

Note. n = 91-110 in each group.  
<sup>a</sup> Refers to the significance of the difference between r<sub>s</sub>.  
 \* p < .05.  
 \*\* p < .01.

TABLE 5  
RELATIONSHIPS BETWEEN MOTIVATING POTENTIAL SCORE AND OUTCOME MEASURES AS MODERATED  
BY GROWTH NEED STRENGTH AND SATISFACTION WITH CONTEXTUAL FACTORS

Outcome measure	Growth Needs (GN)/Sum of 4 Contextual Factors (Sum)				$z^a$
	Low GN/ Low Sum	Low GN/ High Sum	High GN/ Low Sum	High GN/ High Sum	
Performance	-.19	.08	.23	.32*	1.81*
Salary Corrected for Tenure	-.06	.19	.32*	.50**	2.11*
Internal Motivation	.15	.22	.35*	.24	.32
Outcome measure	Growth Needs/Pay Satisfaction (PS)				$z^a$
	Low GN/ Low PS	Low GN/ High PS	High GN/ Low PS	High GN/ High PS	
Performance	.02	.00	.07	.47**	1.71*
Salary Corrected for Tenure	.07	.00	.45**	.44**	1.40
Internal Motivation	.08	.32*	.30*	.52**	1.73*
Outcome measure	Growth Needs/Security Satisfaction (SecS)				$z^a$
	Low GN/ Low SecS	Low GN/ High SecS	High GN/ Low SecS	High GN/ High SecS	
Performance	-.22	.28	.12	.39*	2.11*
Salary Corrected for Tenure	-.02	.12	.38**	.48**	1.80*
Internal Motivation	.34	.06	.37**	.34*	.00
Outcome measure	Growth Needs/Social Satisfaction (SocS)				$z^a$
	Low GN/ Low SocS	Low GN/ High SocS	High GN/ Low SocS	High GN/ High SocS	
Performance	-.43*	.41*	.27	.31*	2.67**
Salary Corrected for Tenure	-.18	.27	.31*	.52**	2.59**
Internal Motivation	.20	.18	.34*	.24	.14
Outcome measure	Growth Needs/Supervisory Satisfaction (SupS)				$z^a$
	Low GN/ Low SupS	Low GN/ High SupS	High GN/ Low SupS	High GN/ High SupS	
Performance	-.32	.21	.28*	.39*	2.41**
Salary Corrected for Tenure	.00	.08	.32*	.53**	1.91*
Internal Motivation	.11	.30	.34*	.20	.30

Note.  $n = 22-41$  in each group.

<sup>a</sup> Refers to the significance of the difference between  $r$ s in columns 1 and 4.

\*  $p < .05$ .

\*\*  $p < .01$ .

internal environment. If only one of these two conditions is present, a less strong relationship between the job characteristics and the outcome measures is expected. Finally, if an individual has low growth need strength *and* is dissatisfied with work context, a complex job may have an adverse effect on that person's performance.

## DISCUSSION

Results of this study provide support for the proposition that growth needs and the work context (individually and in combinations) moderate the relationship between job complexity and outcome measures. Individuals who are desirous of growth satisfactions at work tend to perform at higher levels when



working on complex, challenging jobs than employees not desirous of growth satisfactions, replicating earlier research in this area. Additionally, employees tend to respond more positively to complex, challenging work when they are satisfied with various aspects of the work context than when they are dissatisfied with contextual factors. Specifically, employees who are relatively satisfied with their pay and security in the organization, the treatment they receive from their supervisor, and their co-workers tend to perform at the highest levels when working on jobs with high motivating potential.

The strongest results in the study were obtained when growth needs and the work context moderators were considered in combination. Substantially stronger relationships were obtained between the motivating potential of a job and the effectiveness measures when employees were highly desirous of growth satisfaction *and* satisfied with the contextual factors than when either or both of these moderators were at low levels. Indeed, when both low growth needs and dissatisfaction with the work context were present, *negative* relationships between job complexity and the performance measures often were obtained. Apparently when individuals are both low in desire for growth satisfactions *and* dissatisfied with the work context they find a complex, challenging job far out of line with their own needs and perform relatively poorly on it. By the same token, when these individuals are faced with a simple and routine (i.e., low MPS) job, they react positively to it—probably for two related reasons. First, such a job fits their personal needs better (which are for other-than-growth satisfactions), and second, because the job is not challenging, individuals can carry out the work satisfactorily and still have energy remaining to use in dealing with the dissatisfying work context.

The implications of the findings for change are straightforward. They suggest that prior to enriching jobs, practitioners should carefully assess both individual differences in needs and contextual sources of dissatisfaction. If employees lack desire for growth need satisfaction and/or are found to be substantially dissatisfied with pay, security, co-workers, or supervisors, then implementation of job

changes should be done with caution—and perhaps should be delayed until the contextual dissatisfaction can be remedied.

Such implications are reminiscent of the sociotechnical systems approach to work redesign, in that it argues that work systems must be substantially in congruence with one another for job improvements to have their intended beneficial effects. The findings extend and add specificity to the general implications of the sociotechnical systems approach, however, in two ways. First, they identify a number of specific aspects of the work context for which employee dissatisfaction is demonstrably important, if job improvements are to lead to improved work outcomes. And second, they point out the importance of individual differences in needs as a factor that interacts with job characteristics and with the rest of the social system in determining the eventual impact of work redesign. The findings suggest, therefore, that sociotechnical theory might be usefully expanded to encompass a full sociotechnical-*personal* approach to the redesign of work.

Although the results of this research have been discussed as if it were unequivocal that job characteristics are causal of the observed outcomes, the study was not a true experiment, and causal interpretations are not technically justified. It might be, for example, that effective, motivated employees perceive their work as especially complex and challenging (and therefore describe it as such on the JDS) when (a) they are satisfied with various contextual factors and (b) they are personally strongly desirous of growth satisfactions at work. The presence of this combined moderating effect in the data (coupled with a high correlation between employee assessments of their jobs and independent descriptions of the same jobs), however, casts doubt on the plausibility of such a “reverse causality” interpretation.<sup>1</sup>

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<sup>1</sup>To test further the possibility that results reported in this article were affected by method variance common to employee perceptions of their jobs and their reactions to them, correlations were computed between supervisory descriptions of employee jobs and the outcome measures. The outcome mea-

Nevertheless, the need for experimental studies of work redesign is pressing, and some such studies are now beginning to appear (Robey, 1974; Umstot, 1975). Especially useful would be studies that examine the longitudinal effects of enriched work on employee effectiveness, including both how job effects are moderated by individual differences and how individual differences may themselves be affected by changes in jobs.

ures were averaged across employees holding each of the nine jobs for which more than one supervisory description was available. The correlations between supervisory-assessed MPS and the outcome measures for those jobs are .23, .37, and .40, respectively, for performance effectiveness, internal motivation, and salary corrected for tenure. These are closely comparable to the values obtained when employee job descriptions were used (.16, .36, and .22, as shown in Table 2). Thus, it appears that the relationships between the job characteristics and the outcome measures are not explainable in terms of common method variance.

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