Employee Performance as a Function of Job Orientation and Job Design

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Article abstract

Two weaknesses in previous job design research were examined: the overuse of self-report measurements and the questionable use of Growth Need Strength as a moderator between job characteristics and employee performance. Job orientation was hypothesized to moderate the relationship between job characteristics and employee performance. Results indicated that job orientation moderated the relationship between job characteristics and quality of performance but not between job characteristics and quantity of performance, job involvement and satisfaction with work.
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Over the years, approaches to the study of job design have changed considerably. Early approaches proposed improved job performance through scientific study and job simplification (Steers and Spencer, 1977). More recent approaches have emphasized the need for a proper fit between the individual and the job. The focus of these more recent approaches is on the identification of individual differences which determine which employee is likely to react positively to what kind of job. In a recent review of task complexity, Campbell (1988) concluded that a consideration of both task and person characteristics is necessary to account for actual task performance.

A number of authors have raised doubts about the appropriateness of the methodology used to measure individual differences and job characteristics simultaneously and about the role of individual differences in the context of job design research (O’Connor, Rudolf & Peters, 1980; SALES, C.A., E. LEVANONI and R. KNOOP, School of Administrative Studies, Brock University, St-Catherines, Ontario.

** The authors would like to thank Shoukry D. Saleh for his help in preparing an earlier draft of this manuscript.
O'Reilly, Parlette & Bloom, 1980; Roberts & Glick, 1981; Schwab & Cummings, 1976; White, 1978; Campbell, 1988). Both issues will be addressed in the present paper.

The methodological issue concentrates on the utilization of self-report instruments in measuring job characteristics. A common proposition in job design studies is that individual differences moderate employee responses to objective job characteristics (Pierce & Dunham, 1978). However, in the majority of studies, job characteristics are measured by having job incumbents describe their own jobs. Campbell (1988) distinguished between the objective complexity of a task and the subjective complexity that is experienced by the task doer. Thus, it appears likely that the self-reported properties of the job confound objective job characteristics and individual differences (O'Connor, Rudolf & Peters, 1980). The consequence is that similar job characteristics are defined in different ways by different employees.

Salancik and Pfeffer (1977) have also questioned the validity of most job design studies using self-report data. They claim that the findings of these studies can be explained by consistency and priming effects. Consistency effects refer to tendencies of individuals to be consistent in their statements about the world. According to this argument, if employees state that their jobs have the characteristics measured, they will most likely describe their attitudes toward these jobs in a positive manner. This may occur because such attitudes would be consistent with the positive description of the job rather than because such attitudes actually exist.

The priming effect refers to the impact of the order of scales in a questionnaire on respondents' answers. Specifically, Salancik and Pfeffer (1977) argue that when researchers ask employees first about the characteristics of their jobs, they «prime» them to answer the affective measures according to salient facets of the job. Thus, the substantial correlations frequently reported in job design studies might not be indicative of true relationships but might be rather an artifact of the order of the scales in the questionnaire used in a particular study. Further, the likelihood of observing significant moderator effects is decreased (O'Connor, Rudolf & Peters, 1980). To overcome these deficiencies, job characteristics in the present study were measured separately by the employees' immediate supervisors.

Within the context of job design research, growth need strength (GNS) is one of the most frequently tested individual difference variables. This construct reflects the individual's desire for personal feelings of accomplishment and development. The empirical evidence regarding the moderator-effect of GNS on the job characteristics-employee output relationship is mixed. Because of the various instruments used to measure GNS, it is dif-
difficult to compare the results of various studies. In addition, there is a lack of clarity about the meaning of GNS (Steers & Spencer, 1977). Thus, the usefulness of GNS as a moderator variable in job design research is in doubt.

We are suggesting that job orientation (Saleh, 1964) may be a useful substitute for GNS in job design research. Saleh and Pasricha (1975) consider job orientation an individual tendency, a relatively stable attribute based on the individual's value system. Two major categories of job orientation have been identified, intrinsic (IOs) and extrinsic orientation (EOs). It appears that intrinsically-oriented individuals are more task or job content oriented; extrinsically-oriented individuals, in contrast, appear to be more maintenance or job context oriented (Saleh & Pasricha, 1975). Thus, intrinsically-oriented employees prefer such work values as responsibility, advancement and challenge; extrinsically-oriented employees prefer such work values as good working conditions, equitable salary and good relationship with supervisor. Slocum (1971) suggests that intrinsic rewards are associated with the satisfaction of higher order needs, and extrinsic rewards with lower order needs as discussed by Maslow. Saleh and Grygier (1969) found that IOs had a stronger tendency to be independent, needing less guidance and reassurance than EOs. Other characteristics attributed to IOs in the same study were: flexibility, initiative, self-reliance, dislike of rigidity of approach, and imagination. Further, Saleh and Hyde (1969) found that those who were intrinsically-oriented showed higher levels of general job satisfaction than extrinsically-oriented individuals.

A paucity of research exists on the importance of job orientation on task design. In one laboratory study, Saleh (1971) found that the presence of supervisors was the main source of arousal for EOs. In contrast, IOs' main sources of arousal were the presence of supervisors and the task itself. Saleh suggested that individuals would prefer and perhaps be more attentive to work on a task which is consonant with their dominant orientation. According to the Yerkes-Dodson Law (1908) of performance and arousal, it is conceivable that for IOs, the arousal induced by close supervision added to that induced by a complex job may result in arousal which exceeds the level necessary for optimal performance (Saleh, 1971). In the case of the simple job, the arousal induced by close supervision may not add significantly to that induced by the task (Saleh, 1971).

In the present study, it is hypothesized that the job orientation of employees acts as a moderator between job characteristics and work or personal outcome variables i.e., job performance, satisfaction with the work itself, and job involvement.
METHOD

Sample and Setting

The sample consisted of 333 employees in 47 different work groups and their immediate supervisors across 18 different organizations. The sample of subordinates consisted of approximately equal numbers of males and females. In contrast, 81 percent of the supervisors were male. The majority of subjects (both supervisors and subordinates) had at least a Grade 12 education. Questionnaires were completed in each organization within one hour, on company time.

Instruments

The independent variables, the five job characteristics, were measured with the Job Rating Form of the Job Diagnostic Survey (Hackman & Oldham, 1975). The Job Rating Form for subordinates was completed by each immediate supervisor.

The moderator variable, job orientation, was measured with the short form of the Job Attitude Scale (Saleh, 1964). This scale was completed by employees.

With regard to the dependent variables, job performance was rated for subordinates by each immediate supervisor using the Job Performance Scale (Sims and Szilagyi, 1975). Satisfaction with the work itself was measured with the Job Descriptive Index (Smith, Kendall & Hulin, 1967), and job involvement with the short form of the Job Involvement Scale (Lodahl & Kejner, 1965). The two latter scales were completed by the subordinates. Table 1 describes the number of items in each scale, the descriptive statistics and the psychometric properties of the variables.

Data Analysis

Arnold (1982) proposed two kinds of moderator effects: moderator effects on the degree of the relationship between two variables and moderator effects on the form of the relationship between two variables. The former should be tested by correlational analysis and the latter should be tested by hierarchical regression analysis. To test the moderator effect of job orientation on the degree of the relationship between job characteristics and the dependent variables, hierarchical regression analyses were used.
The procedure involved two sequential steps: 1. entering all main effects and 2. entering all interaction terms. The analytical procedure employed here is different from the moderated regression technique suggested by Zedeck (1971) in that it does not test for the significance of the unique contribution of the moderator variable in the particular analysis. This stage was omitted because Arnold and Evans (1979) demonstrated that such a contribution can be manipulated by a simple transformation of the scores on that or any other variable.

Table 1
Descriptive Statistics and Psychometric Properties of the Variables
(N = 328)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of items</th>
<th>Mean</th>
<th>S.D.</th>
<th>Reliability-alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Skill Variety</td>
<td>3</td>
<td>5.27</td>
<td>1.68</td>
<td>.90</td>
</tr>
<tr>
<td>2. Task Identity</td>
<td>3</td>
<td>5.23</td>
<td>1.36</td>
<td>.63</td>
</tr>
<tr>
<td>3. Task Significance</td>
<td>3</td>
<td>6.22</td>
<td>0.97</td>
<td>.70</td>
</tr>
<tr>
<td>4. Autonomy</td>
<td>3</td>
<td>5.07</td>
<td>1.43</td>
<td>.77</td>
</tr>
<tr>
<td>5. Feedback from Job</td>
<td>3</td>
<td>5.61</td>
<td>1.23</td>
<td>.85</td>
</tr>
<tr>
<td>6. Job Orientation[a]</td>
<td>60</td>
<td>29.84</td>
<td>9.38</td>
<td>.86</td>
</tr>
<tr>
<td>7. Performance</td>
<td>9</td>
<td>34.46</td>
<td>6.24</td>
<td>.92</td>
</tr>
<tr>
<td>8. Quality of Performance</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Quantity of Performance</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Job Involvement[b]</td>
<td>6</td>
<td>15.16</td>
<td>2.58</td>
<td>.72</td>
</tr>
<tr>
<td>11. Satisfaction with Work</td>
<td>18</td>
<td>35.01</td>
<td>10.13</td>
<td>.77</td>
</tr>
</tbody>
</table>

a. The job orientation scale was scored in the intrinsic orientation direction, i.e., the higher the score the more intrinsically-oriented the respondent.

b. The job involvement scale was scored such that the higher the score the lower the job involvement.

RESULTS

Table 2 shows the zero-order correlations among the variables. As in previous job design studies there is a moderate level of intercorrelation among the job characteristics.
Table 2

Intercorrelation Coefficients Among the Variables
(N = 328)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Skill Variety</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Task Identity</td>
<td>.28</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Task Significance</td>
<td>.31</td>
<td>.27</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Autonomy</td>
<td>.72</td>
<td>.46</td>
<td>.14</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Feedback from Job</td>
<td>.36</td>
<td>.60</td>
<td>.19</td>
<td>.34</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Job Orientation</td>
<td>.11</td>
<td>.07</td>
<td>-.08</td>
<td>.12</td>
<td>.03</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. General Performance</td>
<td>.22</td>
<td>.09</td>
<td>.28</td>
<td>.08</td>
<td>.32</td>
<td>-.04</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Job Involvement</td>
<td>-.05</td>
<td>.06</td>
<td>.14</td>
<td>.01</td>
<td>-.01</td>
<td>-.03</td>
<td>-.08</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>9. Satisfaction with Work</td>
<td>.32</td>
<td>.10</td>
<td>.05</td>
<td>.28</td>
<td>.09</td>
<td>-.01</td>
<td>.13</td>
<td>-.40</td>
<td>--</td>
</tr>
</tbody>
</table>

a. For a sample of this size any correlation of .09 and above is significant at $p < .05$.

The results of this study depart from those of other studies in finding a relatively high correlation between autonomy and skill variety and between feedback from the job and task identity. There are also small but significant correlations between job orientation and skill variety between job orientation and autonomy.

The results of the tests of the moderator effect of job orientation on the relationship between job characteristics and dependent variables are given in Table 3. As can be seen, the increments in the proportion of explained variance of satisfaction with work and job involvement were not statistically significant. However, the increments in explained variance of general performance and quality of performance, as a result of the five interaction terms of the regression equation, were significant at the $p < .001$ level. In the case of quantity of performance, the increment in the proportion of explained variance reached the verge of statistical significance ($p < .10$).

DISCUSSION

As hypothesized, the results show that job orientation in the present study acts as a moderator between an objective measure of five job characteristics and general performance. It appears that a job which is rated
higher with respect to job characteristics would likely be more consonant with those employees who are intrinsically-oriented. IOs would be expected to respond more positively to jobs higher in the five characteristics since these employees seek to fulfill their higher order needs through job content. The higher the job is rated on the characteristics the more the likelihood that 10 incumbents will have opportunities to realize preferred work values, ceteris paribus, e.g., cognitive processes of the task doer (Campbell & Gingrich, 1986; Shaw, 1984).

Table 3

Variance Explained in Dependent Variables
At Each Stage of the Hierarchical Regression Analysis
(N = 328)

<table>
<thead>
<tr>
<th>Variables Added to the Equation</th>
<th>Job Involvement</th>
<th>Satisfaction with Work</th>
<th>Performance Quantity</th>
<th>Performance Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Variety (SKV)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Identity (TI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Significance (TS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy (AU)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feedback, (FB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Orientation</td>
<td>.046</td>
<td>.112</td>
<td>.093</td>
<td></td>
</tr>
<tr>
<td>SKV x JO,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TI x JO,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS x JO,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU x JO,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB x JO</td>
<td>.068</td>
<td>.112</td>
<td>.122</td>
<td></td>
</tr>
</tbody>
</table>

a. \( R^2 \) increment from previous step (row) is significant \( F(5,317) = 5.39, p \leq .001 \).
b. \( R^2 \) increment from previous step (row) is significant \( F(5,317) = 6.10, p \leq .001 \).

When general performance was broken down into quality and quantity components, an interesting pattern emerged. While job orientation appeared to moderate the relationship between the five characteristics and quality of performance, it did not moderate the relationship between task complexity and quantity of performance. These results seem to be consistent with Hackman and Oldham’s model (1976) in which quality of performance, not quantity, was reported as an outcome variable predicted by the model.
The failure of job orientation in this study to moderate the relationship between the five characteristics and either satisfaction with work or job involvement is somewhat disappointing. However, the lack of significance might be explained by the fact that the immediate supervisors rated the job characteristics, while subordinates rated their own job orientation, satisfaction with work, and job involvement. Such differentials in perceptions of the job characteristics by supervisors and subordinates is discussed by Hackman and Oldham (1976). These authors performed direct quantitative comparisons among assessments made of job characteristics by the people who do the job, by their supervisors and by outside observers. They found that the five core job dimensions were most highly intercorrelated for the observers, next most for supervisors and least most for the subordinates themselves. An analysis of variance comparing the mean job dimension scores for employees, supervisors and observers revealed statistically significant mean differences for all job dimensions except skill variety and feedback from the job itself. They reported finding that typically supervisory ratings were the highest and observer ratings were the lowest. Further, they found that supervisors ratings for the dimensions task significance and feedback from agents were especially high. Hackman and Oldman concluded that the «closer» one is to the job, the better able one is to differentiate among the different job dimensions and thus researchers should obtain and pay attention to employee ratings of their own jobs in any diagnostic use of the Job Diagnostic Survey.

In the present study, we attempted to overcome some of the weaknesses in other studies by using a large, diversified sample, by giving careful attention to the correction of weaknesses in job design research: consistency effect, priming effect, and objective versus self-report measures of job characteristics; by attempting to further the understanding of individual differences in the context of job design research; and by initiating the introduction of job orientation as an alternative to GNS. It would seem that countless studies boast of correlations with job satisfaction, but fewer studies have been as successful as the present study in predicting employee performance (Pierce & Dunham, 1976).

A future direction for individual differences as moderators in job design research would seem to be in continued in depth examinations of such methodological issues as are spotlighted in the present study. If popular job design models such as the Hackman and Oldham model (1976) are to be of use to practitioners, then such models must be able to tolerate substitution of comparable variables.

One salient line of investigation may be the perceptions of fit between supervisory style and job orientation of the subordinate in the context of
task complexity. Sales, Levanoni & Saleh (1984) in a smaller sample, found a three way interaction among job orientation, task complexity and supervisory style. The strongest differences between the two orientation groups were found in the complex task condition. In this case, under close supervision, the extrinsically-oriented employees reported higher satisfaction with the work itself than the intrinsically-oriented employees, while the opposite was true under general supervision. Future research studies should use multiple reliable instruments to measure performance. They should include employee self-reports of performance and should investigate possible interactions among job orientation, task complexity and supervisory style.

Finally, future research, with a larger sample than was used in the present study, should investigate gender differences between pairs of subordinates and supervisors and resulting perceptual differentials.

REFERENCES


Relation entre la performance de l’employé, l’orientation et la structuration des tâches

Les approches contemporaines à l’étude de la structuration des tâches ont démontré la nécessité d’un ajustement approprié entre l’individu et le poste qu’il occupe. À l’occasion d’un examen récent de la complexité des tâches, un auteur concluait qu’il fallait considérer à la fois les caractéristiques de la tâche et celles de la personne pour apprécier le rendement au travail.

De nombreux auteurs ont exprimé des doutes à propos de la justesse de la méthodologie utilisée pour mesurer simultanément les différences individuelles et les caractéristiques d’un poste. Essentiellement, la méthodologie recourt à des moyens qui se fondent sur l’appréciation propre du salarié pour déterminer les caractéristiques d’une tâche. Un auteur distingue entre la complexité objective d’une tâche et la complexité subjective que le titulaire en perçoit. En conséquence, des employés différents définissent d’une façon différente les caractéristiques d’un même poste. Quelques chercheurs estiment que les individus ont tendance à s’accorder dans leurs appréciations en général. Selon ce point de vue, si les travailleurs affirment que leur poste comporte les caractéristiques cotées, il est fort probable qu’ils décriront leurs attitudes touchant celui-ci d’une manière positive. De plus, certains chercheurs soutiennent que les corrélations substantielles souvent notées dans les études en matière de conception des tâches ne peuvent pas indiquer les rapports réels, mais être plutôt le produit de l’ordre des échelles utilisées dans une étude particulière. De façon à surmonter ces déficiences, les caractéristiques des tâches ont été évalués dans la présente étude par les supérieurs immédiats des employés.
On a beaucoup appuyé sur le rôle des différences entre les individus dans les recherches en matière de structuration des tâches. La force du désir de progrès (FDP), notion abstraite traduisant l’aspiration innée de l’individu de se réaliser et de se développer, est l’une des variables relatives aux différences individuelles qui est la plus fréquemment vérifiée. Cependant, l’utilité de cette formule comme variable régulatrice dans la recherche sur la structuration des tâches a été mise en doute dans des travaux récents.

La présente étude examine l’orientation des tâches en tant que substitut à la FDP comme modérateur entre les exigences de l’emploi, le rendement, la satisfaction au travail et le degré de motivation de l’employé. L’adaptation au poste d’orientation des tâches est une tendance individuelle, un attribut relativement stable fondé sur le système des valeurs d’un individu. On peut identifier deux catégories principales d’orientation: l’une intrinsèque, où l’employé recherche les responsabilités, le défi, le progrès; l’autre, extrinsèque, lui fait préférer les bonnes conditions de travail, un salaire équitable et des relations amicales avec les contremaîtres.

L’échantillonnage de cette enquête comprenait 333 salariés appartenant à 47 groupes de travail différents et leurs contremaîtres dans 18 organisations diversifiées.

Pour chaque employé, les contremaîtres ont rempli les formulaires suivants: le formulaire de notation des emplois (lesquels évaluaient cinq caractéristiques du poste) et les neuf points de l’échelle de rendement. Pour leur part, les employés ont rempli l’échelle des comportements au travail (mesure de l’orientation des tâches), l’échelle de satisfaction au travail de l’index descriptif du poste et un court formulaire portant sur la motivation au travail.

Le processus statistique principal comprenait une régression hiérarchique. Les résultats ont indiqué que l’orientation des tâches atténuait dans une certaine mesure le rapport entre les caractéristiques du poste et le rendement en général (qualité du rendement et non quantité). On n’a remarqué aucun effet de modération en ce qui a trait au travail même et à la motivation. En ce qui touche la performance, on peut estimer que les travailleurs qui aiment les responsabilités, les défis et l’avancement réagissent d’une façon plus positive à des postes dont les exigences sont plus considérables, parce que ces individus cherchent à combler les aspirations plus hautes qu’ils découvrent dans le contenu de la tâche. Les emplois dont les exigences sont plus élevées offrent en conséquence l’occasion voulue de satisfaire leurs ambitions professionnelles, compte tenu des connaissances du titulaire.

Le manque d’orientation des tâches comme agent modérateur du rapport entre les cinq caractéristiques, d’une part, la satisfaction au travail et la motivation, d’autre part, peuvent s’expliquer parce que les contremaîtres ont évalué les caractéristiques de la tâche de leurs subordonnés, tandis que ce sont les employés eux-mêmes qui ont estimé leur degré de satisfaction et de motivation au travail. Il est normal que des divergences de perception existent entre contremaîtres et subordonnés.

À l’avenir, la recherche devrait scruter les comparaisons qu’il y a lieu d’établir entre les réactions des contremaîtres et celles de leurs subordonnés et le rôle joué par le type de direction en plus de l’orientation des tâches en tant que variable modérateur dans les études en matière de structuration des tâches.