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Personality and Individual Differences 37 (2004) 333–347
PERSONALITY AND INDIVIDUAL DIFFERENCES
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Personality and attitudinal variables as predictors of voluntary union membership

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Received 10 February 2003; received in revised form 26 August 2003; accepted 15 September 2003
Available online 7 November 2003

Abstract

This study examines individual differences in personality and attitudinal variables as predictors of union membership, with control for demographic and job-related factors. The data were collected from government employees in a work setting in which union membership was voluntary ($N = 582$ males, 83% response rate). A survey questionnaire was used to assess extraversion, neuroticism, internal locus of control, organizational commitment, and two measures of job satisfaction. Demographic (age, marital status) and job-related (job level, tenure, geographical region) data were also collected. Information about union membership was obtained from union records.

Hierarchical logistic regression analysis methods were used. Over and above the effects of demographic and job-related variables, neuroticism, external locus of control, organizational commitment, general job satisfaction, and dissatisfaction with workload were significant positive predictors of union membership. The extraversion × neuroticism interaction was also significant; the combination of low neuroticism and low extraversion was associated with a disproportionately low rate of union membership. All the significant variables were direct predictors of outcome; there was no evidence of mediation effects. These results are discussed with reference to the literature on the role of dispositional and attitudinal variables in relation to organizational outcomes, particularly union membership and participation.
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Keywords: Extraversion; Neuroticism; Locus of control; Job satisfaction; Organizational commitment; Union membership; Government employees

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doi:10.1016/j.paid.2003.09.007

1. Introduction

Evidence suggests that psychological variables play a role in determining work-related attitudes and behaviours (for a review, see George, 1992). Recent publications highlight the significance of extraversion and neuroticism (e.g. Judge, Heller, & Mount, 2002; Mohammed, Mathieu, & Bartlett, 2002; Seibert & Kraimer, 2001), impulsivity (Jackson, 2001), personal resilience (Wanberg & Banas, 2000), locus of control (Allen, Lucero, & van Norman, 1997), and self-efficacy (Cunningham et al., 2002) in relation to leadership, participation, productivity, career success, and attitudes to organizational change. Evidence that personality variables are implicated in a wide range of work outcomes suggests that they may also play an explanatory role in relation to other work behaviours. The specific issue considered in the present study is union membership, a topic that has hitherto received little attention in the literature on the role of personality in organizational settings.

The dominant theory explaining why employees become union members is the '*exit-voice theory*' which views membership as a means by which employees express their complaints about work conditions through the 'voice' of their union, and seek to effect change (Freeman & Medoff, 1984; Hirschman, 1970). Thus, the theory predicts that dissatisfied union members will use their 'voice' and thus be more likely to remain in their jobs, whereas dissatisfied non-union workers will tend to quit. Empirical support for this view, which implies lower job satisfaction among union members as compared with non-members, is mixed (e.g. Hersch & Stone, 1990; Leigh, 1986; Olson-Buchanan, 1996; Schwochau, 1987). Moreover, the theory disregards the potential influence of individual differences on union membership.

One reason why personality has not been extensively studied in relation to union membership is that research in this area has focused primarily on work settings in which membership is mandatory. This research allows outcomes such as loyalty, commitment, and grievance behaviour among union members to be studied (e.g. Aryee & Debrah, 1997; Conlon & Gallagher, 1987; Iverson & Roy, 1994; Iverson & Kuruvilla, 1995; Nandram & Klandermans, 1993), but does not allow comparisons between union members and non-members.

Thus, although demographic and structural factors (e.g. age, education, and size of organization) have been studied in relation to union membership (for a review, see Riley, 1997), the role of personality has been relatively neglected. Indeed, earlier work cast doubt on whether individual differences played any significant role in union membership decisions; de Cotiis and LeLouran (1981) concluded that "*Studies of personal characteristics offer little support for the contention that there is a union type*". Seeking to clarify this issue, Snyder, Verderber, and Morris (1986) examined predictors of voluntary union membership in a social services work setting. Among male employees ($n = 144$), union members had longer tenure than non-members, but were significantly lower in sense of competence and internal control, in satisfaction with work content and promotion opportunities, and in organizational commitment.

This study highlights the role of work perceptions in relation to union membership, but provides only limited evidence of personality differences between members and non-members. Other relevant research includes several Dutch studies, cited by Klandermans (1986), based on a motivational model of union membership. Demographic factors, together with instrumental motives and social pressures, were found to underlie union membership decisions. Offering little support

for exit-voice theory, job dissatisfaction played only a minor role in predicting union membership, a finding also reported by Guest and Dewe (1988). Moreover, Conlon and Gallagher (1987) and Poole, Mansfield, Frost, and Blyton (1983) found no differences in job satisfaction between members and non-members, while Khaleque (1993) reported that union members had greater job satisfaction than non-members.

However, job satisfaction is not a single, global construct. Separate facets of satisfaction (e.g. work content, job security, pay, and supervision) may be differentially related to union membership, and other factors (e.g. gender and manual versus non-manual employment) have been found to influence these more specific relationships (Bender & Sloane, 1998). Thus, mixed (and often inconsistent) research findings tend to support the view that "*the relationship between union membership and satisfaction is complex and not yet fully understood*" (Schwochau, 1987).

Conflicting findings have also been reported from studies of union membership in relation to organizational commitment. Whereas Snyder et al. (1986) found that commitment was higher among non-members as compared with members, Conlon and Gallagher (1987) found no significant differences in commitment between current members of the union and those who had never been members (although past members had lower scores). In contrast, other evidence suggests that organizational commitment is positively related to union participation (Iverson & Kuruvilla, 1995; Iverson & Roy, 1994). Possibly accounting for these diverse findings, a recent meta-analysis showed that cultural work values and industrial relations systems moderated the overall positive correlation between company commitment and union involvement (Johnson, Johnson, & Patterson, 1999).

Methodological limitations may also account for weak or discrepant findings in the literature. Snyder et al. (1986) noted that the research has usually compared samples from work sites with no union representation with those from settings in which union membership is mandatory (e.g. Hovekamp, 1994). Thus, differences between members and non-members may be attributable to differences (unrelated to union issues per se) between individuals who choose to work in one or other setting. Such comparisons may also be confounded by non-random differences in work conditions, bargaining agreements, organization structures, and external justifications for union membership (e.g. pay rates or better promotion prospects).

1.1. Present study

The present research sought to extend the existing literature on psychological factors associated with voluntary union membership to encompass the role of personality characteristics known to predict other aspects of work-related behaviour. The role of attitudinal variables was also evaluated to throw further light on conflicting literature findings. Control for demographic and job-related variables was included in the analysis model, and data were collected in a work situation that eliminated several methodological problems of previous work. The rationale underlying the choice of predictor variables, and the specific hypotheses tested, are outlined in the following paragraphs.

Personality variables. The personality characteristics assessed in the present study were neuroticism and extraversion (Eysenck & Eysenck, 1975), and locus of control (Paulhus, 1983). In view of evidence that support for worker participation tends to be greatest among employees with

fewest organizational and personal resources (Fenwick & Olson, 1986), and among individuals low in perceived competence and internal control (Snyder et al., 1986), it was predicted that psychological vulnerability (as reflected by high neuroticism and low internal locus of control) would be positively associated with union membership (*Hypothesis* 1). It was also predicted that extraversion (which refers to sociability, activity, and affiliation needs) (Eysenck & Eysenck, 1975) would be positively associated with membership (*Hypothesis* 2).

Over and above the main effects of neuroticism and extraversion, evidence suggests that these dimensions of Eysenck's personality model may combine interactively to predict outcomes (Eysenck & Eysenck, 1985). Claridge and Davis (2001) cite experimental studies in which significant neuroticism/extraversion interactions were found, and caution against neglect of such moderator effects. In an organizational setting, Parkes (1986) demonstrated that neuroticism moderated the relation between extraversion and coping behaviour. Moreover, Jackson (2001) found that employee sales performance was better predicted by impulsivity, a dimension of Gray's personality model (Gray, 1981), than by the additive effects of extraversion and neuroticism. Relative to Eysenck's dimensions, impulsivity runs from low neurotic introversion to high neurotic extraversion. Thus, this result adds to the evidence of interactive effects within Eysenck's model. Accordingly, in the present study, extraversion and neuroticism were hypothesized to contribute interactively to the prediction of union membership (*Hypothesis* 3).

Attitudinal variables. Three attitudinal variables (organizational commitment, overall job satisfaction, and dissatisfaction with workload) were evaluated in relation to union membership over and above the personality variables. It was predicted that both organizational commitment (*Hypothesis* 4) and overall job satisfaction (*Hypothesis* 5) would be significant, but no a priori predictions were made about the direction of effects in view of the inconsistent literature findings. On the basis of the exit-voice theory and perceived union instrumentality in negotiating improved working conditions, workload dissatisfaction was predicted to be positively associated with union membership (*Hypothesis* 6).

Control variables. Demographic (age and marital status) and job-related (job level, job tenure, and geographical region) variables were included in the predictive model for control purposes in the light of literature demonstrating their significance in relation to union membership (Riley, 1997).

Hypotheses 1–6 were tested in data collected from a homogeneous group of male, white-collar workers represented by a single union. The participants were government employees working in an environment in which there were no extrinsic pressures to join the union, in which membership was open to both supervisors and subordinates, in which all employees were engaged in the same work activities, and in which the union was recognized by the employer for the negotiation of pay and working conditions. Thus, several methodological problems associated with previous work in this area (e.g. comparisons across different work settings) were avoided in the present study.

Mediational effects. Barling, Fullager, and Kelloway (1992) noted that personality variables may exert indirect, rather than direct, effects on union-related outcomes; current models of union involvement also incorporate indirect pathways (e.g. Iverson & Kuruvilla, 1995). Accordingly, a further aim of the present study was to determine whether there was evidence of mediational effects whereby the effects of personality on union membership were transmitted through organizational commitment and job satisfaction.

2. Method

2.1. Sample and procedure

A national sample of government employees working as Driving Examiners participated in the study. Two-thirds of the Driving Test centres in the UK were randomly selected, and survey materials were mailed to all Examiners in these centres, together with a covering letter describing the nature of the research. Questionnaires were identified only by number, and a list linking numbers and names was compiled separately. Confidentiality of individual data was guaranteed.

Completed questionnaires were returned by 624 participants, a response rate of 83%. Almost 96% of the respondents were men, closely reflecting the overall proportion of men in this occupational group. For analysis purposes, data from the 25 women were excluded; deletion of missing data reduced the sample size to 582.

2.2. Measures

The survey questionnaire assessed demographic characteristics, job-related variables, and individual differences; in addition, union membership information was obtained from formal records. Details of the measures used are given below.

Age. Mean age in the sample was 48.3 ± 8.5 yrs. The range was 28–64 yrs.

Marital status. 90.2% of participants ($n = 525$) were married; 5.5% were single ($n = 32$); and 4.3% were divorced/separated ($n = 25$).

Job level. Examiners in each Test Centre (usually 3–5 individuals) were supervised by a Senior Examiner. 77% of the present sample ($n = 448$) were Examiners (coded 0); the remainder ($n = 134$) were Senior Examiners (coded 1).

Job tenure. Total years of employment as a Driving Examiner, at either job level, was reported. Mean tenure was 9.4 ± 6.3 yrs; the range was <1–30 yrs.

Extraversion and neuroticism. The Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975) was used to assess extraversion (21 items, coefficient α 0.85) and neuroticism (22 items, coefficient α 0.84).

Locus of control. A 10-item measure of personal control (Paulhus, 1983) was used to assess control beliefs; high scores indicated internal control. Responses were scored on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale. Coefficient α was relatively low (0.51), but in line with other values for male samples reported by Paulhus and Van Selst (1990).

Organizational commitment. A single-item measure, similar to that used by Iverson and Roy (1994) assessed whether participants expected to move to a different kind of work within the next two years. The 0–1–2–3 response scale corresponded to responses of 'no' (76.8%), 'possibly' (17.2%), 'probably' (3.4%), and 'definitely' (2.6%) respectively. For analysis purposes, this scale was reverse-scored to assess organizational commitment.

Job satisfaction. A seven-item scale with responses scored from 1 to 5 was used to assess job satisfaction (Caplan, Cobb, French, Harrison, & Pinneau, 1975). Factor analysis identified two components in this scale with eigenvalues of 4.50 and 1.78, respectively. The first factor represented general satisfaction (4 items, $\alpha = 0.86$); the items covered overall job satisfaction, interest in the work, and (reverse-scored) often feeling fed-up, and feeling bored with the work. The second

factor related to specific dissatisfaction with workload (3 items, $\alpha = 0.78$); these items assessed dislike of work pace and amount of work, and dissatisfaction with workload level.

Geographical regions. Eight UK regions were identified in the analysis: Northern (30% of the sample), West Midlands (11%), Eastern (13%), Wales (5%), South Eastern (9%), Metropolitan/London area (15%), Scottish (9%), and Western (8%).

Union membership. A list of members of the Driving Examiner section was provided by the National Union of Civil and Public Servants (now the Public and Commercial Services Union). Union members constituted 75.6% of the analysis sample; in the Driving Examiner branch as a whole, union membership was 77.6%. For analysis purposes, union members were coded 1; non-members were coded 0.

2.3. Statistical analysis

Hierarchical logistic regression was used to evaluate the significance of the personality and attitudinal variables as predictors of union membership, over and above the demographic and job-related control variables. Following the guidance of Cohen, Cohen, West, and Aiken (2003), this method was chosen in preference to discriminant analysis for two main reasons. First, the assumptions underlying discriminant analysis (that the set of predictor variables is multivariate normal, and that within-group covariance matrices are homogeneous across the groups) are rarely met in practice (Press & Wilson, 1978). Second, logistic regression is well-suited to hierarchical methods, including the testing of interactive effects (Jaccard, 2001), as it allows the significance of sets of predictors, or of individual variables, to be evaluated over and above those already in the model.

As in multiple regression, predictor variables in logistic regression may be continuous or categorical (or a combination of both). For categorical variables (dummy coded in the analyses), the 'odds ratio' is the amount by which the chances of being a 'case' (in this instance, a union member) are multiplied when the predictor is incremented by one unit. For example, in the present study, the value of the odds ratio for the predictor "job level" is the probability of being a union member for a Senior Examiner (coded 1) relative to an Examiner (coded 0).

3. Results

3.1. Bivariate analyses

Bivariate relationships between union membership and the predictor variables were evaluated. Union membership was related to marital status ($\chi^2 = 7.9$, df $= 2$, $p < 0.025$), job level ($\chi^2 = 12.9$, df $= 1$, $p < 0.001$), and region ($\chi^2 = 20.5$, df $= 7$, $p < 0.005$). Membership rates were higher among married and single individuals (77% and 75% respectively) than among those who were divorced/separated (52%), and among Senior Examiners (87%) as compared with Examiners in the basic grade (72%). Relative to other regions, membership rates in the Metropolitan (64%) and South Eastern areas (62%) were low, and those in Scotland were high (91%). Membership was also positively related to the ordinal measure of organizational commitment (Mann–Whitney test, $Z = -2.31$, $p < 0.025$).

Table 1
Means, standard deviations, and zero-order correlations of study variables

	Mean (SD)	1	2	3	4	5	6	7
1. Union membership[a]	0.76	–						
2. Job tenure (yrs)	9.4 (6.30)	0.13**	–					
3. Age (yrs)	48.3 (8.5)	0.06	0.62**	–				
4. Extraversion	11.3 (5.1)	0.03	−0.07	−0.03	–			
5. Neuroticism	9.1 (5.1)	0.10*	0.03	−0.10*	−0.14**	–		
6. Internal locus of control	47.9 (6.7)	−0.10*	−0.12**	−0.09*	0.22**	−0.13**	–	
7. General job satisfaction	13.5 (4.1)	0.07	−0.09*	0.07	0.11**	−0.24**	0.07	–
8. Dissatisfaction with workload	9.6 (3.5)	0.06	−0.01	−0.06	−0.03	0.19**	−0.01	−0.39**

$N = 582$.
[a] Union membership was coded 'member' = 1, 'non-member' = 0.
*$p < 0.05$.
**$p < 0.01$.

The means, standard deviations, and Pearson inter-correlations of the continuous predictor variables and the dichotomous union membership variable are shown in Table 1. Membership was positively related to tenure but not to age; it was also related to neuroticism (positively) and to internal locus of control (negatively) but the correlations were modest in size. Among the personality and attitudinal variables, all correlations were less than 0.25 with the exception of general job satisfaction and dissatisfaction with workload which were correlated −0.39**.

3.2. Multivariate analyses

Hierarchical logistic regression, carried out in five steps, was used to determine the extent to which each of the independent variables predicted union membership. The results for the hierarchical analysis and for the final simultaneous model are shown in Table 2. On entry at each of the successive hierarchical steps, the variables in each block are controlled only for each other and for those already entered, whereas in the final model the effects of the predictor variables are controlled for all other variables in the analysis. In the paragraphs below, the overall significance of the model is reported at each step, together with the incremental significance of the block entered (i.e. the extent to which the variables entered at that step contribute to the prediction of union membership over and above those already in the model).

Step 1; demographic variables. Entry of age and marital status at the first step of the logistic regression produced a significant model, $\chi^2 = 7.8$, df = 3, $p < 0.05$. Marital status, but not age, was significant. Examination of the dummy variable contrasts showed that married participants were more likely to be union members than their divorced/separated counterparts, but the difference between married and single groups was non-significant. The odds ratio for married status relative to divorced/separated status was 2.98 (i.e. married individuals were almost three times more likely to be union members than those who were divorced/separated).

Step 2; job-related variables. Job level, job tenure, and region were entered at the second step. The results showed that union membership was associated with higher job level; the odds ratio for union membership among Senior Examiners relative to Examiners was 2.11 (i.e. Senior Examiners

Table 2
Hierarchical logistic regression analysis predicting union membership

Step	Source	df	Statistics at entry				Statistics in final model	
			B	s.e. (*B*)	Wald	*p*	*B*	*p*
1	Age	1	0.095	0.099	<1	ns	−0.123	ns
	Marital status[a]	2	–	–	6.05	<0.05		<0.10
	Single	1	−0.052	0.424	<1	ns	−0.239	ns
	Divorced	1	−1.036	0.422	6.04	<0.025	−1.092	<0.025
2	Job level	1	0.744	0.335	4.95	<0.05	0.871	<0.025
	Job tenure	1	0.040	0.025	2.57	ns	0.048	ns
	Region[b]	7	–		18.03	<0.025	–	<0.01
3	Extraversion	1	0.148	0.106	1.96	ns	0.087	ns
	Neuroticism	1	0.272	0.112	5.92	<0.025	0.314	<0.01
	Internal locus of control	1	−0.271	0.108	6.12	<0.025	−0.287	<0.01
4	Extraversion × neuroticism	1	−0.251	0.115	4.79	<0.05	−0.309	<0.01
5	Organizational commitment	1	0.402	0.163	6.12	<0.025	0.402	<0.025
	Job satisfaction	1	0.287	0.121	5.67	<0.025	0.287	<0.025
	Dissatisfaction with workload	1	0.339	0.119	8.15	<0.005	0.339	<0.005

Note. For ease of interpretation, continuous variables were standardized prior to the analysis.
[a] The reference group was 'married'.
[b] See text for details of regional effects.

were more than twice as likely than Examiners to be union members). Job tenure was non-significant, but membership rates differed significantly across regions. Relative to the Metropolitan/London area, the Northern, West Midlands, and Scottish regions had significantly higher rates of membership, the odds ratios being 1.87, 2.80, and 5.80, respectively. The variables added at this step contributed significantly to the model; change in $\chi^2 = 35.8$, df $= 9$, $p < 0.001$; overall model, $\chi^2 = 43.6$, df $= 12$, $p < 0.001$.

Step 3; individual difference variables. At the third step of the hierarchical analysis, the individual difference measures, extraversion, neuroticism, and locus of control, were entered. High neuroticism and high internal control were significantly related to union membership, but extraversion was non-significant. For this step, change in $\chi^2 = 14.1$, df $= 3$, $p < 0.005$; overall model, $\chi^2 = 57.7$, df $= 15$, $p < 0.001$. Thus, these results supported Hypothesis 1 but not Hypothesis 2.

Step 4; extraversion × neuroticism interaction. At the fourth step of the analysis, the extraversion × neuroticism interaction was entered. It contributed significantly to the model, supporting Hypothesis 3. At this step, change in $\chi^2 = 4.4$, df $= 1$, $p < 0.05$; overall model, $\chi^2 = 62.1$, df $= 16$, $p < 0.001$.

Step 5; organizational commitment and job satisfaction measures. At the final step of the analysis, organizational commitment, general job satisfaction and dissatisfaction with workload were entered. At this step, change in $\chi^2 = 19.8$, df $= 3$, $p < 0.001$; for the overall model, $\chi^2 = 81.8$, df $= 19$, $p < 0.001$. Both organizational commitment and job satisfaction were significant; thus,

Hypotheses 4 and 5 were supported. Higher commitment and greater satisfaction were positively associated with union membership. Greater dissatisfaction with workload was also positively associated with membership, supporting Hypothesis 6.

3.3. Goodness-of-fit of the model

Non-significant statistics for the Hosmer–Lemeshow test of goodness-of-fit (Hosmer & Lemeshow, 2000) for the final model ($\chi^2 = 6.9$, df = 8, ns) indicated an acceptable fit of observed cases in each category to expected cases based on the logistic regression. No single index equivalent to R^2 in ordinary least squares (OLS) regression exists for logistic regression but several *pseudo* R^2 indices have been developed (Cohen et al., 2003). However, Hosmer and Lemeshow (2000) note that the *Pseudo* R^2 indices tend to be smaller than R^2 values for equivalent OLS analyses, and caution against misperceptions of these lower values as indicating poor models.

In the present analysis, two *Pseudo* R^2 indices were evaluated. The value of the Cox and Snell index (Cox & Snell, 1989) was 0.131. However, this index is difficult to interpret as its maximum value is <1, and depends on the proportion of 'cases' in the sample. To facilitate interpretation, the Nagelkerke index (Nagelkerke, 1991) transforms the Cox and Snell index to a 0–1 scale. In the present analysis, the value of the Nagelkerke index was 0.196.

3.4. Form of the extraversion × neuroticism interaction

To determine the nature of the extraversion × neuroticism interaction, the B coefficients for extraversion were evaluated at high neuroticism (1 SD above the mean) and low neuroticism (1 SD below the mean), following the method described by Aiken and West (1991). This method retains the continuous nature of the extraversion and neuroticism scores; it does not involve dichotomization of the independent variables to create 'high' and 'low' groups, or restricting the analysis to individuals with extreme scores on the independent variables. These analyses showed that at low neuroticism (−1 SD), extraversion was positively and significantly ($B = 0.40$, $p < 0.01$) related to union membership; conversely, at high neuroticism (+1 SD), extraversion was not significantly related to union membership but the trend was negative ($B = -0.22$, ns). The form of the interaction was such that the combination of low neuroticism and low extraversion was associated with disproportionately low rates of union membership relative to each of the other combinations (i.e. high neuroticism/low extraversion; high neuroticism/high extraversion; and low neuroticism/high extraversion).

3.5. Mediation effects

The data in Table 2 do not provide any evidence of mediator effects whereby, for instance, the impact of job-related dispositional variables on union membership could be transmitted through attitudinal variables entered into the model subsequently. The significance levels of variables entered into the hierarchical model at the initial steps showed very little change when evaluated in the final model. Mediation would be indicated if a variable significant at entry ceased to be so in the final model, but no such effects were observed. Thus, all variables that were significant on entry were direct predictors of union membership outcome.

4. Discussion

The present study demonstrates the significant roles played by psychological variables in predicting union membership, over and above the effects of demographic and job-related factors. Thus, the findings extend the large body of research that focuses on socio-demographic and structural factors known to be significant in relation to union membership (Riley, 1997). In focusing on individual-level psychological variables, the present study also complements data from empirical studies of union membership based on sociological (e.g. Bender & Sloane, 1998; Cornfield & Kim, 1994) and social psychological (e.g. Aryee & Chay, 2001; Fullagar, Gallagher, Gordon, & Clark, 1995) models. The main findings of the present work are discussed below, with particular reference to the roles of the personality and attitudinal predictors; relevant methodological issues are also considered.

4.1. Personality variables

Supporting Hypothesis 1, neuroticism and locus of control were significant predictors of union membership, over and above the effects of the demographic and job-related variables; membership was associated with high neuroticism and low internal locus of control. The findings for neuroticism support the view that union members, as compared with non-members, are higher in negative affectivity, and consequently more prone to psychological complaints and dissatisfaction with their environment, and more likely to perceive their work conditions unfavorably (Watson & Pennebaker, 1989). In terms of Herzberg's classification (Herzberg, 1966), high neuroticism is also associated with a greater concern for 'hygiene' factors, such as job security, status, pay, and work conditions (which would be expected to predispose an individual to join a union) as compared with 'motivator' factors, such as personal growth, achievement, interesting work, and recognition (Furnham, Forde, & Ferrari, 1999).

The present findings relating to locus of control are consistent with previous evidence of lower levels of competence and internal control among union members as compared with non-members (Snyder et al., 1986). More generally, low internal control is linked to a range of adverse occupational outcomes, including less favourable work performance and motivation, and less effective individual coping strategies, relative to high internal control (for a review, see Parkes, 1989). The finding that individuals low in internal control were less likely to be union members is also consistent with evidence that attitudes towards collective bargaining are less favourable among internals than among externals (Bigoness, 1978). Thus, the present results suggest a tendency towards lower perceived control and greater vulnerability to external circumstances among union members as compared with non-members, and consequently a potentially greater need for organizational and social support. Membership of the union may be seen as one means of obtaining such support; for instance, Shore, Tetrick, Sinclair, and Newton (1994) found that perceived support from the union was an important dimension of union commitment.

Contrary to Hypothesis 2, extraversion did not show an overall association with union membership, but the interaction between extraversion and neuroticism was significant, supporting Hypothesis 3. At high levels of neuroticism (1 SD above the mean), union membership was relatively high and did not depend on level of extraversion. In contrast, at low levels of neuroticism (1 SD below the mean) membership was positively related to extraversion. Stable introverts (i.e.

individuals low in neuroticism and extraversion) were significantly less likely to be union members than stable extraverts (i.e. individuals low in neuroticism and high in extraversion); among the latter, membership rates were comparable to those associated with high neuroticism. This finding is consistent with evidence that stable introversion is characterized by traits such as passive, careful, peaceful, controlled and calm (Eysenck & Eysenck, 1991), and by the tendency to use coping strategies involving suppression rather than direct action (Parkes, 1986). It also suggests that, in terms of Gray's personality model (Gray, 1981), low impulsivity is associated with disproportionately low levels of union membership.

Among those low in neuroticism, the results suggest that characteristics associated with extraversion (sociability, affiliation, cooperation, and a willingness to engage in activities with others) (e.g. Fox, 1984; Lu & Argyle, 1991; Wolfe & Kasmer, 1988) may motivate individuals to become union members, in contrast to the negative perceptions and vulnerability that appear to underlie the association between high neuroticism and union membership. This interpretation implies that, while the likelihood of union membership is similar in each case, high neurotic union members may differ from low neurotic/high extraversion members in the nature and extent of participation and involvement in union activities.

4.2. Organizational commitment and job satisfaction

Over and above the significant effects found for personality variables, organizational commitment and overall job satisfaction were significant predictors of union membership. Thus, Hypotheses 4 and 5 were supported. For organizational commitment, the findings support the view that higher levels of commitment to the organization are associated with a greater likelihood of union membership (c.f. Iverson & Roy, 1994; Iverson & Kuruvilla, 1995). In contrast, Snyder et al. (1986) found that, among male employees, union members had lower levels of organizational commitment than non-members. Findings suggesting that cultural work values and industrial relations practices may moderate relations between organizational commitment and union involvement (Johnson et al., 1999) could account for the discrepancy between the present results and those of Snyder et al.

General job satisfaction was a positive predictor of union membership. This result is consistent with recent findings for non-manual male employees in a large-sample data analysis by Bender and Sloane (1998). Taken together with the findings relating to organizational commitment, the present result suggests that union members are generally more positive about their work situation than non-members. However, supporting Hypothesis 6, the specific measure of dissatisfaction with workload was also positively related to membership. Two interpretations of this finding can be suggested. First, individuals may have decided to join the union because they were dissatisfied with workload (a topic of current concern when the present data were collected) and perceived the union to have an instrumental role in negotiating reduced workload. Second, membership of the union may have sensitized individuals to the issue of workload, giving rise to greater dissatisfaction than found among non-members. The present data do not allow the direction of effect to be identified. However, the fact that both general job satisfaction and a specific dissatisfaction were both positively associated with union membership illustrates the point that the relation between union membership and satisfaction is complex, and seemingly conflicting findings are not unusual.

4.3. Demographic and job-related factors

Demographic (age and marital status) and job-related factors (i.e. job level, tenure, administrative region) were included in the present study primarily as control variables, but the main findings are discussed briefly below.

Age and marital status. There was no association between union membership and age in the present study, although marital status was significant. Whilst no differences in membership rates between married and single participants were found, divorced/separated individuals were significantly less likely to be union members. This result may reflect the general disruption to lifestyle (e.g. move to a new location) associated with divorce or separation.

Job-related variables. Job level was a significant predictor of union membership. In contrast to the non-significant findings of Snyder et al. (1986), Senior Examiners were more likely to be union members than Examiners. One interpretation of this finding is that union members are more active in seeking promotion, but it is also possible that management and leadership skills acquired in a union context make promotion more likely. Significant regional differences were consistent with union traditions in large UK urban centres (e.g. West Midlands and Northern regions), and with the generally lower membership in Southern England (Riley, 1997). Moreover, consistent with the relatively high level of membership found for Scotland, union membership is associated with local unemployment levels (e.g. Payne, 1989).

4.4. Mediational effects

All the significant variables in the present study were direct predictors of union membership; comparing the hierarchical regression results with those from the final model showed no evidence of mediational relationships by which the effects of, for instance, trait measures on union membership were transmitted through the attitudinal measures of commitment and job satisfaction. These findings contrast with a number of path models of union participation (e.g. Barling et al., 1992; Iverson & Kuruvilla, 1995), and suggest that models of the processes by which dispositional and attitudinal variables lead to membership require further development.

4.5. Methodological issues

The work environment in which the present study was carried out was particularly well-suited to research into the roles of personal and attitudinal characteristics as predictors of union membership. Thus, the data were obtained from a homogeneous occupational group of government employees all of whom were exposed to the same work demands, and had the opportunity to join the same union but were under no pressure to do so; moreover, membership of the union conferred no extrinsic benefits. Under these conditions, differences in personality and attitudes between union members and non-members are likely to be most strongly apparent (Snyder et al., 1986). In addition, the potential confounding effects of differences in type of work (e.g. manual versus non-manual), in job characteristics, and in instrumental motives for union membership, were eliminated or greatly reduced relative to heterogeneous occupational samples. However, although advantageous for the present study, the particular employment situation of

participants in the present work (government employees) leaves unresolved the question of whether the findings would generalize to other organizational settings.

Several more specific methodological aspects of the work should also be noted: in particular, the sample was moderately large ($N = 582$) and covered all UK mainland regions, the proportion of union members reflected that in the occupational group as a whole, and the response rate was high. Against these favorable features, there were two aspects of measurement weakness in the predictor variables. First, organizational commitment was assessed by a single item; second, the measure of external control had a low alpha value. In both cases, the observed results (although significant) must be regarded as attenuated by the low reliabilities of these measures.

A more substantial limitation of the present study is that cross-sectional data do not allow the direction of causal effects to be inferred. As Guest and Dewe (1988) point out, comparisons of members and non-members provide information about the characteristics associated with *belonging to a union*, but not about the process of *joining a union*. Whilst it is likely that those who voluntarily decide to become union members differ from those who do not become members, it is also possible that over a period of time membership may bring about changes in personality and attitudes. The reciprocal relationships observed between personality (including locus of control) and job attributes over many years illustrates the bi-directional pathways that may be involved (Kohn & Schooler, 1982). Moreover, the personal characteristics associated with belonging to a union are not necessarily the same as those that predict the level of union participation and involvement. Thus, several research questions relating to the roles of personality and attitudes in determining union membership and subsequent participation, which necessarily require longitudinal research, remain to be addressed.

Acknowledgements

The data reported in this article were obtained as part of a research programme funded by the UK Health and Safety Executive. The authors gratefully acknowledge the co-operation of the Driving Standards Agency and the National Union of Civil and Public Servants (now the Public and Commercial Services Union).

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