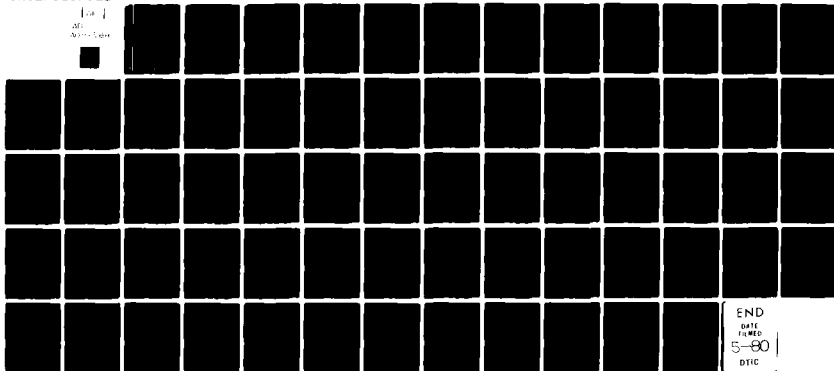


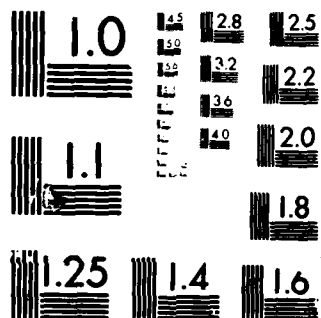
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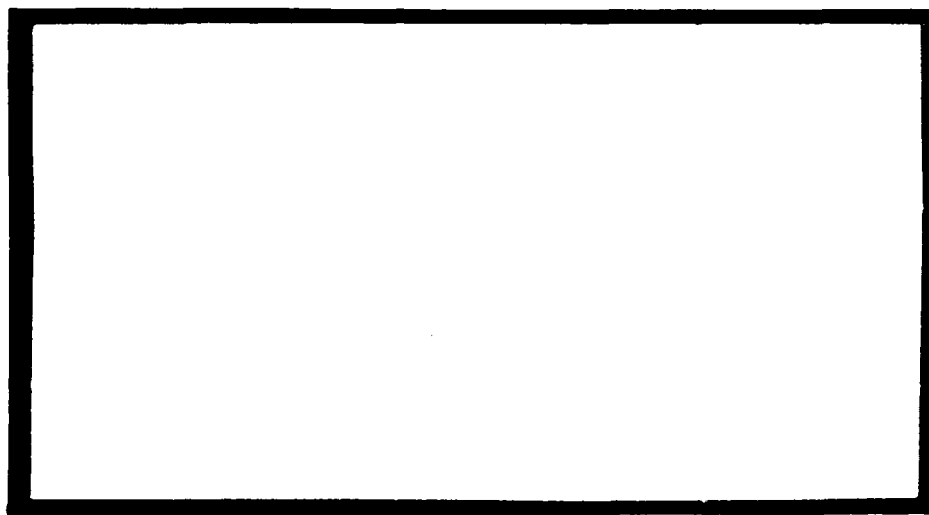
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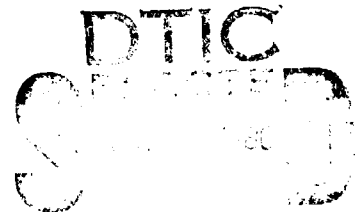
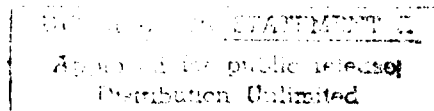
**ORGANIZATIONAL AND NON-ORGANIZATIONAL
INFLUENCES ON JOB ATTITUDES
OF PART-TIME AND FULL-TIME EMPLOYEES**

Howard E. Miller Charles L. Hulin

University of Illinois

**Technical Report 80-1
February 1980**

The authors benefited from discussion with Professors Karlene Roberts and James Terborg, and with William Glick and Nancy Rotchford during several stages of this research.



izational role but were more satisfied generally than full-time employees and perceived lower conflict, greater communication accuracy and greater communication openness than did full-time employees. The two job status groups did not differ in perceptions of conflict from non-organizational sources nor in ambiguity concerning work role activities. They were similar also in their commitment to the organization and in their intentions to remain with the organization. Finally, relations of non-organizational social influences with measures of psychological attachment were equivalently high for both part-time and full-time employees, as were relations among measures of work role perceptions and psychological attachment. Discussion cites sample-based explanations and the utility of role theory and partial inclusion to account for the data. Directions for further research contrasting these two status groups are suggested.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Several hypotheses concerning work and non-work social influences on part- time and full-time employees were investigated. Predictions were derived from role theory (Gross, Mason, and McEachern, 1958) and partial inclusion notions (Katz and Kahn, 1978). Survey data were collected from 1632 retail employees working part- or full-time in one of 41 geographically dispersed organizational units. Part-time employees felt less involved in the organ-			

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Part-time workers have been characterized as "missing persons" in psychological research (Rotchford and Roberts, 1978). The basis for this assertion is that so little research of a psychological nature has focused on differences between part-time and full-time workers (Miller and Terborg, 1979). This may be an important oversight by organizational psychologists, as is evident from the demographic characteristics of the United States labor force. Part-time workers made up 11 percent of the labor force in 1964, whereas in 1977 they made up 18 percent of the labor force (Monthly Labor Review, May, 1978). This latter figure converts to 18 million employees. Thus, part-time workers made up a substantial and growing part of the labor force.

The purpose of this research is to examine several psychological dimensions along which part-time and full-time workers might differ. Predictions will be made by drawing from available literature pertaining to part-time workers and by applying concepts from role theory (Gross, Mason and McEachern, 1958) and partial inclusion (Katz and Kahn, 1978). The results of this research should provide evidence concerning the direction and magnitude of possible differences between part-time and full-time employees on selected variables, and provide a basis to evaluate the usefulness of further research on part-time employees. Some specific questions amenable to research with current technology will also be proposed.

A search of journals in the area of organizational psychology from 1970 to 1977 uncovered three empirical studies that focussed on part-time employees. Convention papers and unpublished work add a few more psychologically-based studies, but as a whole the empirical literature is sparse.

Economically-oriented studies are not reviewed. A review which includes economic literature may be found in Rotchford and Roberts (1978).

Studies involving part-time workers have either contrasted them with full-time workers or examined differences among various groups of part-time workers. Three studies were reviewed that contrasted part-time and full-time workers. Logan, O'Reilly and Roberts (1973) examined demographic characteristics and job satisfaction among 47 part-time and 104 full-time workers. All respondents were female and were employed as registered nurses, licensed vocational nurses, aides, or clerical employees. There were few differences between part- and full-time employees on race, age, education, or tenure. A greater proportion of part-time workers were married (83% versus 63%) and they had more children (2.5 versus 1.7) than full-time workers. Job satisfaction was measured with the Job Descriptive Index (Smith, Kendall and Hulin, 1969) and overall satisfaction was measured with the GM Faces Scale (Kunin, 1955). A principal components analysis of attitude measures within each group suggested that a single component adequately summarized satisfaction variance for full-time workers whereas for part-time workers two components seemed necessary. Part-time workers tended to have higher satisfaction scores, although no mean differences were significant. The authors concluded that job satisfaction was a more homogeneous concept for full-time than part-time workers, due possibly to differing frames of references (Smith, Kendall and Hulin, 1969).

Hall and Gordon (1973) surveyed female college graduates about role conflict, career satisfaction, and general life happiness. The latter two variables were measured by single, five-point Likert type items. Questionnaires were mailed to 700 females, with 42 part-time workers, 73 full-time

workers and 114 housewives returning useable information. Part-time workers reported greater conflict from home pressures and lower career satisfaction than full-time workers. No mean differences were found on general life happiness, or total conflict, time conflict, non-home conflict, or self conflict. There were no significant correlations among satisfaction, happiness or types of conflict for part-time workers. For full-time workers there were significant negative relationships between career satisfaction and total conflict, home conflict, and time conflict, and between happiness and total and home conflicts. The authors concluded that the difference between part-time and full-time workers was as distinct as that between working and not working. The reliability of the data is questionable, however, given the poor overall response rate (33%) and use of single-item measures of career satisfaction and life happiness.

Miller and Terborg (1979) investigated work attitude differences among groups of part-time and full-time clerical-level employees ($n = 1064$) of a large retail organization. Information concerning job status (part-time or full-time), sex, tenure, and attitudes toward various job content and context factors were collected in a survey completed voluntarily by employees on their own time. Part-time and full-time workers were found to differ significantly in work attitudes, particularly towards benefits, the work itself, and pay. Part-time workers expressed greater pay satisfaction but lower benefits and work satisfaction than full-time workers. Furthermore, these attitude differences remained after co-variation attributable to tenure and sex were removed. The results were consistent with organizational conditions and frame of reference theory (Smith et al., 1969). Differences in work

satisfaction were attributable to differential task allocation by management. Anecdotes provided by a senior personnel executive suggested that managers tended to equate part-time workers with temporary help, who were assigned tasks avoided or left incomplete by full-time workers. Thus benefits and work-itself attitude differences were attributable to organizational conditions. Social comparison theory (Goodman, 1977) was used to interpret pay satisfaction differences. The pay schedule was reported to be the same for part-time and full-time workers in the same job title. Given equal pay, part-time workers may perceive their rewards as equitable compared with other part-time jobs whereas full-time workers in this low-level clerical job may perceive their pay as inadequate compared with other full-time jobs requiring similar skill levels (e.g. construction general laborer, light delivery driving). Lower pay satisfaction among full-time than part-time workers in the Miller and Terborg (1979) data is consistent with this interpretation.

Two studies were reviewed that compared several groups of part-time workers. Gannon and Nothern (1971) compared job satisfaction scores and various personality traits between 36 short-term (less than two years with the organization) and 96 long term (more than two years) part-time workers employed as checkers in a supermarket chain. Satisfaction was measured with a 24-item questionnaire that was unit-weighted and summed. Gannon and Nothern found that turnover was not predicted by job satisfaction, in contrast to studies that show job satisfaction to predict turnover for full-time employees (Mobley, et al., 1979). Only one of the 24 items related significantly ($p < .05$) to turnover, and that can be expected by chance. Only age among the demographic variables was related to tenure ($p < .05$). Long-

term employees were older than short-term employees. There were also some differences between groups on the Ghiselli Self-Description Inventory. Long-term employees scored reliably higher on scales labelled intelligence, initiative, self-assurance, and perceived occupational level. Finally, subjective ratings of performance by unit managers were higher for long-term than short-term employees. The authors concluded that part-time workers differed from full-time workers in that job satisfaction did not predict turnover for the former whereas the literature indicates a reliable, albeit weak relationship for the latter.

Their conclusion may not be justified because no comparative data for full-time workers were reported and past studies of the satisfaction-turnover relationship are not always consistent. Further, evidence reported by Hom, Katerberg and Hulin (1979) indicated high turnover predictability using attitude models with part-time workers in a military organization. Although the two studies differ along many dimensions (e.g. sample, organizational context, measures), it is clear that turnover predictability is not a simple function of being part- or full-time in job status.

Hom, Miller and Hulin (1977) investigated attitude and demographic differences among groups of part-time workers ($N \sim 10,000$) in a large retail organization. Sixteen groups were identified by the number of hours worked per week and whether employment was on a seasonal or steady basis. Discriminant analyses showed that blacks predominated in steady short-hour and seasonal short- and long-hour jobs. Whites were found mostly in steady, medium- and long-hour jobs and seasonal, medium-hour jobs. Seasonal employees were less satisfied with co-workers and felt less secure about their career future than steady employees. Among steady-job workers, those working medium-hour

schedules were more satisfied with co-workers than either short- or long-hour steady job employees. When covariation with personal characteristics was removed from the attitude measures, discrimination among the groups was non-significant. Finally, the factor structures of attitude measures were highly consistent across groups. Their results suggest that studies of part-time worker attitudes should consider personal characteristics also.

The data reviewed concerning part-time employment warrant three conclusions. First, most research has focussed on attitudes, with less attention directed towards assessment of behaviors. Second, the evidence is not consistent regarding the existence of attitude differences, either between part-time and full-time workers or among groups of part-time workers. The few published studies differ in samples, organizational contexts, measures and analyses as well as in results so that no one set of results is most plausible. Finally, none of the studies reviewed was designed with an explicit theoretical perspective. Post-hoc explanations have been offered from frame of reference theory (Logan et al., 1973), and social comparison theory (Miller and Terborg, 1979). Other theoretical perspectives exist that may be applied fruitfully to analysis of differences among part-time and full-time workers. Two such perspectives were selected for use in the present research.

Conceptual Framework

Concepts from partial inclusion (Katz and Kahn, 1978) and role analysis (Gross, Mason and McEachern, 1958) were used in this research to guide variable selection and to generate predictions.

Partial inclusion is the notion that people are involved in the functioning of a social system on a segmented or partial basis. Although the social system of the organization makes specific demands on employees for specific behaviors and attitudes, the organization does not control all physical and psychological factors of each employee. People belong to several social systems that make independent demands for personal time and involvement. Similarly, people have different value systems that influence time and energy allocation decisions. Although the organization must set lower bounds on the level of acceptable inclusion (i.e., attendance at work must be regular), considerable variance may still exist in perceived inclusion across organizational members. Persons expressing low levels of inclusion may have their dominant interests outside of the organization. Similarly they may be less likely to behave in accordance with organizational demands and may express less interest and involvement in their job.

Part-time workers by definition, spend less actual time in the organization than full-time workers. Part-time workers may thus feel less included in the organization than full-time workers, depending on the number and type of commitments held by the two job status groups outside the organization. We will return to this point shortly.

Linton (1936) regarded the concept role as the unifying link between structure and function within social systems. Role concepts are based on the proposition that people in social systems behave in accordance with expectations (Gross et al., 1958). How expectations are established, by whom, and with what effect are recurrent concerns of researchers using role analysis to study social systems. The term role is defined here to include both the structural location (position) and the activities (job) of an organizational

member. This is consistent with previous uses of the term (Gross et al., 1958). Individuals occupy more than one role in society. Common roles include professional worker, father, husband, student and philanthropist. The role set is the source of expectations concerning the activities of a role incumbent. Members of the role set are usually people with vested interest in the enactment of the person's role, and they may be expected to differ across the various roles occupied by an individual. More importantly, members of the social system surrounding one of the individual's roles may be members of the relevant role set for other roles occupied by the individual also. Role conflict arises when two or more sources of expectations make incompatible requests of the role incumbent. Role ambiguity arises when it is unclear what is expected of the incumbent or how he or she should fulfill certain expectations. These latter two concepts are important to establish the effects of role expectations. Role sets and multiple role holding are important to establish the sources of expectations.

Concepts from partial inclusion and role analysis may be combined to generate several predictions concerning part-time and full-time employees.

Hypotheses

Four sets of hypotheses are developed. The first set refers to membership in non-organizational social networks (hereafter abbreviated to NOR). The second set refers to perceptions of the organizational work role (hereafter abbreviated to OWR). The third set concerns the levels of psychological attachment to the OWR. The fourth set concerns the relations among

social network membership, perceptions of the OWR and psychological attachment to the OWR.

Hypothesis 1a: Part-time employees will report involvement in a greater number of NOR's than full-time employees.

Most organizations distinguish part-time and full-time employees at the time of hire by the number of hours the applicant is expected to work. Because part-time workers commit less time per week to the OWR they have more freedom to engage in other roles. Evidence supporting this proposition was cited previously (Hall and Gordon, 1973).

Hypothesis 1b: Part-time employees will report greater conflict from NOR set members than full-time employees.

Hypothesis 1b follows from the lower time commitment of part-time workers and their hypothesized more frequent membership in NOR than full-time workers. The OWR may be seen by NOR set members as an infringement on time and activity commitments desired of the individual in NOR's.

Hypothesis 1c: Part-time employees will report greater personal conflict from having to forego desired NOR activities than full-time employees.

Both Hypotheses 1b and 1c depend, in part, on the existence of significant differences between part-time and full-time employees in their frequency of membership in NOR's. It is that more sources of potential conflict may exist for part-time than full-time employees that forms the basis for Hypotheses 1b and 1c.

Hypothesis 2a: Part-time employees will perceive lower inclusion in informal work groups than full-time employees.

Spending less time per week in the organization may make it more difficult for part-time employees to pursue social relations in the work

setting. Similarly, part-time workers may not desire acceptance in work social relations as much as full-time employees if part-time workers have their dominant interests outside of the organization.

Hypothesis 2b: Part-time employees will report less communication openness in the work setting than full-time employees.

Hypothesis 2c: Part-time employees will report less communication accuracy in the work setting than full-time employees.

Communication in organizations flows through formal and informal channels (Davis, 1953). Spending less time in the organization may limit the amount of exposure that part-time employees may have to formal and informal communications, particularly for informal communications if part-time employees perceive that they are not included in informal work groups (Hypothesis 2a) relative to full-time employees.

Hypothesis 2d: Part-time employees will report greater ambiguity concerning activities in the OWR than full-time employees.

Spending less time in the organization, coupled with restricted communication flow (Hypotheses 2b, 2c) may result in part-time employees receiving inadequate information about OWR requirements, particularly when changes in OWR requirements occur (e.g., when prices or procedures change).

Hypothesis 2e: Part-time employees will report less conflict concerning role set expectations in the OWR than full-time employees.

A potential advantage afforded part-time employees by being present less is that they may be exposed less to incompatible requests concerning what to do or how to go about activities in the OWR.

Hypothesis 3a: Part-time employees will report lower satisfaction with the OWR than full-time employees.

Hypothesis 3b: Part-time employees will report lower commitment to the organization than full-time employees.

Hypothesis 3c: Part-time employees will report lower involvement in the OWR than full-time employees.

Hypothesis 3d: Part-time employees will report greater intentions to leave the organization than full-time employees.

If part-time employees participate in more NOR's, if they feel less included in the informal work groups, and if they generally have greater internal and external pressures that operate against organizational membership, they may feel less psychological attachment to the organization.

Psychological attachment is defined broadly as the net magnitude of emotional, conative and cognitive links between the individual and the organization, viewed from the perspective of the individual. Psychological attachment was operationalized with measures of a) satisfaction with various aspects of the organization, b) commitment to the organization, c) involvement in the OWR, and d) intention to maintain organizational membership. If part-time employees are less included psychologically in the OWR than full-time employees, then part-time employees should report lower levels for each of satisfaction, commitment, involvement, and intention to remain with the organization than full-time employees.

Hypothesis 4a: Measures of NOR perceptions and NOR membership will relate more strongly to each of commitment, satisfaction, involvement, and intention to remain for part-time employees than full-time employees.

Hypothesis 4b: Measures of OWR perceptions will relate more strongly to each of commitment, satisfaction, involvement, and intention to remain for full-time employees than part-time employees.

If these two job status groups differ in psychological inclusion (Hypotheses 2a-c, 3a-d), they may also differ in how organizational and non-organizational role demands impact on psychological attachment to the work role. Organizational events are more proximal to attitudes centered on the OWR and hence should relate more strongly to attachment than measures of NOR perceptions and characteristics. However, full-time employees' attachment should be influenced by OWR events more than part-time employees', and part-time employees' attachment should be influenced more by NOR events than full-time employees. Covariation of psychological attachment and role measures with personal characteristics will be controlled, consistent with recommendations by Hom, Miller and Hulin (1977).

METHOD

Sample and Administration Procedures

The data were collected from 1632 employees distributed among 41 geographically dispersed units of a large retail organization. The sample was drawn from nonmanagerial employees and a variety of job types were represented. Sampling procedures were designed to provide a sample representative of the population of employees in this organization.

A survey was administered to groups of respondents by organizational staff on company time. Completed surveys were sealed in envelopes and mailed to university researchers. Although identifying information was requested for purposes unrelated to the present research, confidentiality of responses was promised and maintained. Participation in the survey was voluntary.

Measures

The survey content was designed collaboratively by university researchers and organizational personnel executives. Interviews with part-time and full-time employees of the organization provided information concerning the appropriateness of survey content. Included in the survey were questions about demographic characteristics and membership in various NOR's, and perceptual measures of non-organizational role conflict, organizational role conflict and ambiguity, communication accuracy and openness, inclusion in the work group, general job satisfaction, organization commitment, job involvement, and intentions to remain with the organization.

Age, sex, tenure and education level were used to control for confounding of individually-based characteristics with part-time/full-time job status in relation to job attitudes.

Measures of NOR membership were obtained by asking respondents to indicate if they were involved in each of the following roles: another paying job, volunteer work, home responsibilities and student. Responses were coded nominally (1 = yes; 0 = no). Parental role was assessed by four questions concerning the number of children the respondent had in each of preschool, elementary school, high school, and out of school categories. Raw frequencies for each of these four categories were retained for analysis.

Two measures of perceived NOR conflicts were derived factor analytically from among 17 items designed to tap conflict from OWR and NOR sources, and ambiguity from OWR sources. These items were based on the role conflict-ambiguity literature (Rizzo, House and Lirtzman, 1970) and were refined in pilot research for use in this study. One measure assessed the extent to

which the OWR prevented the respondent from participating in other (i.e., NOR) activities. This measure was labeled NOR time conflict and was the unit-weighted sum of two items. The other measure assessed the extent to which people outside the organization that the respondent not maintain his or her OWR. This measure was labeled NOR people conflict and was the unit-weighted sum of five items.

Six measures were used to assess perceptions of the OWR. A ten-item short form of the Roberts and O'Reilly (1974) communications scale assessed perceptions of openness and accuracy of communications in the unit. Perceived inclusion in the informal work group was assessed by five items written for use in this research. Two measures of OWR ambiguity and one of OWR conflict were derived factor-analytically from a pool of 17 conflict/ambiguity items. Five items of the 17 assessed ambiguity concerning what to do or how to go about activities in the OWR. Two of these items were reversed in the question stem to reflect on clarity in the OWR. Two measures were derived from these five ambiguity items, one each labeled OWR ambiguity (three items) and OWR clarity (two items). Five items assessed perceived conflict in the OWR. Sources of conflict included conflicting requests from supervisors, incompatible work procedures, and general perceptions of conflict within the OWR. These five items were unit-weighted and summed to form a measure label OWR conflict.

Four measures of psychological attachment to the work role were employed. Commitment to the organizational unit was measured by 14 items of an instrument developed by Porter and Smith (1970). Two items from 16 used in the survey were deleted because they used a different stimulus object than the other

items (other organizational units instead of the individual unit). The 14 items were unit-weighted and summed. Job involvement was measured with five items drawn from the job involvement literature (Rabinowitz and Hall, 1977). The items emphasized work role effects on ego-definition and work role centrality to life interests, and were unit-weighted and summed. General satisfaction with the job was assessed with a single item modeled after the format of the G.M. Faces scale (Kunin, 1955). Intention to stay with the organization was measured with two items that were unit weighted and summed. The first item assessed directly intentions to quit and the second item assessed frequency of thoughts of quitting.

Analysis

The structure of scales used in this research were examined with principal components analysis. The components model was selected over the factor analytic model because the goal was to summarize the variance among a set of items in the fewest number of dimensions, not to investigate the dimensionality of psychological attributes reflected in a set of scale responses. Components analysis was conducted within job status groups for each measure and congruence coefficients (Harman, 1972) computed to determine scale comparability between groups. Estimates of scale internal consistency (Cronbach's alpha) were then obtained for each measure.

Differences between part-time and full-time employees on sex and frequency of membership in various NOR's were examined with Chi-square analysis (Hypothesis 1a). Differences in age, education, tenure and perceptions concerning NOR and OWR were tested with univariate (ANOVA) and

multivariate (MANOVA) analysis of variance (Hypotheses 1b-3d). Differences between part-time and full-time employees in how strongly OWR measures and NOR measures related to psychological attachment were tested with correlational and multivariate regression procedures. Composite indices of individual (demographic) characteristics, OWR measures and NOR measures were computed. These composite measures were then related to the four measures of psychological attachment (Hypotheses 4a-b). Secondary analyses using multiple and canonical regression were conducted to explore further the relationships between OWR measures and psychological attachment, and between NOR measures and psychological attachment.

RESULTS

Overview

The results are organized into seven sections for presentation. The first section discusses sample characteristics. The second section discusses results of principal components analyses conducted to determine appropriate scale structures. The third section discusses measure reliability and decision rules concerning missing data. The fourth section through the seventh section presents results pertaining to each of the four sets of hypotheses.

Sample Characteristics

Sample characteristics are presented in Table 1. Fifty-nine percent of the 1632 employees sampled were full-time employees. Thirty-eight percent of full-time employees and 17 percent of part-time employees were

male. Chi-square analysis of job status by sex frequencies indicated significantly more full-time employees than part-time employees were male ($\chi^2 = 76.14$, $p < .01$). Full-time employees were employed longer with the organization ($F = 175.39$, $p < .01$) and were older ($F = 29.80$, $p < .01$), but did not differ from part-time employees in education level ($F = 1.37$, $p > .05$).

Component Structures of Perceptual Measures

Principal components analyses were conducted to determine if variance among items could be summarized in the number of dimension suggested by measure authors. Further, these analyses were conducted within part-time and full-time samples and congruence coefficients computed to determine similarity of scale structures between job status groups. Item correlation matrices, eigenvalues, component weights and congruence coefficients for each measure may be obtained from the authors.

The number of dimensions to be retained for a given set of items was decided by computing principle components of the item correlation matrix and plotting eigenvalues against the dimension number for scree tests. The five work role centrality items were unidimensional as were the five items written to measure inclusion in the informal work groups. The first component for each scale within each job status group accounted for between 43% and 59% of total variance, with no subsequent component accounting for 20% or more variance. Congruence coefficients for unrotated first components between part-time and full-time employees were within rounding error or 1.00 for both measures.

Table 1
Sample Demographic Characteristics

Variable	Full-time	Part-time
<u>Sex</u>		
Male frequencies	350	110
Female frequencies	565	520
<u>Tenure</u>		
Mean	8.32	4.16
Standard deviation	6.71	4.31
<u>Education</u>		
Mean	12.66	12.76
Standard deviation	1.73	1.54
<u>Age</u>		
Mean	38.06	34.33
Standard deviation	12.74	12.82

Note: N(full-time) = 915
N(part-time) = 630

The Roberts and O'Reilly (1974) communications measure was clearly two-dimensional for both part-time and full-time samples. Item loadings were consistent with the conceptual distinction between communication openness and communication accuracy. The first two components accounted for 65% and 63% total variance in the full-time employee and part-time employee samples respectively. Congruence coefficients between job status samples for the openness and accuracy dimensions after orthogonal rotation were again within rounding error of 1.00.

The dimensionality among the 14 commitment items within part-time and full-time samples was more difficult to resolve. Joint consideration of scree tests and Kaiser's criterion (retain components with eigenvalues ≥ 1.00) indicated that three dimensions were present in the full-time employee sample but two dimensions were present in the part-time sample. However, orthogonal and oblique rotations failed to provide simple or interpretable structures in either sample. It was decided to retain a unidimensional solution because the first components accounted for substantial variance (39% - 43%) and because a unidimensional solution is in keeping with previous uses of the measure (e.g., Porter, Crampon and Smith, 1976). The congruence coefficient between unrotated first components from full-time and part-time employee samples was once again within rounding error of 1.00.

Analysis of structure among the 17 conflict and ambiguity items indicated that five dimensions were present among the items for both job status samples. Expectations were, however, for three dimensions to emerge: OWR conflict, OWR ambiguity and NOR conflict. Scree tests in both job status samples indicated five dimensions, including two doublets. NOR conflict

was separated into a time conflict dimension and a people conflict dimension, and OWR ambiguity was separated into an ambiguity dimension and a clarity dimension. Attempts to force a four dimension solution resulted in OWR ambiguity collapsing into OWR conflict while OWR clarity, NOR people conflict, and NOR time conflict remained distinct, although less clean in loadings. Although the OWR ambiguity and OWR clarity dimensions may represent method factors (e.g., wording bias), it is also possible that the two concepts are asymmetric. Five dimensions were retained because collapsing OWR ambiguity into OWR conflict was less desirable than interpreting potentially different results for OWR clarity and OWR ambiguity in subsequent analyses. The five dimensions accounted for 65% and 63% of total variance in full-time and part-time job status samples respectively. Congruence coefficients between matched dimensions ranged from .90 to .97, indicating high structural similarity for these subscales between job status groups.

Internal Consistency of Perceptual Measures

The part-time and full-time samples were combined for calculation of reliabilities because the structures across measures were highly similar between the two status groups. Characteristics of the measures are presented in Table 2. Cronbach's alpha estimates range from a low of .69 for inclusion to a high of .89 for commitment. The three two-item measures (OWR clarity, OWR ambiguity, and intention to quit) exhibited item-item correlations in the low .60 range. In general the reliability estimates were not high but were judged adequate for use in subsequent analyses.

Table 2

Characteristics of Organizational Work Role, Non-
organizational Role and Psychological Attachment
Measures

Variable	# Items	N	M	SD	Alpha
<u>Organizational Work Role</u>					
Communication accuracy	5	1607	20.59	7.61	.85
Communication openness	5	1607	26.76	6.54	.85
Inclusion	5	1578	25.37	5.05	.69
Conflict	5	1531	15.82	7.45	.78
Ambiguity	3	1531	8.60	4.85	.75
Clarity	2	1531	4.58	3.08	.60†
<u>Non-organizational Role</u>					
People conflict	5	1531	12.68	6.15	.77
Time conflict	2	1531	6.31	3.63	.61†
<u>Psychological Attachment</u>					
Involvement	5	1597	12.99	4.71	.82
Commitment	14	1591	52.90	9.04	.89
Intention to quit	2	1610	5.06	3.15	.64†
General satisfaction	1	1481	5.49	1.35	--

†reliability estimates based on correlation between items

Missing information never exceeded 10% for any item used in this research. Scale scores were computed using the rule of thumb that the respondent could skip no more than 15% of the items included in a scale for a scale score to be computed. If the respondent skipped 15% or less items, the theoretical neutral point was inserted for missing items and the scale score computed; otherwise a missing value indicator was assigned for that scale. All individuals with missing information on variables directly involved in an analysis were excluded. This resulted in sample sizes varying from analysis to analysis because some individuals were missing information in just one area (e.g., NOR membership) and not others. No differences were uncovered between respondents with missing data and those with complete data ($p > .05$), and the overall rate of missing information was sufficiently low to indicate that no sampling bias would result from excluding individuals on a per analysis basis.

NOR Membership and Conflicts

Hypothesis 1a was that part-time employees would report involvement in a greater number of non-organizational roles than full-time employees. Chi-square analyses contrasting job status groups on frequencies for each of marital status, another paying job, volunteer work, home responsibilities and student status are presented in Table 3. Recall that all five NOR measures were coded nominally according to reported involvement (1 = yes, 0 = no) in each role.

Part time employees were slightly more likely than full-time employees to be students (PT% = 35, FT% = 18, $p < .01$), single (PT% = 30, FT% = 20,

Table 3

Non-organizational Role Frequencies and Part-time
or Full-time Job Status: Chi-square Analyses

Non-organizational Role	Full-time	Part-time	χ^2	p	η^2
<u>Marital Status</u>					
Single	184	192	20.94	.01	.01
Married	730	439			
<u>Other Paying Job</u>					
Yes	70	81	10.82	.01	.01
No	845	550			
<u>Volunteer Work</u>					
Yes	154	129	3.03	.08	--
No	761	502			
<u>Home Responsibilities</u>					
Yes	625	497	20.00	.01	.01
No	290	134			
<u>Student Status</u>					
Yes	167	221	55.00	.01	.04
No	748	410			

$p < .01$). A measure of the total number of NOR memberships per individual was computed by adding together marital status, student status, volunteer work, other paying job, and home responsibilities. The point-biserial correlation between this index of NOR membership and part- or full-time status was statistically reliable ($r = .15$, $p < .01$), indicated a slight tendency for part-time employees to report a greater number of roles than full-time employees. Because job status covaried significantly with sex, separate analyses of NOR membership were conducted between part-time and full-time employees with each sex group. The relationship between job status and total NOR membership attenuated slightly for both sexes but remained significant ($r(\text{male}) = .09$, $p < .05$; $r(\text{female}) = .14$, $p < .05$). However, males working part-time appeared much more likely than females to be single ($\phi(\text{male}) = .35$, $\phi(\text{female}) = .07$) and students ($\phi(\text{male}) = .36$, $\phi(\text{female}) = .15$). Other NOR relationships with job status were unaffected by controlling for sex. Hypothesis 1a, that part-time employees would report greater numbers of NOR membership, was supported.

The next two hypotheses were that part-time employees would report greater conflict than full-time employees stemming from NOR set members (1b) and from competing time demands (1c) between the OWR and other desired activities. The MANOVA test of these hypotheses are presented in Table 4. There were no differences between part-time and full-time employees at the multivariate level, or for either NOR people conflict or NOR time conflict at the univariate level ($p > .05$ for all three results). Neither Hypothesis 1b nor 1c was supported.

Table 4

Differences in Non-organizational People Conflict and
Time Conflict as a Function of Working Part- or Full-
time: MANOVA Results

Dependent Variable	Full- time	Part- time	F(1,1502)	p	η^2
<u>NOR People Conflict</u>					
Mean	12.71	12.57	0.19	.66	--
Standard deviation	6.27	5.85			
<u>NOR Time Conflict</u>					
Mean	6.35	6.22	0.47	.49	--
Standard deviation	3.58	3.67			

Note: MANOVA $F(2,1501) = 0.25$, $p > .05$
 $N(\text{full-time}) = 883$; $N(\text{part-time}) = 616$

Perceptions of the OWR

Hypothesis 2a was that part-time employees would report lower felt inclusion in informal work groups than full-time employees. It was also predicted that part-time employees would report greater ambiguity (2d) but lower conflict (2e) than full-time employees concerning OWR activities. Further, part-time employees were predicted to perceive less openness (2b) and accuracy (2c) of communications in the work setting than full-time employees. Results of the MANOVA test of these hypotheses are presented in Table 5. The test for differences in centroids between part-time and full-time employees was significant ($p < .01$). Univariate analyses revealed a complex pattern of results that supported just one hypothesis. Part-time employees reported significantly lower conflict in the OWR than full-time employees ($p < .01$). Contrary to expectation, part-time employees reported greater communication accuracy ($p < .05$) and more communication openness ($p < .05$) than full-time employees. The two job status groups did not differ in ambiguity perceptions or in felt inclusion in informal work groups ($p < .05$ for all three results). The pattern of results for the second set of hypotheses was complex and supported one hypothesis.

Psychological Attachment to the OWR

It was predicted that part-time employees would report lower levels for each of general satisfaction (3a), commitment (3b), involvement (3c), and intention to remain with the organization (3d) than full-time employees. Results of the MANOVA test are presented in Table 6. Part-time and full-time employees differed significantly in centroids formed by the four measures of

Table 5

Differences in Organizational Work Role Perceptions as
a Function of Working Part- or Full-time: MANOVA
Results

Dependent Variable	Full-time	Part-time	F(1,1409)	p	η^2
<u>Inclusion</u>					
Mean	25.64	25.13	3.51	.06	--
Standard deviation	5.19	5.00			
<u>Communication Accuracy</u>					
Mean	19.98	21.30	10.15	.01	.01
Standard deviation	7.73	7.46			
<u>Communication Openness</u>					
Mean	26.30	26.99	3.72	.05	--
Standard deviation	6.79	6.36			
<u>Conflict</u>					
Mean	16.39	15.14	9.44	.01	.01
Standard deviation	7.71	7.18			
<u>Ambiguity</u>					
Mean	8.42	8.68	1.02	.31	--
Standard deviation	4.88	4.80			
<u>Clarity</u>					
Mean	4.58	4.56	0.01	.90	--
Standard deviation	3.09	3.06			

Note: MANOVA F(6,1404) = 4.74, $p < .01$
N(full-time) = 839; N(part-time) = 572

attachment as predicted ($p < .01$). Once again a complex pattern of results emerged from univariate analyses on each dependent measure. As expected, part-time employees were significantly less involved in their OWR than full-time employees ($p < .05$). Contrary to expectation, part-time employees were more satisfied in general with the OWR than full-time employees ($p < .05$). No differences in between part-time and full-time employees were found on commitment or intention to remain with the organization ($p > .05$ for both results). Part-time employees differed from full-time employees in psychological attachment to the OWR, but part-time employees were not uniformly lower in attachment as expected.

NOR Membership and Perceptions,
OWR Perceptions and Psychological Attachment

The previous three sets of hypotheses were concerned with differences of membership frequencies and perception means between part-time and full-time employees. In contrast, the fourth set of hypotheses are concerned with difference of relation among the membership and perception variables for part-time and full-time employees. The proposition underlying the fourth set of hypotheses is that events external to the organization should have a greater impact on part-time employee attitudes than full-time employee attitudes, but events inside the organization should have a greater impact on full-time employee attitudes than part-time employee attitudes. Although the causal sequence implied in this proposition is that events (i.e., NOR membership, NOR and OWR perceptions) influence attitudes (i.e., psychological attachment), tests of this proposition were relational rather than causal. It was predicted that NOR perceptions and membership would relate more

Table 6

Differences in Psychological Attachment to the Work
Role as a Function of Working Part- or Full-time

Dependent Variable	Full-time	Part-time	F(1,1352)	p	η^2
<u>OWR Commitment</u>					
Mean	52.52	53.14	1.55	.21	--
Standard deviation	9.38	8.52			
<u>OWR General Satisfaction</u>					
Mean	5.40	5.57	4.90	.03	--
Standard deviation	1.39	1.27			
<u>OWR Involvement</u>					
Mean	13.77	11.67	72.24	.01	.05
Standard deviation	4.57	4.37			
<u>OWR Intention to Quit</u>					
Mean	5.02	5.25	1.80	.18	--
Standard deviation	3.03	3.28			

Note: MANOVA $F(4,1349) = 28.84$, $p < .01$
 $N(\text{full-time}) = 793$; $N(\text{part-time}) = 561$

strongly to psychological attachment for part-time employees than full-time employees (4a), but OWR perceptions would relate more strongly to psychological attachment for full-time employees than part-time employees (4b).

To test these hypotheses a procedure was needed that would provide an index of relation that could be compared meaningfully between part-time and full-time employees, and that would summarize relationships among several independent and dependent variables in a single value. The canonical correlation resulting from least square canonical regression was rejected because no significance test was found to compare magnitudes of canonical correlations computed in independent samples. An alternate procedure is to form a linear composite for each set of variables by unit-weighting each variable and adding together raw scores on each variable. This alternative was rejected because the variables selected for inclusion in composites included qualitative and quantitative variables with unequal variances across variables. Composites formed from such variables would reflect greater contribution from variables with greater variance. The procedure used was to apply equal weights to each variable to be included in the composite, then sum across variables to obtain the composite score. Equal weighting was accomplished by setting variable means to zero and variances to one within part-time and full-time samples. Standardizing within job status samples was preferred over standardizing on the combined sample because slight fluctuations in variance between groups for a given variable would result in slightly different weights being applied to the variable when the composite was formed within each sample. Composite scores were thus computed for part-time and full-time sample on each of NOR perceptions and membership,

OWR perceptions and individual characteristics.¹

For each hypothesis variable correlations between role-related variables (NOR/OWR) and psychological attachment for part-time and full-time employees were inspected. The correlation between the role composite and each measure of psychological attachment was then computed for part-time and full-time employees and compared statistically. The individual characteristics composite was then partialled out of the role composite-psychological attachment relationship to control for possible confounding, consistent with recommendations by Hom, Miller, and Hulin (1977).

Correlations of individual characteristics and NOR variables with psychological attachment appear in Table 7. Levels of relation between NOR variables and attachment were fairly modest for both full-time and part-time employees, and often were not statistically reliable. Only 18 of 44 correlations were significant at $p < .01$, for both part-time and full-time employees. No clear pattern emerged from the correlations for the two job status groups, failing to support hypothesis 4a. Only one NOR variable exhibited consistently different correlations ($p < .05$) for the two job status groups across the measures of psychological attachment, and the differences were opposite to

¹Variables included in the four composites are as follows: NOR perceptions and membership - NOR people conflict, NOR time conflict, student and marital statuses, other paying job, volunteer work, home responsibilities, number of preschool children, number of school children, number of high school children, number of children out of school; OWR perceptions - inclusion, communication accuracy and openness, OWR conflict, OWR ambiguity, OWR clarity; Individual characteristics - age, sex, education, tenure. All variables were scored in a consistent positive direction based on variable correlations within variable sets.

expectation. NOR people conflict related consistently more strongly to attachment for full-time than part-time employees. NOR people conflict also exhibited the highest level of relationship across attachment measures for both job status groups. NOR time conflict correlated considerably lower, and no other NOR variable exhibited moderate or even significant relations with psychological attachment. A sign test for each attachment measure was conducted on the direction of greater correlation among the eleven correlation pairs for part-time and full-time employees. Once again no consistent or statistically reliable pattern emerged for correlations of NOR variables with attachment to be larger for one or the other job status group ($p > .05$ for all four tests).

Correlations and first order partial correlations between the NOR variable composite and four psychological attachment measures appear in Table 8. All correlations and partial correlations were statistically reliable ($p < .05$) for part-time and full-time employees. Removing individual characteristics composite variance from the NOR composite-psychological attachment correlations attenuated relationships, but all relations remained statistically reliable ($p < .05$). Changes in magnitude of correlation ranged from a low of .04 to a high of .09 units. The NOR composite-commitment correlation was strongest among the relations, NOR composite-involvement relationship the weakest, and NOR composite relations with general satisfaction and intention to remain fell in between. After controlling for individual characteristics the NOR composite accounted for 3-12% of attachment variance for full-time employees and 1-9% of attachment variance for part-time employees. Contrary to expectation, all NOR composite-psychological

Table 7

Correlations of Psychological Attachment Measures with
NOR Measures and Individual Characteristics for Full-
time and Part-time Employee Samples

	<u>Psychological Attachment</u>							
	Commitment		General Satisfaction		Involvement		Intention to Quit	
	FT	PT	FT	PT	FT	PT	FT	PT
<u>Individual Characteristics</u>								
Age	25	27	21	20	22	12	-28	-24
Sex	18	10	14	10	-02	07	-07	-10
Education	-11	-11	-08	-18	-18	-25	15	23
Tenure	10	13	03	07	18	04	-18	-08
<u>NOR Measures</u>								
Student status	-04	-14	-01	-10	-03	-08	09	08
Marital status	15	18	12	14	08	-01	-15	-17
Other paying job	-07	-05	-05	02	00	-07	08	-01
Volunteer work	-07	00	-01	00	-06	-11	05	-04
Home responsibilities	12	04	04	01	-02	-06	-03	00
People conflict	-61	-45	-59	-43	-38	-21	56	45
Time conflict	-35	-28	-35	-29	-26	-29	33	34
Preschool children	-09	-10	-07	-02	-04	-09	04	10
School children	09	12	05	11	07	01	-04	-18
High school children	04	21	00	14	-03	04	-04	-13
Children out of school	17	16	12	08	14	06	-08	-08

Note: N(full-time) = 714; $r = .09$, $p < .01$; decimals are omitted from correlations.

N(part-time) = 503; $r = .12$, $p < .01$; decimals are omitted from correlations.

attachment correlations were greater for full-time employees than part-time employees, whether or not individual characteristics were taken into account. Significance tests for correlation differences between part-time and full-time employees revealed, however, that the relation between NOR composite and attachment was not reliably different ($p > .05$). This conclusion also was unaffected by control for individual characteristics. The number of observations (4) per attachment variable was too small to conduct sign tests for consistency in the direction of differences in correlation magnitude. The hypothesis that NOR variables would relate more strongly to psychological attachment for part-time employees than full-time employees received no support.

A series of analyses was conducted to explore further the relationships among NOR variables, individual characteristics and psychological attachment. A canonical regression analysis was performed with four individual characteristics and eleven NOR factors as independent variables, and the four psychological attachment measures as dependent variables. Tests for parallelism of regression hyperplanes at the multivariate (across the four attachment variables) and univariate (for each attachment measure) levels were then conducted to determine if contributions of NOR and individual characteristics variables to regression within each sample were sufficiently equivalent to indicate that the samples were drawn from the same population.

The multivariate test of regression hyperplane parallelism revealed significant non-parallelism across the four attachment measures ($F(60,4616) = 1.85, p < .01$). Univariate parallelism tests revealed that regression hyperplanes were significantly non-parallel for each of commitment ($F(15,1185) =$

Table 8

Correlations and Partial Correlations of NOR Composite
with Psychological Attachment for Full-time and Part-
time Employee Samples

Psychological Attachment	<u>Correlation</u>			<u>Partial Correlation</u>		
	FT	PT	Z*	FT	PT	Z**
Commitment	41	37	06	35	30	06
General satisfaction	33	28	06	29	20	09
Involvement	24	20	05	17	11	05
Intention to quit	-36	-32	04	-28	-23	05

Note: N(full-time) = 714; degrees of freedom for correlation = 701;
degrees of freedom for partial correlation = 697.

N(part-time) = 503; degrees of freedom for correlation = 490;
degrees of freedom for partial correlation = 486.

*Z(difference) greater than .12 is significant at $p < .01$.

**Z(difference) greater than .15 is significant at $p < .01$.

Decimals are omitted from correlations, partial correlations
and Z values. The partial correlation is between the NOR
composite and psychological attachment with individual
characteristics controlled.

1.94, $p < .05$), general satisfaction ($F(15,1185) = 2.17$, $p < .10$), involvement ($F(15,1185) = 2.14$, $p < .01$) and intention to quit ($F(15,1185) = 1.93$, $p < .05$). Tests for significance of individual regression coefficients in predicting each attachment variable were then conducted.

Regression coefficient significance patterns were similar across attachment measures within each job status group, so these patterns are discussed as they apply to all four psychological attachment measures. NOR people conflict and NOR time conflict contributed significantly and substantially to regression for both full-time and part-time employees. The average increment in R^2 across attachment measures due to NOR people conflict was .18 for full-time employees and .09 for part-time employees. Mean increments in R^2 due to NOR time conflict were .02 for full-time employees and .03 for part-time employees. Sex and age contributed significantly to regression for full-time employees ($p < .05$) but not for part-time employees ($p > .05$). Conversely, another paying job contributed significantly to attachment for part-time employees ($p < .05$) but not full-time employees ($p > .05$). No other patterns among NOR variables were consistent across attachment measures between job status group.

An alternative perspective on the relations of NOR variables and individual characteristics with psychological attachment measures was sought by employing hierarchical regression procedures (Cohen and Cohen, 1975). Each measure of psychological attachment within each job status group was regressed first on the set of individual characteristics, then on the set of NOR measures, and then on the two sets of independent variables combined. Independent variance contributed by each set was then computed. Cross-validity

Table 9

Squared Multiple Correlations and Cross-validity Estimates
from Regression of Psychological Attachment on NOR Measures
and Individual Characteristics for Full-time and Part-
time Employee Samples

Independent Variable(s)		<u>Psychological Attachment</u>							
		Commitment		General Satisfaction		Involvement		Intention to Quit	
		FT	PT	FT	PT	FT	PT	FT	PT
NOR Measures	R^2	42	27	38	23	18	12	34	28
	R^2_{cv}	40	24	36	20	16	09	32	25
Individual Characteristics	R^2	10	08	07	06	07	07	09	10
	R^2_{cv}	09	06	06	05	06	05	08	09
NOR Measures + Individual Characteristics	R^2	43	27	39	24	21	17	37	30
	R^2_{cv}	41	23	37	20	18	12	34	26
Variance Unique to NOR Measures	ΔR^2	34	19	32	18	15	09	28	20
Variance Unique to Individual Characteristics	ΔR^2	02	01 [†]	02	01 [†]	03	03	03	02

Note: N(full-time) = 714

N(part-time) = 503

All squared multiple correlations and incremental squared multiple correlations are significant ($p < .01$), except as noted by [†]. Decimals are omitted from squared multiple correlations, cross-validity estimates (R^2_{cv}), and incremental squared multiple correlations (ΔR^2).

estimates were also computed, using a formula presented by Browne (1975). Results of these analyses are presented in Table 9.

Application of least-square weights to NOR variables resulted in substantial gains in variance accounted for in psychological attachment over that obtained by the equally weighted NOR composite. This was due to strong relationships of NOR people and NOR time conflicts with attachment being accented in least-squares regression and attenuated in the equally weighted composite as a result of variance transformations. Cross-validity estimates indicated that the relations are stable for both part- and full-time employees. Variance in attachment contributed by NOR variables ranged from a low of 9% for involvement to 20% for intention to quit based on the part-time sample. Individual characteristics contributed little additional variance in attachment (1-3%) for either full- or part-time employees. The contributions of NOR variables to regression was roughly equal for part-time employees across three of the four attachment measures, whereas for full-time employees the relative order of attachment predictability remained as with other analyses (commitment > general satisfaction > intention to quit > involvement).

In summary, NOR variables did not relate differentially to attachment for part-time and full-time employees, whether or not individual characteristics were considered. Both NOR factors and individual difference variables contributed significantly as sets to regressions with psychological attachment measures as dependent variables. NOR people conflict and NOR time conflict contributed substantially more variance to regression than other NOR variables. Overall, part-time and full-time employees did not differ in how

NOR variables and individual characteristics combined to predict psychological attachment.

Correlations between individual characteristics, OWR factors (perceptions), and psychological attachment appear in Table 10. All OWR factors related significantly to each of the four attachment measures for both part-time and full-time employees ($p < .05$), save correlations of OWR inclusion and OWR ambiguity with involvement for part-time employees ($p > .05$). No OWR measure correlated greater for full-time than part-time employees ($p > .05$) across the four attachment measures. OWR measures related most strongly to commitment, least strongly to involvement, and relations with general satisfaction and intention to remain fell in between. Sign tests were conducted on the direction of differences in strength of correlation across the six OWR measures for each of the four attachment dependent measures. All six correlations in one sample had to be greater than their parallel correlations in the other sample for a statistically reliable different to result ($p < .05$, two-tailed test). As may be seen in Table 10 this occurred for commitment and intention to remain, but not for general satisfaction or involvement. Perceptions of the organizational work role generally related to commitment and to intention to remain more strongly for full-time than part-time employees across the six OWR measures.

The four individual characteristics generally exhibited lower correlations with the psychological attachment measures. Eight of 16 correlations were reliably different from zero for full-time employees but only four of 16 were so for part-time employees (all correlations tested at $p < .05$, two-tailed test). No correlation between individual characteristics and

Table 10

Correlations of Psychological Attachment Measures with
Individual Characteristics and OWR Perceptions for
Full-time and Part-time Employee Samples

	<u>Psychological Attachment</u>							
	Commitment		General Satisfaction		Involvement		Intention to Quit	
	FT	PT	FT	PT	FT	PT	FT	PT
<u>Individual Characteristics</u>								
Age	26	28	20	22	23	14	-28	-26
Sex	18	07	17	07	-02	05	-05	-08
Education	-12	-11	-08	-18	-18	-24	16	24
Tenure	11	14	03	09	20	05	-19	-10
<u>OWR Perceptions</u>								
Inclusion	34	31	34	22	15	03	-26	-14
Communication accuracy	45	33	32	31	18	19	-30	-25
Communication openness	55	39	46	36	27	18	-34	-25
Conflict	-53	-40	-43	-37	-24	-17	38	32
Ambiguity	-47	-35	-39	-29	-21	-07	29	24
Clarity	-36	-31	-28	-29	-17	-17	28	23

Note: N(full-time) = 713, $r = .10$, $p < .01$; decimals are omitted from correlations.

N(part-time) = 491, $r = .13$, $p < .01$; decimals are omitted from correlations.

[†]This measure was reverse-scored so that a high value reflects low clarity.

attachment was greater than $r \pm .28$ for either full-time or part-time employees.

Zero order and first-order partial correlations between the OWR composite index and the four attachment measures appear in Table 11. All correlations and partial correlations between the OWR composite and attachment measures were significant ($p < .05$) for both full- and part-time employees. In no case did controlling for individual characteristics attenuate the relation by more than .03 correlation units. Correlations of the OWR composite with the attachment measures exhibited the same pattern as did the individual OWR factors: relations with commitment were highest, relations with involvement lowest, and relations with general satisfaction and intention to quit falling in between for both status groups. After controlling for individual characteristics the OWR composite still accounted for 8% to 44% of attachment variance for full-time employees, and 4% to 28% of attachment variance for part-time employees. All correlations and partial correlations based on full-time employees were larger than those based on part-time employees. However, tests for significance of correlation differences between part-time and full-time employees revealed that only commitment related more strongly to the OWR composite for full-time employees than part-time employees ($p < .05$). The pattern of results remained unchanged by controlling for individual characteristics.

Analyses identical to those used with NOR variables were conducted with OWR perceptions to explore further the relationships among OWR variables, individual characteristics and psychological attachment. The multivariate test for parallelism of regression hyperplanes revealed significant non-

Table 11

Correlations and Partial Correlations of OWR Composite
with Psychological Attachment for Full-time and Part-
time Employee Samples

Psychological Attachment	Correlation			Partial Correlation		
	FT	PT	Z*	FT	PT	Z**
Commitment	68	54	23	66	53	22
General satisfaction	56	48	11	54	46	11
Involvement	31	21	11	28	19	10
Intention to quit	-46	-37	11	-44	-34	11

Note: N(full-time) = 713; degrees of freedom for correlation = 705;
degrees of freedom for partial correlation = 701.

N(part-time) = 491; degrees of freedom for correlation = 483;
degrees of freedom for partial correlation = 479.

Decimals are omitted from correlations, partial correlations
and Z values. The partial correlation is between the OWR
composite and psychological attachment with individual
characteristics controlled.

* Z difference greater than .12 is significant ($p < .01$).

** Z difference greater than .15 is significant ($p < .01$).

parallelism from the regression of the four psychological attachment measures on the six OWR measures and the four individual characteristics measures ($F(40,4472) = 1.77, p < .01$). Analysis of parallelism for each of the four attachment measures revealed that the effect was due solely to non-parallelism in predicting involvement ($F(10,1182) = 2.13, p < .05$). Tests for significance of regression coefficients for predicting involvement within each job status group revealed significant contributions by communication openness ($t(1,702) = 4.00, p < .01, \Delta R^2 = .02$), conflict ($t = -2.20, p < .05$), $\Delta R^2 = .01$, sex ($t = -.201, p < .05, \Delta R^2 < .01$), education ($t = -2.84, p < .01, \Delta R^2 = .01$), and tenure ($t = 2.38, p < .05, \Delta R^2 < .01$) for full-time employees. Only communication accuracy ($t = 2.26, p < .05, \Delta R^2 = .01$), openness ($t = 2.72, p < .01, \Delta R^2 = .01$) and education ($t = -4.41, p < .01, \Delta R^2 = .02$) made significant independent contributions to regression for part-time employees. An alternative perspective on the relations of OWR variables with each attachment measure, with control for individual characteristics, was again sought by employing hierarchical regression procedures (Cohen and Cohen, 1975). For each measure of psychological attachment within each job status group the sets of individual characteristics and OWR variables were forced alternately into regression and increments in R^2 calculated for each set. Cross-validity estimates were computed (Browne, 1975). Results of these analyses are presented in Table 12.

All multiple correlations and incremental contributions presented in this table were reliable ($p < .01$), and cross-validity estimates (Browne, 1975) indicated high expected stability. However, fitting least square weights to the six OWR factors and four individual characteristics resulted

Table 12

Squared Multiple Correlations and Cross-validity Estimates
from Regression of Attachment on OWR Perceptions and
Individual Characteristics for Full-time and Part-time
Employee Samples

Independent Variable(s)		<u>Psychological Attachment</u>							
		Commitment		General Satisfaction		Involvement		Intention to Quit	
		FT	PT	FT	PT	FT	PT	FT	PT
OWR Perceptions	R^2	49	30	33	24	11	08	23	14
	R^2_{cv}	48	28	32	22	10	06	22	12
Individual Characteristics	R^2	10	08	06	07	07	07	08	10
	R^2_{cv}	09	06	05	05	06	05	07	08
OWR Perceptions + Individual Characteristics	R^2	50	33	35	27	16	12	26	20
	R^2_{cv}	49	31	33	24	14	09	24	17
Variance Unique to OWR Measures	ΔR^2	40	25	28	20	09	05	18	11
Variance Unique to Individual Characteristics	ΔR^2	02	04	02	03	05	05	04	06

Note: N(full-time) = 713

N(part-time) = 491

All squared multiple correlations and incremental squared multiple correlations are significant, $p < .01$. Decimals are omitted from squared multiple correlations (R^2), squared cross-validity estimates (R^2_{cv}), and variance increments (ΔR^2).

in only slight gains (0-4%) in variance accounted for over equally weighted composites.

To summarize, only commitment was related more strongly to OWR factors for full-time than part-time employees, whether or not individual characteristics were considered. Both sets of factors contributed significantly to relationships with attachment, and the pattern of contributions of OWR and individual characteristics to regression were generally similar between part- and full-time employees, save in regression of involvement on these variables.

Discussion

Differences between part-time and full-time employees in their perceptions of and involvement in the organizational work role and several non-organizational roles, and how the impact of these several roles relate to affective, conative and cognitive reactions to the organization were investigated. A profile emerged of the part-time employee in this organization as a young, single, female, who is attending school or working another job in addition to her organizational role, and who will probably leave sooner than her full-time counterparts. Part-time employees felt less involved in the organizational role but were more satisfied generally than full-time employees and perceived lower conflict, greater communication accuracy and greater communication openness than did full-time employees. The two job status groups did not differ in perceptions of conflict from non-organizational sources nor in ambiguity concerning work role activities. They were also similar in their commitment to the organization and in their intentions to remain with the

organization. Finally, the relation of non-organizational role measures with psychological attachment was equivalently high for part-time and full-time employees as was the relation between perceptions of the organizational role and psychological attachment.

In reviewing support across the four sets of hypotheses investigated one is struck by the relatively few significant differences found between part-time and full-time employees. Further, the statistically reliable differences generally accounted for rather small amounts of variance (1-5%). One reason for the overall weakness of results may be sampling bias. Survey data were collected during normal business hours (8:00 a.m. to 5:00 p.m.) in the host organization. It is possible that part-time employees with strong non-organizational role commitments work predominantly evening hours. Part-time employees available to work daytime hours may be more similar to full-time day shift coworkers than their evening part-time counterparts in the commitments and constraints with which they must contend. If true, the effect of this bias would be to suppress differences on several hypothesized dimensions. Given this possibility, it is encouraging that any hypothesized differences were supported. Although the extent of sample bias is unknown, this possibility should be taken into account in reviewing results.

Another sampling concern is that, in the opinion of a senior personnel executive in the organization, tenure levels of both job status groups were high. Although full-time employees averaged significantly longer tenure than part-time employees, both samples averaged greater than four years of continuous employment in the organization. A concern of sampling high tenure employees is that differences between part-time and full-time employees at time of hiring may have been socialized out by the fourth year of

employment. Only those individuals who have met with and either successfully combatted or acquiesced to organizational and work group pressures to conform will have remained for four or more years. Part-time employees with competing non-organizational interests when hired may have rejected one or more of these other roles for the organization role by the fourth year. This may account for the small differences between part-time and full-time employees in NOR membership and the lack of differences on NOR people and time conflicts.

Only one of six related hypotheses concerning perceptions within the organizational work role was supported. That part-time employees perceived less conflict in the OWR followed directly from their spending less time in the organization on a daily basis. It was also expected that part-time employees would perceive lower accuracy and openness of communication due to being around less than full-time employees. Just the opposite occurred, indicating that a simple exposure hypothesis was not sufficient to account for these data. With greater conflict perceptions, communication channels would not appear open and free-flowing to full-time employees; otherwise, conflicting request would occur less frequently. This explanation may account for the lack of perceived ambiguity differences between part-time and full-time employees, coupled with high tenure levels in the samples. Greater ambiguity perceptions for part-time employees would be expected either 1) during early job experiences (because training time is spread over longer periods of real time for part-time than full-time employees, or 2) after changes occur (e.g., in organizational policies, procedures or products). Both differences would be conditional on differences in the extent to which information about changes is relayed to part-time and full-time

employees. As both samples were made up largely of experienced employees, and as information was not perceived to be withheld by part-time employees, the lack of difference in ambiguity between job status groups in these data makes sense.

Lack of differences between part-time and full-time employees in felt inclusion in the informal work group was unexpected in light of the striking difference on involvement in the work role. If, as expected from partial inclusion, people differ in how much of their total being is brought to and expressed in the work role, then people low in partial inclusion should express lower involvement in the work role and should not become as involved in the work social structure as those high in partial inclusion. This contradiction could result if work role involvement and inclusion in the informal work group have different causes. Inclusion in the informal work group is clearly a function of the individual's degree of success in assimilating into the work social structure. High tenure levels in the sample indicates that assimilation was completed for most respondents, resulting in no difference on felt inclusion in the informal work group. In contrast, involvement in the work role may vary with task characteristics, competing non-organizational roles, and economic exchanges with the organization. Task characteristics have been found to relate to involvement across several job types in a military sample (Katerberg, Hom and Hulin, 1978). Part-time employees were found to hold a greater number of non-organizational roles than full-time employees. In some organizations part-time employees are not eligible for the same benefits as full-time employees (Rotchford and Roberts, 1978). In this study, the host organization does not offer hospitalization benefits

to part-time employees but does to full-time employees. Thus two of three possible causes of involvement varied with job status in these data, and could have influenced involvement but not affected inclusion in the informal work group.

A contrived scenario of the experiences of part-time and full-time employees as they move from job applicant to assimilated employee can summarize the obtained pattern of results. Part-time and full-time employees already differ when they apply for positions. Full-time employees are looking for a principle source of economic support and an opportunity for career development. They have resolved commitments that would compete for time during normal business hours, and will choose the work role over competing commitments. Part-time employees may seek part-time employment for several reasons, including economic necessity, competing commitments, or as a first step into the labor force. Other reasons are possible; the important point is that the work role is a means to one of a variety of ends more so for part-time employees than full-time employees. The work role will thus occupy a position of lower centrality for part-time employees than for full-time employees.

Management knows that fewer benefits may be extended part-time employees than full-time employees without causing staffing shortages. Further, part-time employees tend to leave sooner than full-time employees and hence, "are not worth" equal investment. This, however, conveys to part-time employees that the organization views part-time help as second-class citizens, thus lowering further work role involvement already low at the time of hire among part-time employees.

Once on the job, both job status groups have to learn operating

procedures, stock, and organizational policies and norms. It may take part-time employees longer to do so. For example, if it takes 100 hours to learn the job, it will take a full-time employee working 40 hours per week just two and one-half weeks to learn the job. A part-time employee averaging 10 hours per week will need two and one-half months to learn the same job, all else being equal. Thus part-time employees should experience greater ambiguity on the job than full-time employees up to the point at which both job status groups have learned the job. The first several weeks of employment is also when the employee will assimilate into the social fabric of the organization with varying degrees of success. Again the part-time employees may have the assimilation period extended longer because they spend less time per week in the organization than full-time employees. Perceived inclusion in the work role should differ up to the point at which both job status groups have assimilated into the social structure of the organization or rejected the role and terminated.

With lower involvement in the work role, part-time employees may have a lower threshold for turnover than full-time employees when confronted with equal frustrations on the job. Greater frustration, resulting from job learning time and assimilation being extended over a greater period of time, would foster further the propensity of low involvement individuals to withdraw from the organization. If the organization conveys the view that part-time employees are second class citizens (e.g., by offering fewer benefits to part-time employees who perform the same work for less time per week), the propensity of part-time employees to average shorter tenure may also increase.

Just as part-time employees must assimilate into the organization so must members of non-organization role sets assimilate to the added intrusion of the work role on the part-time employee's time and energy. Conflicts may arise until the non-organizational social systems adjust to the part-time employee's new obligation, or until the part-time employee casts aside one or more conflicting roles. In either case conflict would be expected early in the tenure of the part-time employee. Full-time employees would not face such conflict resolution because they start the organizational role with fewer non-organizational commitments.

The scenario just outlined is speculative. If accurate, several of the hypotheses of this study should be retested. Part-time and full-time employees should be sampled when job applications are submitted. Assessments of conflict, ambiguity and inclusion should then be repeated until the employee reports feelings that the job is learned and acceptance in the social system of the organization is gained.

The fourth set of hypotheses concerned how strongly NOR variables and OWR variables would relate to measures of psychological attachment of part-time and full-time employees. Although little support was obtained for correlation differences as hypothesized, there was a persistent pattern for larger correlations among measures for full-time employees than part-time employees. This same tendency is found in data reported by Logan, O'Reilly and Roberts (1973) and in data reported by Miller and Terborg (1979). As these investigations differed in organizations, samples and measures, the most compelling explanation is one tied to part-time and full-time employees as distinct worker populations. Two possibilities are apparent. First,

part-time employees may be heterogeneous, combining several groups of people with differing frames of reference (Smith, Kendall and Hulin, 1969). Several evaluative frameworks operating in a sample would tend to suppress relations among perceptual measures. For example, two potentially distinct groups of part-time employees might be young, single, male students (group 1) and older, married, mothers who have returned to the labor force after children have left home (group 2). Given the same pay, group 1 might evaluate pay against what they expect to earn in careers resulting from their training, thus concluding that the pay is inadequate and unsatisfactory. Group 2 might evaluate pay against an evaluative framework that the money is unnecessary, since the point of taking a job was to get out of the house and meet people, leading to the conclusion that the pay is adequate at least. Differences of evaluative framework among part-time employees would then lead to a poor fit of any model applied across heterogeneous groups. Further research should identify distinct groups of people within part-time employees, and re-apply hypotheses developed for the part-time sample as a whole to each distinct subsample.

The second possibility is that the measurement procedures used are inappropriate to measure perception of part-time employees. Questions about organizational factors that have little salience for part-time employees (e.g., promotion opportunities) may elicit responses with greater error variance than items concerning high salience factors. Although weighting perceptual measures by importance has been found to not increase predictability for full-time employees (Mikes and Hulin, 1968), a measure of importance or of salience may help to identify questions that were meaningless

to ask of part-time employees. Such questions could then be given low or zero weights in scale development. Salience measurement could also aid research on overlap between the reasons part-time employees seek jobs and those governing full-time employee job search.

A second way in which assessment procedures may be inappropriate for part-time employees is tied to the low involvement levels of part-time employees relative to full-time employees. If research measures are perceived as somehow used for the benefit of the organization, and if part-time employees care less about the general welfare of the organization than full-time employees, then part-time employees may not take research questions as seriously as full-time employees. This would inflate error levels and attenuate relationships.

Differences in strength of relation among measures for part-time and full-time employees were subtle and often non-significant in these data, but are consistent across three independent investigations. Two interpretations of this result are offered; neither appears more likely than the other. Use of salience measures is researchable, as is investigating heterogeneity with part-time employee samples. Low interest and involvement in research questions is problematic in field research generally, and seems the least likely to have produced differential relations among measures for part-time and full-time employees.

The hypotheses concerning part- and full-time employee differences in this research were simplistic. Differences in time spent in the organization formed the basis for several hypotheses concerning non-organizational activity differences, and various attitudinal and perceptual differences;

specific hypotheses were developed from partial inclusion and role theory concepts; predictions were for time difference effects on attitudes, perceptions and non-organizational role membership. Small differences were found. The most interesting differences between part- and full-time employees may result from interactive effects of non-organizational constraints on the individual with differential treatment by the organization, producing withdrawal behavior differences independent of job-related attitudes. Further work on differences between job status groups should investigate differences between status groups on factors outside the organization function to alter or solidify expectations concerning the work role; and how the individual and organizational factors interact to produce short or long term part- and full-time employees.

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