2. Expand with increases in the demand for transit,

3. Provide built-in incentives for cost control and restriction of service to nonproductive routes, and

4. Restrict the number of decision makers who must approve the pass through of funds from one agency to another.

In the cities that have experienced the most serious threats of service interruption because of financing difficulties (Washington and St. Louis), recurring violations of these principles have caused difficulties. Capital-contribution agreements in the case of the Washington Metro have been for fixed sums; with the onset of inflation these capital-contribution agreements have had to be renegotiated. This process has proved time consuming and holds open the possibility that one party or another will drop out of the next round of financing. In both these cities, decisions to fund must be made simultaneously by two state legislatures and by the local governments involved. The multiplicity of decision points can cause cash-flow problems, since the budget cycles of the various groups differ. Political differences among the jurisdictions can cause local politicians to use the transit subsidy as a club to extract policy concessions in its favor from the board of directors of the transit authority.

CONCLUSION

Multijurisdictional transit financing has been approached from many directions. Some jurisdictions

act as independent units that buy services at a predetermined rate by using general revenues. Other cities have adopted regionwide taxation, either directly through local levies or by the earmarking of state taxes collected in the areas. Some allocate service on the basis of financial contribution; others use a regional planning framework that does not allocate specific amounts of service to jurisdictions as such.

There is an increasing tendency to overspend all local resources and to look to the next-higher level of government to contribute disproportionately to further growth of the system. New fiscal imperatives may require the jurisdictions to reevaluate the low-fares policy inherent in their programs or to renegotiate local arrangements to accommodate the higher costs of public transportation.

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Job-Related Employee Attitudes in Urban Mass Transit

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Early efforts of behavioral scientists interested in finding attitude-behavior linkages on the job centered largely on job satisfaction. More recently, organizational commitment has joined job satisfaction as a focal variable and, indeed, shows greater promise as a predictor of both employee participation and worker productivity. Nonetheless, job satisfaction continues to interest organizational scholars, partly due to current societal concern about the quality of working life. Neither concept, however, seems to have found a wide audience within the transit industry. This research attempts to fill that void by assessing the degree of organizational commitment as well as patterns of job satisfaction in a sample of 1244 lower-level employees in 24 public mass transit organizations. Cross-industry comparisons are facilitated by the use of standard measures for which normative data are available. Contrary to the belief of some scholars, lower-level transit employees do become committed to their organizations. On the other hand, overall satisfaction levels were lower for transit employees than for those employed in most comparative occupations. The specific job aspects responsible for dissatisfaction tended to be those related to the rewards and employee treatment that are under control of the organization rather than the nature of the work itself. In general, the unique pattern of job concerns found among transit employees indicates that attitudinal research based on other occupations should be applied in the transit industry only with due caution.

The attempt to establish reliable and meaningful linkages between employee attitudes and on-the-job behavior has been a long-term quest of behavioral scientists. Early research in organizations tended to concentrate on linkages between job satisfaction and relevant job behaviors (i.e., productivity, attendance, and continuation of organizational

membership). More recent emphasis has centered on a global, psychological attachment to the organization, usually called organizational commitment. Despite potentially significant payoffs for the management of transportation organizations, little systematic analysis of these employee attitudes has been evident in the transit industry. This study extends the analysis of job satisfaction and organizational commitment to public mass transit organizations, with particular focus on the transit operator.

PRIOR RESEARCH

Early efforts to relate worker attitudes to work behavior focused on the concept of job satisfaction. The intuitive notion that a satisfied worker should also be a productive worker can be traced back at least as far as the famous Hawthorne studies, which were conducted by Elton Mayo and his associates in the late 1920s and early 1930s (1). Whether the Hawthorne studies were actually responsible, or they occurred at the right moment in history, they appeared concurrently with a dramatic shift of managerial mood--from an emphasis on worker motivation by manipulation of wage incentives and environmental conditions to a new approach centered on human relations.

Since the Hawthorne studies, a growing body of research has demonstrated little empirical support for the wave of a priori optimism regarding improvement of workers' performance through morale enhancement. Brayfield and Crockett (2), in a review of more than 50 carefully screened studies, questioned the assumptions that

1. Satisfied workers will demonstrate their gratitude by increased output,
2. Increased satisfaction frees creative energies in the worker, or
3. Satisfied employees internalize management's goals.

Although satisfaction and performance were often seen to covary, there was little reason, based on available evidence, to assume any simple causal link. Vroom (3) reviewed 20 studies that showed a median correlation of only 0.14 between satisfaction and performance, both for individual and group levels of analysis. Although the relationship reported by Vroom betwen satisfaction and employee participation was also less than perfect, research findings were more consistent than for studies that attempt to relate satisfaction to productivity. Vroom's review indicated a consistent negative relation between job satisfaction and voluntary turnover along with a somewhat less consistent negative relation between job satisfaction and absences. These observations were consistent with those of Herzberg and others (4), who summarized then-current research by concluding that positive job attitudes seemed more reliably related to the worker's tendency to stay with the job than to productivity.

Subsequent to Vroom's review, and particularly during the past decade, the concept of organizational commitment has joined job satisfaction as a key construct in the search for linkages between employee attitudes and work behavior. There are at least three reasons for the current popularity of this concept. Theoretically, commitment should be a reliable predictor of certain employee behaviors, particularly turnover (5). The concept also makes intuitive sense and stems from a persistent historical concern with employee loyalty. Finally, behavioral scientists are interested in commitment in its own right because exploration of this concept holds the promise of lending important insights into the way people make sense out of their relationship to their environment (6). Commitment may be a more stable employee attribute than job satisfaction, and this is a basis for assuming its closer relationship to actual behaviors (7).

The definition of organizational commitment offered by Porter and others (7) contains three major components:

1. Strong belief in and acceptance of the organization's goals,
2. Willingness to exert considerable effort on behalf of the organization, and
3. Definite desire to maintain organizational membership.

Buchanan (8, p. 533) has defined commitment as a "partisan, affective attachment to the goals and values of the organization, to one's role in relation to goals and values, and to the organization for its own sake, apart from its purely instrumental worth." The psychological bond between individuals and their organizations was conceived by Buchanan as having three components:

1. Identification--adoption as one's own of the goals and values of the organization,
2. Involvement--psychological immersion in one's work role, and
3. Loyalty--a feeling of affection for and attachment to the organization.

Recent research has indicated that commitment is not only a predictor of employee retention (5,7), but that it may also predict employee effort and performance (6,9,10). This makes good, intuitive sense. By combining the elements of Porter's (7) and Buchanan's (8) definitions of commitment, a general set of behavioral expectations, for a committed employee, can be derived. The "definite desire to maintain organizational membership" would lead, in the aggregate, to reduced turnover. Furthermore, identification with the organization and acceptance of perceived organizational goals, as well as a "willingness to exert considerable effort on behalf of the organization," would make it reasonable to expect that commitment can lead, ultimately, to higher productivity as well.

Although commitment appears to be somewhat superior to job satisfaction as a predictor of employee behavior, organizational scholars continue to express an interest in both concepts. Although inducements for research into job satisfaction may be less powerful in terms of direct payoff to the organization, there is, nevertheless, a growing concern in contemporary society over the quality of working life (11-13). Above and beyond any potential benefits to the organization, in terms of participation and performance, there appears to be a widely shared belief that improving employees' job satisfaction has value in its own right; that a part of corporate social responsibility is a responsibility toward the employee. Part of that responsibility would be to attempt to provide work that is satisfying (or at least not aversive).

The present research is concerned, therefore, with both job satisfaction and organizational commitment among lower-level transit employees. Through the use of standard survey instruments, for which normative data on a number of occupations are available, the research is able to put the level of commitment and patterns of job satisfaction and dissatisfaction of transit employees into meaningful perspective.

METHOD

Sample and Research Sites

The research was conducted as part of a larger study that investigated the impact of labor-management relations on organizational effectiveness in urban mass transit (14). A total of 28 transit organizations (fixed-route bus systems) in the western United States participated in the study. The extent of data collection differed among participant organizations depending, among other things, on each associated labor organization's concurrence in having its members surveyed. Questionnaires were administered to employees at 24 of these organizations. Archival and manager interview data were collected at all participating organizations.

The sample-pool criterion was membership in the bus operators' bargaining unit. At some of the participating transit organizations, mechanics and clerical personnel were included in the operators' bargaining unit. In those instances, they were sampled along with the operators. In the aggregate, a majority (91 percent) of respondents were bus operators.

Eighty-seven percent of the respondents had at least a high school education and 7 percent were college graduates. Eighty-six percent had worked at their present organization for longer than one year.

Measures

Organizational Commitment

Employee commitment to the transit organization was measured by Porter's organizational commitment questionnaire (OCQ) (7). Respondents are asked to express the extent of their agreement or disagreement with each of 15 items, such as, "I am proud to tell others that I am part of this organization," or "I am willing to put in a great deal of effort beyond that normally expected, in order to help this organization to be successful." The OCQ has demonstrated good psychometric properties, with internal consistency coefficients that range from 0.82 to 0.93, with a median of 0.90. In our study, Cronbach's alpha (15) was 0.90.

Job Satisfaction

The short form of the Minnesota satisfaction questionnaire (MSQ) (16) was used to measure satisfaction with 20 job aspects (i.e., factors). In the short form, each factor is measured by a single question. In addition, the MSQ provides intrinsic, extrinsic, and general satisfaction scores. Responses to each item were elicited on a seven-point Likert scale, with verbal anchors that ranged from very dissatisfied to very satisfied. Reliability coefficients reported for seven occupations range from 0.87 to 0.92 (17). Scale reliability in our study (Cronbach's alpha) was 0.91.

Personal Characteristics

Measures of personal characteristics included sex, education level, marital status, organizational and job tenure, breadwinner status, age, and race. Self-report measures were also obtained on absenteeism, intent to remain in the organization, perceived job opportunities in other organizations, and perceived usefulness of personal skills to other organizations.

Data Collection Procedures

Archival data were collected, on-site, at each participating transit organization during the latter half of 1977. Site visits normally lasted two days. The questionnaires were administered during the site visits.

All sampling was by personal presentation of questionnaires to employees by a member of the research team. The majority of the completed questionnaires were handed back to the researchers at the transit site; respondents who were unable to complete the questionnaires during the site visit were provided preaddressed and stamped envelopes for mail return. The cumulative response rate was 64 percent--71 percent from on-site returns and 32 percent via mail return, for a total sample of 1244.

Probability questionnaire sampling targets were established separately for each transit organization based on organization size. At the smallest organizations (less than 30 eligible employees) the target was 100 percent. This target declined, on a percentage basis, as organization size increased, so that the target was only 10 percent at organizations that have more than 1000 eligible employees. Little difficulty was encountered in meeting sampling quotas at most organizations, except for those in the 100 percent category, and sampling was close to quota in those cases as well.

Since participation was voluntary, true random sampling was infeasible. Researchers attempted, judgmentally, to stratify samples by age, race, sex, and tenure in the process of contacting employees at work sites. However, there were clear discrepancies in proportional representation of certain groups. Blacks were underrepresented (14 percent in sample but 31 percent in population), and whites were overrepresented. Women were overrepresented (18 percent in sample but 11 percent in population), as were employees over 50 years of age (18 percent in sample but 6 percent in population). Employees that had more than five years' tenure in the organization were underrepresented (30 percent in sample but 38 percent in population). Other groups matched sampling targets reasonably well. Although an effort was made to administer questionnaires during all work shifts, the site visits, and therefore all questionnaire administration, took place on weekdays. This may have been partly responsible for the racial, age, and tenure imbalances. The overrepresented groups were probably present in greater numbers during these more desirable workdays because of the seniority system in route bidding. It is also likely that females were available for questionnaire response in disproportionate numbers because of a high percentage of females on "extra boards" (i.e., operators who are brought on duty to fill in for absentees on bus routes). The large amount of time spent in operators' ready rooms by extra-board drivers may have increased the probability of their being asked to participate.

RESULTS

Occupational Comparisons

Mowday and others (6) reported OCQ means and standard deviations for nine separate occupational groupings. Table 1 provides comparison data between those occupational groupings and the public transit employees who participated in the study. Intrinsic, extrinsic, and general satisfaction scores for transit employees and for six comparative occupations (17) are shown in Table 2.

Table 2 indicates that transit employees are generally less satisfied with their jobs than are employees in the comparative occupations. The only exception to this general rule is the electrical assemblers. For transit and nontransit employees alike, the trend is for intrinsic satisfaction to be higher than extrinsic satisfaction; that is, satisfaction with such aspects as the work itself is higher than with such job aspects as the way the organization rewards good performance. In addition, variability in satisfaction, as indicated by the standard deviations in Table 2, is generally higher for transit personnel than for the comparative employees. It appears that transit employees are not particularly homogeneous with respect to job attitudes and show, instead, a fairly wide range of satisfaction levels.

Comparisons of the Job Satisfaction Factors

Each question on the MSQ (short form) represents one job factor, as derived from factor analysis of the long form (17). Table 3 lists the 20 factors and shows levels of transit employee satisfaction (seven-point scale) for each factor.

As was indicated in Table 2, the overall trend is for satisfaction levels to be lower for transit operators than for other nonsupervisory transit employees. As Table 3 indicates, however, there are

Table 1. Occupational comparison: organizational commitment (OCQ).

Occupation	No.	Mean	SD
Public employees	569	4.5	0.90
University employees	243	4.6	0.90
Hospital employees	382	5.1	1.18
Bank employees	411	5.2	1.07
Telephone company employees	605	4.7	1.20
Scientists and engineers	119	4.4	0.98
Automobile company managers	115	5.3	1.05
Psychiatric technicians	60		
Remain in organization		4.2	1.04
Quit organization		3.3	0.94
Retail management trainees	59	6.1	0.64
Public transit employees	1214	4.50	1.36
Bus operators	1087	4.48	1.13
Supervisors	15	4.91	1.16
Maintenance personnel	58	4.34	1.11
Nonoperators, first level	104	4.57	1.10

Table 2. Occupational comparison: job satisfaction (MSQ).

		Intrinsic		Extrinsic		General	
Occupation	No.	Mean	SD	Mean	SD	Mean	SD
Transit							
Operator	1093	5.22	1.04	4.15	1.34	4.79	1.06
Supervisor	15	5.59	1.47	4.53	1.90	5.16	1.56
Maintenance	58	5.48	1.01	4.30	1.45	5.01	1.08
Nonoperator, nonsupervisory	106	5.39	1.09	4.47	1.44	5.02	1.13
Total	1272	5.24	1.05	4.19	1.36	4.82	1.08
Comparative occupations							
Engineer	290	5.66	0.88	4.97	1.02	5.45	0.84
Office clerk	227	5.52	0.90	4.52	1.16	5.21	0.87
Salesperson	195	5.87	0.88	4.99	1.11	5.59	0.83
Janitor and maintenance	240	5.73	0.81	4.90	1.13	5.46	0.81
Machinist	248	5.63	0.81	4.59	1.18	5.31	0.81
Electrical assembler	353	4.94	0.91	4.21	1.13	4.72	0.85

Table 3. Transit employees' satisfaction with 20 job factors.

	Transit Operators		Non-operators	
Factor	Mean	SD	Mean	SD
Activity	5.56	1.33	5.82	1.20
Independence	6.15	1.15	5.47	1.61
Variety	5.40	1.63	5.45	1.71
Social status	4.70	1.75	4.92	1.67
Supervision				
Human relations	3.90	2.12	4.37	2.14
Technical	3.97	1.94	4.69	2.03
Moral values	5.31	1.68	5.48	1.58
Security	6.18	1.19	6.17	1.20
Social service	5.84	1.23	5.44	1.53
Authority	4.70	1.46	4.95	1.54
Ability utilization	4.99	1.91	5.36	1.89
Company policies and practices	3.23	1.85	3.73	1.90
Compensation	4.88	1.89	4.79	1.95
Advancement	3.89	1.96	4.24	2.02
Responsibility	4.69	2.01	5.01	1.83
Creativity	4.12	1.89	5.15	1.80
Working conditions	4.30	1.91	4.58	2.00
Co-workers	5.24	1.64	5.02	1.84
Recognition	3.78	1.99	4.33	2.03
Achievement	4.92	1.80	5.38	1.69

reversals of this trend in specific job factors such as independence, social service, compensation, and co-workers. For operators and nonoperators alike, company policies and practices stood out as the source of greatest dissatisfaction. Job factors with which operators were dissatisfied but

nonoperators seemed satisfied included supervision, advancement, and recognition.

Job factors that appeared generally to be strong sources of transit employee saisfaction included independence, variety, security, social service, ability utilization, co-workers, and achievement. Satisfaction with compensation was nearly as high—a finding somewhat at variance with the general body of research literature on job satisfaction (4).

Individual Correlates of Job Satisfaction and Commitment

Differences in levels of job satisfaction were found to be related to age, sex, education level, and type of environment in which the employee grew up. The more satisfied employee subgroups were females (p < 0.05), older employees (p < 0.001), those who had less formal education (p < 0.001), and those who grew up in rural surroundings (p < 0.05). Differences between single and married employees, breadwinners and nonbreadwinners, and various racial and ethnic groups did not reach conventional levels of statistical significance.

Statistically significant differences in the level of commitment to their work organization were found for age, sex, and education subgroups. Older employees showed higher levels of organizational commitment (p < 0.001) as did females (p < 0.001), and the less well educated (p < 0.0001). Length of service, marital status, breadwinner status, race, and community background were not significantly related to employee commitment.

Self-report measures of absenteeism and intent to quit the organization were obtained, as were self-estimates of usefulness of one's job skills to other organizations and availability of equivalent jobs in other organizations. These measures enable comparisons of job satisfaction and commitment levels with some of the attitudes, beliefs, and behaviors that have frequently been associated with satisfaction and commitment in other research.

In agreement with the general body of literature on turnover, both commitment and job satisfaction were significantly related to intent to quit the organization. Commitment correlated −0.51 (p < 0.001) with intent to quit, and job satisfaction correlated −0.45 (p < 0.001). The difference between these two correlations was statistically significant (p < 0.001).

JOB SATISFACTION IN PUBLIC MASS TRANSIT

The use of a standard job satisfaction instrument (MSQ) provided an opportunity not only to assess overall levels of satisfaction and satisfaction with several specific job factors but also to compare those levels with measured satisfaction in other industries. Several points merit discussion.

As Table 2 indicates, overall levels of job satisfaction are lower for transit employees than for those employed in five of the six comparative occupations. Futhermore, within the transit industry, transit operators tend to be less satisfied than other nonsupervisory transit personnel. In Table 3, the differences between operator and nonoperator job satisfaction are largely attributable to a small set of job factors. To a great extent, the pattern in Table 3 verifies the subjective impressions that had been gained by the researchers during the site visits.

Transit operators seem to be relatively satisfied with the built-in aspects of their jobs (i.e., job factors resident in the nature of the work itself). Unless extraordinary measures were to be taken by management to modify the way bus transit operations

are conducted, the transit operator's job will characteristically be high in those job aspects.

On the other hand, several of the job factors about which employees are less satisfied are the type that can be subject to considerable variability from job to job, depending on the way the transit organization treats its employees. For the most part, these controllable job aspects relate to supervision (both technical and interpersonal), company policies and practices, working conditions, promotion practices, and wages and benefits. Wages and benefits represent the only one of these factors for which this study's transit employees appear relatively well satisfied. The other five factors are among the seven lowest job satisfaction scores for transit operators (Table 3). Clearly, there is room for improvement in several areas that are well within management's capability to improve.

Informal conversations with many bus operators repeatedly highlighted the quality of supervision as a frequent irritant. This was manifest in two ways:

1. The tendency for supervisors to cut themselves off from informal communication with drivers (a situation sometimes aggravated by physical barriers such as glass partitions) and

2. A perceived tendency for some road supervisors to interpret their role as that of a disciplinarian rather than a helper.

The factor "company policies and practices" was represented by a single question worded in such a way that we suspect that it too reflects this general syndrome (i.e., the way organizational policies are put into practice).

Another general irritant that had been detected during field visits was a perceived lack of receptivity to drivers' suggestions for procedural improvements or recognizing driver contributions whenever driver suggestions had been implemented. The driver-nondriver disparity, for the factor "recognition," seems wholly consistent with our earlier subjective impression.

EMPLOYEE COMMITMENT IN PUBLIC TRANSIT ORGANIZATIONS

Lower-level employees in public transit organizations develop psychological bonds to their transit organizations, and these individual-organization linkages appear to have important implications for the effectiveness of a transit organization. Mayntz (18) had been explicit in denying the likelihood of commitment to (or identification with) formal organizations, on the part of lower-ranking organizational members. Two basic reasons were cited. First, because subordinate roles in organizations are highly specific and programmed, they offer little basis for a positive self-image. This was said to lead to work roles' being seen as intrinsically unattractive and, therefore, pursued mainly for their instrumental payoffs.

Second, the individual in the subordinate role is seldom afforded the opportunity to make personal decisions about either the organizational purposes toward which he or she contributes or the means used to attain those goals. The choice is only whether to comply or to refuse compliance. Thus, the employee feels little ownership or responsibility for his or her actions in terms of organizational outcomes.

In a comparison of public- and private-sector managers, Buchanan (10,19,20) isolated personal significance reinforcement as a prime determinant of managers' commitment to their organizations. In effect, "managers who feel the work they do makes

real contributions to organizational success are more likely to develop commitment than those who lack this feeling" (19, p. 341). Buchanan (20) cited "goal crispness" as one factor that leads to higher commitment in private, goal-oriented organizations than in public agencies, where individual contributions to ultimate goals were less visible.

One possible reconciliation of such views as those of Mayntz and Buchanan with our finding that many transit employees seem to be committed to their organizations may lie in the basic nature of lower-level work in public transit. Although other categories of transit employee were included, the principal focus of the study was on the transit operator. More than 90 percent of the nonsupervisory participants were transit operators.

By contrast to the routinized, oversupervised nature of lower-level organiational work, as characterized by Mayntz (18), the transit operator performs, within general limits, as a relatively autonomous agent of the organization. He or she is what Adams (21) called an organizational boundary-role person. To the individual passenger, the operator is the transit organization, and the operator seems aware of this. The specific job-factor satisfaction pattern in Table 3 indicates that such job aspects as independence, variety, authority, and responsibility are relatively well satisfied among transit operators. Furthermore, except for responsibility, there is less variability in satisfaction with these factors than with the great majority of other factors (Table 3).

Sex of the employee related significantly to commitment; women were more committed to the organization than their male counterparts. This finding is at variance with conventional wisdom. Historically, women have been considered less involved than men in their work (11,22). A frequent argument encountered in the literature cited above is that it is the essentially menial nature of the jobs that women hold that underlies their lack of work involvement. The job satisfaction findings of our study, however, clearly suggest that women (as well as men) do not perceive transit jobs to be menial.

Rapid social change may also partly explain the reversal of past findings with respect to women and work encountered in the present study. The job of transit operator has been dominated in the past (though certainly not exclusively) by male employees. During the site visits, managers of several transit organizations noted a rapid increase in the number of female transit operators, both recent and projected. It may be that the arena of public transit, at the time in history in which the study occurred, represents an aspect of a social revolution in which the relationships between women and work organizations are changing.

CONCLUSION

Employees can and do become committed to their transit organizations. Levels of commitment are generally comparable to those found in other industries. However, transit employees are generally less satisfied with their jobs than are employees in comparative occupations. Furthermore, there is an overall trend for job satisfaction levels to be lower for transit operators than for other nonsupervisory transit employees. For operators and nonoperators alike, company policies and practices stood out as the source of greatest dissatisfaction. Job factors that appeared generally as strong sources of transit employee

satisfaction included independence, variety, security, social service, ability utilization, co-workers, and achievement.

Several aspects of these findings single out the transit operator as an employee with unique job-related concerns. The pattern of specific job-facet satisfactions and dissatisfactions is not duplicated in any other blue-collar occupation of which we are aware. Fortunately, the problem areas disclosed by this research fall well within the range of management's capability for improvement. It now appears incumbent on the transit industry to take the next logical steps.

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