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Occupational differences in job satisfaction

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OCCUPATIONAL DIFFERENCES
IN JOB SATISFACTION

A Thesis
Presented to
the Faculty of the Department of Psychology
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Tracy LeBlanc
December, 1992

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Occupational Differences

In Job Satisfaction

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Running Head: JOB SATISFACTION

Footnotes

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ABSTRACT

OCCUPATIONAL DIFFERENCES
IN JOB SATISFACTION

by Tracy LeBlanc

This thesis examined the relationship between components of job satisfaction and occupation in a large computer firm. Four dimensions were investigated; extrinsic (or the external working environment), role clarity, management, and intrinsic (or the work itself). The key positions of sales people, engineers, and purchasing agents were chosen as representatives of the white collar worker.

It was found that engineers and purchasing agents were significantly more extrinsically satisfied than sales people; purchasing agents were significantly more satisfied than both engineers and sales people on the other 3 scales. Although gender and tenure have been found to influence job satisfaction, this was not supported according to the results of this study.

Occupational Differences

In Job Satisfaction

There is increasing evidence that professional white collar workers are reporting feeling disenfranchised and cynical ("Morale Crisis," 1992). Roger Ord, a consultant in New York City, polled 1,200 employees in 1986 and found employee job satisfaction lower than at any other time since he began the surveys in 1980.

There are several possible reasons why job satisfaction has shown a decrease recently. The economic slowdown in the United States has had an influence on workers' job satisfaction. Attitudes toward mergers have soured as workers see an increase in upper echelon pay, while they struggle to keep their jobs. There are few positions that have security in this era of layoffs, resulting in rampant employee fear, reports Kriegal and Patler, authors of "If It Ain't Broke...Break It!" With all these dramatic changes in the work place, job satisfaction of the white collar worker has been negatively affected.

In addition to these external factors, employees' occupations appear to influence job satisfaction. Those occupations with more responsibility, prestige, and job control are associated with higher job satisfaction ratings (LaRocco, 1985). This study will examine the differences in job satisfaction between sales people,

engineers, and purchasing agents. The sales, engineering, and purchasing professionals are all vital components contributing to successful manufacturing in organizations. These three occupations were chosen because they represent critical components of the white collar worker, and the core of manufacturing in the United States.

Definition of Job Satisfaction

Job satisfaction is defined as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences (Locke, 1976). The following have been seen as necessary conditions of job satisfaction: mentally challenging work where one can cope successfully, personal interest in the work itself, receiving recognition for performance, good working conditions to facilitate the accomplishment of work goals, agents in the work place who help one attain interesting work, good pay and promotions, and similar basic values which minimize role conflict and ambiguity (Locke, 1976).

After an extensive analysis of the research, four factors necessary for job satisfaction have been proposed: (a) extrinsic dimensions, (b) role clarity, (c) management, and (d) intrinsic components. The extrinsic or external conditions are essential antecedents of satisfaction because employees are constantly evaluating their pay

and working conditions compared to other employees.

Equity, or Pay Theory, contends that employees compare their pay and work load to the value of the job itself, and to others in similar industries (Lawler, 1971). Satisfaction with pay is a function of obtained pay in relation to the employee's perceived work in relation to others holding similar jobs. For example, waste management employees have been found to be more satisfied overall than those of similar occupations with lower pay (Locke, & Whiting, 1974). The experimenters argued that higher pay influenced satisfaction levels because of these comparisons.

Role clarity is another dimension that influences job satisfaction. This component includes the perception of the work group, recognition for job performance, and having clear goals and evaluation procedures (Mayo, 1960; Roethlisberger & Dickson, 1939). Role conflict, the opposite dimension of clarity, can be defined as having expectancies that are incompatible or contradictory; whereas, role ambiguity is defined as having expectancies that are unclear, vague, or undefined. Role conflict and ambiguity have been associated with both job dissatisfaction and propensity to leave the organization (House & Rizzo, 1972; Kahn, Wolfe, Quinn, Snock, & Rosenthal, 1964).

Several models of causality have been used to outline the effects of role clarity on job satisfaction and job

roles. For example, the Bedeian and Armenakis' causal model of job satisfaction found that role conflict and ambiguity increased job related tension and propensity to leave the organization, while decreasing job satisfaction (Klenke-Hamel & Mathieu, 1990).

The highest levels of role conflict have been reported by individuals whose jobs spanned organizational boundaries (LaRocco, 1985). Evidence was also found that employees whose roles crossed organizational boundaries reported higher levels of role conflict (Kahn, et al., 1969).

An examination of interpersonal relations within the work group found that group consensus and perceptions determined job satisfaction. The influence of the work group is so strong that it moderates the perception of the work environment (O'Reilly & Caldwell, 1979). Brollier's (1985) investigation of staff members' and supervisors' contributions in a hospital found the staff's satisfaction to be derived from the work group.

Employees' perceptions of the effectiveness of the organization's management also influence satisfaction with the job. The Hawthorne studies and the Social or Human Relations movement stressed the role supervisory practices have in shaping employee attitudes (Fleishman, 1972; Homans, 1961; Likert, 1961; Whyte, 1955). The company and the employees sharing the same values

are essential to successful work relationships. These similar values help reduce uncertainty, stimulus overload, and other negative features of work interaction which, in turn, enhances job satisfaction (Schein, 1985).

There is evidence to suggest that intrinsic or internal elements of the task impacts job satisfaction levels. LaRocco (1985) found that the task structure mediates the perception of rewarding job conditions. In a study of hospital staff members, job satisfaction was derived from the employees' perception of the work itself (Brollier, 1985).

The contemporary Work Itself or Growth School emphasizes the attainment of satisfaction through growth in skill, efficacy, and responsibility made possible by mentally challenging work. It has been suggested that satisfaction with the job would only occur if individuals were allowed sufficient responsibility through challenges, interest in the work itself, and opportunities for personal development (Herzberg, Mausner, & Snyderman, 1959). Herzberg believed that growing mentally from the work itself was the single most important determinant of job satisfaction.

It is unclear from the job satisfaction research if a relationship exists between facets of occupation and job

Job Satisfaction

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satisfaction. It is also unknown whether job satisfaction reports generalize to other industries and occupations. Before any programs are implemented on a company-wide basis to improve job satisfaction, it is vital to know if they ought to be occupation-specific.

The reported job satisfaction of sales people, engineers, and purchasing agents in the computer industry was chosen for this study. The sales position is responsible for selling the product. As such, sales people are directly related to the success of the organization. Without sufficient sales, the corporation would not be able to remain in business.

Engineers are essential for the design and innovation of new products. With technology changing at an ever increasing rate, the engineer is responsible for continuous upgrades and revisions to remain competitive in a world economy.

Purchasing agents are needed to procure the materials necessary to assemble the product after it has been designed and sold. This occupation must monitor costs and inventories to ensure products are shipped out on a timely basis.

As a result of the slowdown in the United States' economy over the past decade, the purchasing agent's position has become even more important. A survey of purchasing agents found an increase in reported job

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satisfaction from 50% in 1989 to 65% in October of 1990. Purchasing agents are considered important assets in reduction of company material costs, directly affecting the bottom line. Monitoring inventories and saving money on parts procured has become even more critical to the company goals of maintaining profits. Effective manufacturing depends on the purchasing agents' procuring the correct parts, on time, and for a competitive price. All of these responsibilities of purchasing agents have a direct impact on the company's success.

This same slowdown has had a different impact on the engineers. The United States is no longer technologically superior to other countries. With the increase in foreign imports and faster rate of technological advances, they are under intense pressure to design products faster and better.

The sales people are experiencing even worse conditions. With the decrease in manufacturing, foreign products flooding the market, and the hesitancy to purchase equipment in a recessionary climate, the position of sales people is tenuous at best. The sales people are at the mercy of the company where they are trying to sell the product, and dependent on their own organization to produce a viable product. Sales people, who must interface with their organization, their potential customers,

and all people in between must experience role conflict. This lack of control and high potential for role conflict could be expected to negatively impact their job satisfaction levels.

The purpose of this study is to investigate differences in the reported job satisfaction dimensions of sales people, engineers, and purchasing agents in the computer industry. The following hypotheses will be investigated: (1) Purchasing agents will report greater satisfaction on the Overall, Intrinsic, Role Clarity, and Management dimensions followed by engineers, with sales people the least satisfied, and (2) Sales people will report greater satisfaction on the Extrinsic Scale of job satisfaction followed by engineers and purchasing agents.

The purchasing agents' roles are clearly evaluated in comparison to the other white collar, manufacturing positions. Their ability to select and monitor vendors' performance, arrange appointments and meetings, and control their commodities increases their role clarity, intrinsic, and extrinsic satisfaction.

With the sales position focused on pay as the motivating factor, it is expected they would be more satisfied than both engineers and purchasing agents with the extrinsic component of job satisfaction.

For those organizations that wish to retain competent

workers, it is critical to accurately diagnose job satisfaction levels. There is evidence that those employees who report higher job satisfaction are less absent, ill, and leave the companies less often than those with lower levels (Brayfield & Crockett, 1935; Muchinsky, 1983; Sales, 1969; Waters & Roach, 1973). With this higher job satisfaction comes lower turnover resulting in decreases in hiring and training costs.

If the first hypothesis is supported with sales people and engineers less satisfied than purchasing agents on the Overall, Intrinsic, Role Clarity, and Management dimensions, these occupations may be more at risk for health problems, absenteeism, and turnover. If these hypotheses are supported, job enrichment and redesign programs could be based on those specific areas and occupations where they were needed.

Method

Subjects

The survey was administered to a total of 9,500 employees from a large computer firm in northern California, with 5,172 responses (56%) received. The sample, chosen by the personnel department, consisted of 842 subjects (28% of the total sample): 352 sales people, 328 engineers, and 162 purchasing agents. Demographic information (tenure, gender, and occupation) for the three groups is

provided in Table 1. Subjects were previously given this survey by their own personnel department via computer terminal in October of 1990. Subjects received no compensation for their participation.

Materials

The survey, created by the organization's personnel department, was designed to study job satisfaction and to facilitate open and effective communication between management and employees. The actual survey was not included in order to maintain the organization's anonymity. This survey consisted of 20 items rated on a 5 point Likert-type scale from 1 to 5, with "1" typically representing "Not at all satisfied," to "5" representing "Highly satisfied."

A factor analysis of the survey was previously performed by the organization to determine the degree and manner in which the items were interrelated. This analysis found evidence for recombining the items into 4 job satisfaction scales: Extrinsic Satisfaction (the external job components such as pay and benefits); Role Clarity (existence of job recognition and clearly defined goals); Satisfaction with Management (including immediate and division managers); and Intrinsic Satisfaction (opportunities for self development and interest in the job itself).

The scales and items are presented in Table 2 and are discussed below.

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Table 1

Demographic Information for Sales People, Engineers, and
Purchasing Agents

Occupation	<u>Gender</u>		<u>Tenure (Years Employed)</u>	
	Male	Female	Mean	S.D.

Sales People (N=352)	326	26	4.52	1.76
	(93%)	(7%)		
Engineers (N=328)	303	25	4.55	2.30
	(94%)	(6%)		
Purchasing Agents (N=157)	115	42	5.35	2.13
	(73%)	(27%)		

Table 2

Job Satisfaction Scales Rating 1 = Very Satisfied
to 5 = Very Dissatisfied From Survey Items

<u>Scale</u>	<u>Items</u>
Overall Satisfaction	Considering everything, how satisfied are you working for X at the present time?
Extrinsic	When you compare your job to similar jobs in other companies, how do you rate: Your pay? How satisfied are you with: Your physical working conditions?
Role Clarity	How satisfied are you with: The recognition you receive for doing a good job? Indicate the extent to which you agree or disagree with the following: The morale of the people in my work group is good. My work is guided by clearly established goals and priorities set for the next evaluation period.
Management	Indicate the extent to which you agree or disagree with the following: My immediate manager encourages creativity and innovation in my work. My manager's management practices are consistent with the company's core values. Overall, how good a job do you feel is being done by: Your immediate manager? Your manager's manager? Your division's senior management (VP & Director)?

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Intrinsic

How Satisfied are you with:
Your job--the kind of work you do?
The quality of products or services
you produce?
Opportunities to develop yourself?
Indicate the extent to which you
agree or disagree with the
following:
My job is challenging and interesting.

The first facet of job satisfaction, Extrinsic Satisfaction, included subjects' ratings of their pay, benefits, the corporation itself, and physical working conditions in comparison to other similar companies. The next job satisfaction dimension, Role Clarity, consisted of subjects' ratings of how satisfied they are with the recognition received on the job, whether the work is guided by clear goals and priorities, and the morale of their work group. Satisfaction with Management, the third component of job satisfaction, consisted of subjects' ratings of whether their immediate manager encourages creativity, whether their manager's practices are consistent with company policy, and their evaluation of their immediate manager, their manager's manager, and the division's senior manager. The last job satisfaction facet, Intrinsic Satisfaction, contained subjects' ratings of satisfaction with their job, the challenge and interest in the job, their satisfaction with the quality of the products, and satisfaction with opportunities to develop themselves.

Procedure

Subjects were told the survey information was being collected to compare opinions of large groups of employees with various backgrounds, positions, and experience. Although participation was entirely voluntary, employees

were encouraged to answer all of the questions. In order to maintain anonymity, the instructions indicated that names should not be written on the survey or answer sheets. The instructions further stated that responses to the questions were "strictly confidential" and would not be used to identify any individual. Subjects were to answer all responses from their computer terminal on the answer sheet provided. Subjects were instructed to answer each question "as thoughtfully and honestly as possible." All subjects were given identical surveys to complete.

Results

For each scale, coefficient alpha estimates were calculated to measure the internal consistency of the job satisfaction scales. The Extrinsic Scale alpha was = .63, the Role Clarity Scale alpha was = .74, Management Scale alpha was = .83, and the Intrinsic Scale alpha was = .71. The internal consistency of each measure of job satisfaction had an alpha greater than .5, indicating that these items were internally consistent. Reliabilities over .50 indicate an acceptable value, according to Nunnally (1967). The mean and standard deviation of sales people, engineers, and purchasing agents were computed for overall job satisfaction and for the 4 scales (see Table 3).

Table 3

Mean and Standard Deviation : Job Satisfaction Scales
for Sales People, Engineers, and Purchasing Agents

<u>Scale</u>	<u>Occupation</u>	<u>Mean</u>	<u>S.D.</u>	<u>N</u>
Overall	Sales People	3.61	.94	349
	Engineers	3.79	.96	325
	Purchasing Agents	4.16	.97	160
Extrinsic	Sales People	3.80	.63	347
	Engineers	3.94	.58	326
	Purchasing Agents	4.05	.61	159
Role Clarity	Sales People	3.16	.86	349
	Engineers	3.14	.91	325
	Purchasing Agents	3.56	.80	160
Management	Sales People	3.40	.82	333
	Engineers	3.46	.84	311
	Purchasing Agents	3.91	.70	160
Intrinsic	Sales People	3.76	.62	347
	Engineers	3.66	.72	326
	Purchasing Agents	3.91	.59	159

Before comparing the three occupational groups on their level of job satisfaction, it was necessary to control for the possible mediating effects of gender and tenure in the organization. Therefore, for each scale two-way analysis of variance (ANOVA) was conducted with gender and tenure as the independent variables, and job satisfaction scales as the dependent variables. Results indicate no significant interaction or effect for gender or tenure on job satisfaction by occupation. These results are presented in Table 4.

In order to test the hypothesis that job satisfaction differs as a function of occupation, one-way analyses of variance (ANOVA) were used to compare sales people, engineers, and purchasing agents' ratings. In order to determine how the mean for these occupations differ, the Tukey B test was used to indicate what differences between group means are significant.

It was predicted that for the rating of Overall Satisfaction the mean for purchasing agents would be greater than the mean of engineers, and the mean for engineers greater than the mean for sales people.

The analysis of variance (ANOVA) showed a significant difference between the groups ($F(2,837)=18.45$, $p<.01$). Differences between group means were subsequently analyzed with the Tukey B test at the .01 level of significance.

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Table 4

Analysis of Covariance, Job Satisfaction Scales

Source	SS	DF	MS	F

DV=Overall Satisfaction				
Covariate Tenure	.028	1	.028	.032
Occupation	39.616	3	13.205	14.956 **
Gender	.003	1	.003	.003
Occupation by Gender	1.645	2	.822	.931
Error	686.058	777	.883	

DV=Extrinsic Satisfaction				
Covariate Tenure	.046	1	.046	.128
Occupation	8.949	2	4.475	12.422 **
Gender	.020	1	.020	.055
Occupation by Gender	1.433	2	.716	1.989
Error	279.867	777	.360	

DV=Role Clarity Satisfaction				
Covariate Tenure	2.927	1	2.927	3.926
Occupation	26.242	2	13.121	17.600 **
Gender	.037	1	.037	.050
Occupation by Gender	1.945	2	.972	1.304
Error	489.126	777	.630	

Job Satisfaction

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Source	SS	DF	MS	F

DV=Intrinsic Satisfaction				
Covariate Tenure	.909	1	.909	2.183
Occupation	6.421	2	3.210	7.709 **
Gender	.328	1	.328	.788
Occupation by Gender	1.223	2	.611	1.468
Error	323.591	777	.426	

** $p < .01$

An examination of the Overall Satisfaction Scale indicated the mean for the purchasing agents is greater than the mean for the engineers, while the mean for engineers is greater than the mean for the sales people. This result supports the hypothesis that purchasing agents are more satisfied than engineers; furthermore, engineers are more satisfied than sales people.

It was also predicted that the mean for sales people in the Extrinsic Job Satisfaction Scale would be greater than the means for engineers and purchasing agents. The analysis of variance (ANOVA) showed a significant difference between the groups ($F(2,829)=10.78, p<.01$). Further analysis with the Tukey B test revealed that the mean for the engineers and the mean for the purchasing agents is greater than the mean for the sales people (see Table 3). The means for the engineers and purchasing agents did not differ significantly. This suggests that on the Extrinsic Job Satisfaction Scale engineers and purchasing agents are more satisfied than sales people. This result does not support the hypothesis.

It was predicted that the mean for the purchasing agents in the Role Clarity, Management, and Intrinsic Job Satisfaction Scales would be greater than the means for sales people and engineers. On the Role Clarity Scale, analysis of variance (ANOVA) showed a significant

difference between the groups ($F(2,831)=14.31, p<.01$). Further analyses with the Tukey B test found that the mean for purchasing agents is greater than the mean for sales people and engineers. The mean for sales people and engineers was not significantly different.

For the Management Scale, analysis of variance (ANOVA) indicates a significant difference between the groups ($F(2,801)=16.14, p<.01$). Further analyses with the Tukey B test found that the mean for purchasing agents is greater than the mean for sales people and engineers. The mean for sales people and engineers was not significantly different.

For the Intrinsic Scale, analysis of variance (ANOVA) showed a significant difference between the groups ($F(2,829)=7.53, p<.01$). Further analyses with the Tukey B test revealed that the mean for the purchasing agents is greater than the mean for the engineers and the mean for the sales people. There was no significant difference between the mean for the sales people and the mean for the engineers. Apparently on the Role Clarity, Management, and Intrinsic dimension purchasing agents are more satisfied than both sales people and engineers, providing support for the hypothesis.

Discussion

This study examined the relationship between

4 dimensions of job satisfaction and sales people, engineers, and purchasing agents within a large computer company. The first hypothesis proposed that purchasing agents would report greater satisfaction on the Overall, Role Clarity, Management, and Intrinsic dimensions of job satisfaction followed by engineers, with sales people the least satisfied. The second hypothesis asserted that sales people would report greater satisfaction on the Extrinsic dimension than both purchasing agents and engineers.

There was evidence job satisfaction dimensions differed as a function of occupation. Results supported the first hypothesis, with purchasing agents reporting greater satisfaction on the Overall dimension, followed by engineers, with sales people reporting the lowest satisfaction. On the Role Clarity, Management, and Intrinsic dimensions, purchasing agents were significantly more satisfied than both sales people and engineers; however, there was no significant difference between the means of sales people and engineers.

Implications

These results provide evidence that job satisfaction dimensions differ as a function of occupation. Theories of job satisfaction should consider the employee group when making evaluations in the computer industry. Organizations combining measures of job satisfaction for all employees may be overlooking differences among the unique professions of sales people, engineers, and purchasing agents. These

results may also be generalizable to other industries and occupations. Valuable differences may not be found if organizations do not analyze at the occupational level.

This study also indicates that sales people and engineers are significantly less satisfied than purchasing agents. With the association between low job satisfaction and increased propensity for illness, absenteeism, and turnover, this result can have negative consequences for organizations who need to retain their workforce. Organizations ought to address the inherent differences in these professions. A job description of sales people, engineers, and purchasing agents should be obtained to compare any differences in their responsibilities.

The finding that sales people and engineers did not significantly differ on the job satisfaction dimension, other than the Overall index, may be important. The two occupations may have differed in their reported Role Clarity, Management satisfaction, and Intrinsic satisfaction prior to the slowdown in the economy, and ongoing pressures may have made them similar. It would have been advantageous to conduct longitudinal studies to investigate this possibility.

Several interpretations are possible regarding the lack of support for hypothesis two; sales people were not more satisfied than engineers and purchasing agents on

Extrinsic satisfaction. Even with significantly greater tenure, a condition positively correlated with job satisfaction, the sales people reported lower levels on every dimension. This seems contrary to what would be expected for a position traditionally financially motivated. It is possible that sales people are more satisfied on the Extrinsic dimension, but their lower overall level artificially decreased their reports. The economic slowdown may have also influenced sales. With sales people being the least satisfied on every dimension, it is critical that this occupation be analyzed further.

On nearly every index of job satisfaction the sales people and engineers are less satisfied. With the association of low job satisfaction and increased absenteeism, health problems, and turnover, these occupations are at risk. With corporations attempting to retain productive employees, it is crucial that job satisfaction remains high. Programs focusing on sales people and engineers should be emphasized. The purchasing agent's position could be used as a model to improve job satisfaction for sales people and engineers.

The survey was given via computer terminal, assuring the employees' anonymity and privacy. In order to increase internal validity and control for potential confounding variables, employee groups within the same organization

were used. The 4 job satisfaction dimensions were reliable, with excellent internal consistency.

The existence of the 4 dimensions of job satisfaction determined by the factor analysis was supported. The sales people, engineers, and purchasing agents differed on several of these job satisfaction dimensions, providing further support that job satisfaction is a multi-dimensional construct. Consequently, there is evidence that job satisfaction ought to be analyzed in terms of its individual elements, not simply using an overall measure.

Although these job satisfaction dimensions were reliable, they were limited to self-reports. Other variables that may influence satisfaction reports, such as finances, personal obligations, and availability of other jobs, were not assessed. No alternative measures of job satisfaction were used to support these findings. The fact that only one measure of job satisfaction was used for assessment weakens the validity of the study.

Although subjects were told the results of this survey would be confidential, some bias may have occurred in their responses to the items. For example, satisfaction with the overall job condition may have influenced employee reports on each dimension.

Historical effects could have had an impact on the results. Specifically, during October of 1990, when the

survey was administered, the Silicon Valley was experiencing a recession. This change in the economic climate may have affected the sales people, engineers, and purchasing agents differently. For example, the purchasing agents were needed to reschedule orders and determine when the next shipment of materials was needed. The sales people may have been having trouble selling products when organizations were restructuring, merging, or, in the worst case, declaring bankruptcy. The engineers' jobs may have been affected with projects put on hold while the computer company waited out the economic slowdown.

Conditions unique to this computer company could also differentially alter reported job satisfaction. Using the results from one organization limits the external validity of the results, and may not generalize to other companies and industries. As a result of the small proportion of female subjects in this study, existing gender differences may not have been found.

Future research ought to address measurement and design issues. In order to increase the external validity, experimenters need to expand into other organizations and industries. This increase in subjects might also result in greater numbers of women necessary to examine the possibility of gender differences in job satisfaction. Structured interviews and open-ended

questions could be conducted to determine if any additional dimension of job satisfaction ought to be included in the survey. Longitudinal studies should be continued to determine if the low job satisfaction of sales people and engineers is a result of historical effects or if it is a stable characteristic, becoming more pronounced over time.

This survey ought to be used as the first step in the assessment of satisfaction in computer companies. It can be used to specify which dimensions of the job ought to be modified to improve satisfaction for sales people, engineers, and purchasing agents. Rather than making haphazard guesses for including interviews and other measures of job satisfaction, this survey has identified conditions by occupation that need to be examined.

In conclusion, this was an exploratory study designed to stimulate further research in the area of job satisfaction and occupation in the computer industry. Although all three occupations are fairly satisfied, the sales people and engineers are significantly less satisfied than the purchasing agents. Because lower satisfaction is correlated with absenteeism, illness, and turnover, it would be advantageous for organizations to implement programs to improve Role Clarity Satisfaction, Intrinsic

Satisfaction, and Satisfaction with Management for sales people and engineers.

A follow-up survey with structured interviews should be conducted to further clarify these dimensions of job satisfaction. Job enrichment and redesigned programs could be implemented based on these additional measures.

References

- Brayfield, A. H., & Crockett, W. H. (1955). Employee attitudes and employee performance. Psychological Bulletin, 52, 396-424.
- Brollier, C. (1985). Managerial leadership and staff OTR satisfaction. The Occupational Therapy Journal of Research, 5, 170-184.
- Fleishman, E. A. (1972). Manual for the supervisory behavior description questionnaire. Washington, D.C.: American Institutes for Research.
- Hackman, J. R. (1967). Group influences on individuals. Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally.
- Herzberg, F., Mausner, B., & Snyderman, B. (1959). The motivation to work. New York: Wiley.
- Homans, G. C. (1961). Social behavior: Its elementary forms. New York: Harcourt, Brace & World.
- House, R. J., & Rizzo, J. R. (1972). Role conflict and ambiguity as critical variables in a model of organizational behavior. Organizational Behavior and Human Performance, 7, 467-505.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snock, J. D., & Rosenthal, R. A. (1964). Organizational stress: Studies in role conflict and ambiguity. New York: Wiley.

- Klenke-Hamel, K. E., & Mathieu, J. B. (1990). Role strains, tension, and job satisfaction influences on employees' propensity to leave: A multi-sample replication and extension. Human Relations, 43, 791-807.
- Kriegel, R. J., & Patler, L. (1992). If It Ain't Broke... Break It!. New York: Warner Books.
- LaRocco, J. M. (1985). Effects of job conditions on worker perceptions: Ambient stimuli vs. group influence. Journal of Social Psychology, 15, 735-757.
- Lawler, E. E. (1971). Pay and organizational effectiveness. New York: McGraw-Hill.
- Likert, R. (1961). New patterns of management. New York: McGraw-Hill.
- Locke, E. A. (1976). The nature and causes of job satisfaction. Handbook of industrial and organizational psychology. Chicago: Rand McNally.
- Locke, E. A., & Whiting, R. J. (1974). Sources of satisfaction and dissatisfaction among solid waste management employees. Journal of Applied Psychology, 59, 145-156.
- Marrow, A. J., Bowers, D. G., & Seashore, S. E. (1967). Management by participation. New York: Harper and Row.
- Mayo, E. (1960). The human problems of an industrial civilization. New York: Viking Press.
- Muchinsky, P. M. (1983). Psychology applied to work: An introduction to industrial and organizational psychology.

- Homewood, IL: Dorsey Press.
- Nunnally, J. (1967). Psychometric theory. New York: McGraw-Hill.
- Ord, R. (1991). Morale Crisis. Fortune, 124, 70-80.
- O'Reilly, C. A., & Caldwell, D. F. (1979). Work group demography, social integration, and turnover. U. C. Berkeley. Administrative Science Quarterly, 34, 21-37.
- Roethlisberger, F. J., & Dickson, W. J. (1939). Management and the worker. Cambridge: Harvard University Press.
- Sales, S. M. (1969). Organizational role as a risk factor in coronary disease. Administrative Science Quarterly, 14, 325-336.
- Sales, S. M., & House, J. (1971). Job dissatisfaction as a possible risk factor in coronary heart disease. Journal of Chronic Diseases, 23, 861-873.
- Schein, E. H. (1985). Organizational culture and leadership. San Francisco: Jossey-Bass.
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). The measurement of satisfaction in work and retirement. Chicago: Rand McNally.
- Waters, L. K., & Roach, D. (1973). Job attitudes as predictors of termination and absenteeism: Consistency over time and across organizational units. Journal of Applied Psychology, 57, 341-342.

Whyte, W. F. (1955). Money and motivation. New York:
Harper and Row.