

# THE ROLE OF LOYALTY IN EXIT AND VOICE:

## A CONCEPTUAL AND EMPIRICAL ANALYSIS<sup>1</sup>

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### ABSTRACT

This paper analyzes the effects of employee loyalty to the firm on employee exercise of voice through grievance filing and employee intent to leave-exit-the firm. Using survey data obtained from samples of employees in two large firms, one unionized and the other nonunion, logistic regression analyses find that loyalty is negatively related to both the use of voice and intent to exit the firm. The findings contradict propositions drawn from exit-voice-loyalty theory as well as procedural justice-distributive justice theory.

Grievance procedures are virtually always present in unionized firms (Lewin and Peterson 1988; U.S. Bureau of Labor Statistics 1981) and are increasingly common in nonunion firms (Delaney, Ichniowski, and Lewin, 1989; Delaney, Lewin, and Ichniowski 1989; Ichniowski and Lewin 1988). Some studies of grievance

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procedures have sought to identify the characteristics of grievance filers and to assess the effectiveness of grievance procedures. Other research has examined the link between grievance procedures and organizational outcomes, such as employee turnover and productivity, and between grievance procedures and individual outcomes, such as performance appraisal ratings and promotion rates (Lewin 1992; Lewin and Peterson 1988; Peterson and Lewin 1991b). In the case of nonunion grievance procedures, recent research has also focused on union avoidance and other competing rationales for the emergence of such procedures (Feuille and Delaney 1993).

Most of this research has been conducted by organizational behavior and economics specialists, with the former emphasizing the determinants of grievance filing and individual outcomes associated with grievance procedure usage and the latter emphasizing organizational outcomes associated with grievance procedures. Rarely have these two perspectives been combined in a single study. This is surprising because a major paradigm underlying *both* schools of thought is Hirschman's (1970) well-known model of exit, voice, and loyalty.

This lack of conceptual integration is disturbing, but in addition there is a growing body of evidence indicating that Hirschman's model does not adequately explain why individuals file grievances (i.e., use voice) or why individuals subsequently opt to quit (i.e., exit) in the face of a voice option. Consequently, this paper attempts to advance the multidisciplinary integration of research on grievance procedures and to provide a fuller "test" of Hirschman's model than has been attempted heretofore. Our principal emphasis in this regard is on the role of loyalty in the exit-voice nexus, and our data are drawn from both unionized and nonunion settings.

## EXISTING RESEARCH

In his model of exit, voice, and loyalty, Hirschman sets forth two different dependent variables and suggests that they are mutually exclusive. These are (1) the decision to complain about a perceived deteriorated condition one has experienced in an organization (i.e., "voice") and (2) the decision to remove oneself from this worsening condition (i.e., "exit"). One intervening explanatory variable that predicts whether voice or exit behavior will be observed is the individual's loyalty to the firm—"the likelihood of voice increases with the degree of loyalty" (Hirschman 1970, p. 77). Hirschman does not expressly define loyalty, but by his own words it is clearly something different from "exit." If one were to graph the relationship among the three variables, one might draw a line ranging from "low loyalty" to "high loyalty." At the low end of the loyalty spectrum would be the "exit" point, while at the high end of the spectrum would be the "voice" point.

Hirschman's model is bounded by an important concept, which is captured in the subtitle of his book: "...*Responses to Decline in Firms, Organizations and*

*States.*" More pointedly, Hirschman informs the reader that "the initial assumption is a *decline* in the performance of the firm or organization" (1970, p. 31, emphasis added). Thus, exit and voice are options to be weighed once one has experienced deterioration, perceived or actual, in one's relationship to an organization. It is at this point that the interrelationships among exit, voice, and loyalty become operative. As is explained further below, this insight has rarely, if ever, been used by researchers to frame their studies of grievance procedures.

Hirschman's model, which was developed to explain varieties of consumer (customer) behavior, has broad appeal to many disciplines. We focus, however, on how the model has been adapted to explain the behavior of individuals in the employment relationship. Hirschman's thesis has been used by labor economists primarily to analyze the behavior of labor unions (Freeman 1980; Freeman and Medoff 1984; Miller and Mulvey 1991). The dominant finding that emerges from this work is that, by providing employees a "voice" mechanism, unionism reduces voluntary employee turnover, that is, quits. Only a small portion of this research, however, treats grievance procedures (as distinct from unionism) as a voice mechanism. The standard empirical approach in this regard is to compare quit rates within industries among workers who are and are not covered by grievance procedures. In this work, moreover, little conceptual attention is given to the distinction between grievance procedure coverage and usage (Ichniowski and Lewin 1987; Peterson and Lewin 1991a), and none of the work appears to test for the effects of grievance procedure usage (or grievance issues, settlements, and outcomes) on employee quits—that is, exit.

Another major limitation of this research, one of particular relevance to the present inquiry, is the failure to distinguish between employees who have and have not experienced unfair treatment at work. That is, researchers have not attempted to identify and separate those individuals who perceive themselves to have experienced a deterioration in their employment relationship from all other employees. Thus, the boundary condition established by Hirschman in the explication of his model has not been adopted or empirically tested by industrial relations researchers. In addition to this limitation, there has been no attempt in previous research to conceptualize or test for loyalty in the context of the exit-voice framework. Put differently, the work of labor economists on grievance procedures provides a comprehensive treatment of exit (quits), a partial but importantly incomplete treatment of voice, and virtually no treatment of loyalty.

Equally troublesome is the knowledge gap in the organizational justice literature. Here, scholars emphasize that individuals' perceptions of procedural justice strongly influence their perceptions of and attitudes toward resulting (distributive) outcomes (Folger and Greenberg 1985; Greenberg 1990; Sheppard, Lewicki, and Minton 1992). Procedural justice focuses on the mechanisms or processes through which resource allocation decisions are made, while distributive justice focuses on the outcomes of such resource allocation decisions and the criteria used to make them (Delaney and Feuille 1992).



The concept of organizational justice appears to be supported by a body of scholarly work which indicates that fairness is a major contributor to the effective functioning of organizations (Greenberg 1990; Kahneman, Knetsch, and Thaler 1986a, 1986b; Sheppard, Lewicki, and Minton 1992).

Relatedly, individual perceptions of the fairness of resource allocation decisions depend on both the outcomes of and procedures used to make these decisions—that is, on distributive justice and procedural justice. For example, several studies have shown that the citizens of some nations strongly prefer an adversarial to an inquisitorial system for resolving legal disputes (Folger and Greenberg 1985; Lind and Tyler 1988; Thibaut and Walker 1975). Adversarial systems are used in the United States and Britain and in arbitration proceedings and apparently are preferred by the parties to disputes in these settings because they allow the disputants to control the collection and presentation of evidence (i.e., they allow voice). Inquisitorial systems (which are widely used in Continental Europe), by contrast, give judges or other authorities control over the collection and presentation of evidence as well as over decisions.

Research also shows that organizational members more readily accept organizational decisions which affect them when the processes used to make such decisions are perceived to be fair (Greenberg 1990; Sheppard, Lewicki, and Minton 1992). Perceptions of organizational fairness, in turn, significantly influence employee attitudes. For example, the perceived fairness of performance appraisals may depend more on the procedures used to make appraisals than on the actual content of the appraisals. Relatedly, employees who have meaningful input into the appraisal process perceive the process to be fairer than employees who have little or no input into the appraisal process (Folger and Greenberg 1985). Further, Sheppard and his colleagues found that the availability of mechanisms for employees to provide input into workplace-related organizational decisions were positively associated with employee attitudes toward the organization (Sheppard, Lewicki, and Minton 1992). This finding is consistent with Sheppard's earlier (1984) work showing that the type of conflict resolution procedure used by an organization is more important in determining employee-disputant satisfaction with an outcome than is the outcome itself.

More narrowly, perceptions of fairness of justice also appear to play a key role in the context of grievance procedures. To illustrate, Ewing (1989) found that about nine of every 10 respondent subscribers to the *Harvard Business Review* agreed with the proposition that employees should have some type of grievance procedure to present their complaints to top management; Kochan (1979) found that union members assigned grievance handling the highest priority in ranking issues and activities that unions should pursue; and Fryxell and Gordon (1989) concluded that employee belief in the procedural and distributive justice afforded by grievance systems was a strong predictor of employee satisfaction with the unions that represented them.

Nevertheless, scholarly work on the application of organizational justice concepts to grievance procedures gives relatively little attention to the determinants of employee perceptions of the grievance procedure (Peterson and Lewin 1991b) and gives virtually no attention to the relationship between employee perceptions of the grievance procedure and employee use of the procedure—that is, the exercise of voice in the employment context. Instead, the organizational justice literature concentrates on the positive influence of perceived procedural fairness on employee attitudes—analogue perhaps to the dominant emphasis in the labor economics literature on the positive effects of grievance procedures (a form of organizational justice) on employee turnover.

In summary, Hirschman's well-known exit-voice-loyalty model has *not* been robustly tested in the context of the employment relationship, and this remains so despite the "parallel" work of numerous scholars on procedural and distributive justice. In addition, if the model itself has not been robustly tested, one can also call into question the outcomes and conclusions of research which purportedly rest on the underlying model.

Further, while Hirschman's model as well as those of procedural and distributive justice scholars have been only partially tested empirically, there is a developing body of evidence which suggests that the use of voice brings about additional deterioration in one's relationship with the firm. Indeed, Feuille and Delaney (1993) review eight studies, some set in unionized firms and others in nonunion firms, in which individuals who opted to use voice—that is, grieved—suffered adverse organizational consequences when compared to their counterparts who did not use voice. These consequences included lower performance ratings and lower promotion rates.

Furthermore, after having filed grievances, the grievants had higher turnover rates than nongrievants, which is clearly at odds with Hirschman's main thesis. Because loyalty was neither conceptualized nor measured in any of these studies, however, it is not possible to conclude definitively that, all else equal, it is the more loyal employee who opts to voice a complaint and the less loyal employee who exits the firm.

Research on "whistleblowers" further distorts *a priori* expectations drawn from the Hirschman model. Whistleblowers view their actions as ultimately loyal, but loyal to whom is an open question. Typically, these individuals, having blown the whistle, subsequently experience punishment, including being fired by management (Elliston, Keenan, Lockhart, and Van Schaick 1985; Westin, Kurtz, Robbins, and the Educational Fund for Individual Rights 1981). All in all then, in research on the employment relationship, we are confronted both with conceptual gaps in the application of Hirschman's model and with empirical findings that do not square with it. Yet many researchers appear to accept this model as valid, continue to use it to frame their inquiries, and fail to incorporate insights drawn from the literature on procedural and distributive justice into their research. We hope both to avoid and to overcome these limitations in the present study.

## THE MODEL

Hirschman (1970, p. 77) posits that:

- [The] two principle determinants of the readiness to resort to voice when exit is possible [are]:
- (1) the extent to which customer-members are willing to trade off the certainty of exit against the uncertainties of an improvement in the deteriorating product; and
  - (2) the estimate customer-members have of their ability to influence the organization.

From these propositions, we obtain the variables required to define, operationalize, and test Hirschman's model in a workplace setting. First, the model predicts the conditions under which "the use of voice"—the dependent variable,  $P(\text{Voice})$ —will occur in the employment relationship. Second, in predicting the use of voice, the availability of an exit option must be controlled. Put differently, there is no decision for an employee to make between exit and voice if an employee does not believe that a viable exit option exists in the first place.

Third, Hirschman specifies factor (1) above as the loyalty component. He contends that "the first factor is clearly related to that special attachment to an organization known as loyalty" (1970, p. 77). Put this way, Hirschman is less than precise in articulating his loyalty concept, defining it as a tradeoff between exit and voice. In essence, the researcher is left with a virtual tautology—the likelihood to use voice depends on one's loyalty, which is the tradeoff between using voice or exiting. Alternatively, one can cast loyalty as some other scholars have done, such as "giving public and private support to the organization" or "practicing good citizenship" (Rusbult, Farrell, Rogers, and Mainous 1988, p. 601)—or, in Hirschman's words, the "special attachment." We opt to interpret loyalty in this latter fashion, stressing the "organizational commitment" element of the construct. As such, we conceptualize loyalty as the degree to which a person identifies with an organization. In so doing, we purposely differentiate loyalty from organizational satisfaction, a position supported by research on organizational satisfaction and commitment (Bateman and Strasser 1984; Becker 1992; Brooke, Russell, and Price 1988; Curry, Wakefield, Price, and Mueller 1986). Nevertheless, and as will be subsequently discussed, in one of the studies reported below we also control for satisfaction, given its influence on the propensity of individuals to quit organizations (Carston and Spector 1987; Mobley, Horner, and Hollingsworth 1978; Mowday, Koberg, and McArthur 1984).

Fourth, as Hirschman suggests in factor (2) above, the likelihood of using voice is also a function of how effective the mechanism is perceived to be for channeling one's complaint. If individuals feel that they can influence (change) the organizationally-induced "deteriorated state" through the available voice mechanism, then they are more likely to use voice and less likely to exit the firm. Therefore, factor (2) is a measure of how effective the voice mechanism is perceived to be. Thus, Hirschman posits that both loyalty and perceived complaint mechanism effective-

ness will be positively related to the use of voice and, at the same time, negatively related to exit (quitting the firm).

The key assumption that underlies Hirschman's entire model, as emphasized earlier, is a deterioration in one's relationship with the organization. From this perspective, it follows that not all members of an organization will contemplate exiting the firm or using voice; only members who have experienced some (perceived) deterioration or, more pointedly, injustice will consider whether to respond through voice or exit. Stated differently, as a deteriorated state or "discontent" rises among employees, both the exercise of voice and the use of exit are likely to increase. But for a given deteriorated state or level of discontent, voice and exit will presumably be inversely related, as posited by Hirschman. By limiting our analysis to those employees who believe that they have been unfairly treated at work, we are in effect attempting to control for the deteriorated or discontented state and thereby provide the most direct test of the exit-voice tradeoff proposition as well as of the effects of loyalty on both exit and voice.<sup>2</sup>

From this, we can specify the following functional model:

$$P(\text{Voice}) = f(\text{loyalty, effective voice mechanism}). \quad (1)$$

Here,  $P(\text{Voice})$  is the likelihood that an individual will use voice. However, since Hirschman (1970, p. 37) argues that "voice can be a substitute for exit," one's likelihood to exit the firm,  $P(\text{Exit})$ , can also be predicted from this functional equation. So,

$$P(\text{Exit}) = f(\text{loyalty, effective voice mechanism}). \quad (2)$$

The anticipated relationships between the independent and dependent variables differ as between these two equations. In equation (1), both loyalty and perceptions of an effective voice mechanism are hypothesized to be positively related to the use of voice. In equation (2), the less loyal employee and the employee who perceives the voice mechanism (grievance procedure) to be ineffective in correcting injustices is more likely to exit the firm. In the first study reported later, we shall refer to employee loyalty as *LOYALTY*, and to the employees' perception of the voice mechanism as *GRIEVERATING*. In the second study, we shall again refer to employee loyalty as *LOYALTY* but will use *PERQUAL* to refer to the employee's perception (of the quality) of the voice mechanism.

Note that the inclusion of a perceived grievance procedure effectiveness or quality variable in the analysis is germane to the issue of the type of voice that is exercised by employees. To some, grievances or formal complaints represent "negative" types of voice, whereas suggestions made by employees in the context of a suggestion plan or quality circle represent "positive" types of voice. If loyal employees are most likely to use positive rather than negative types of voice, then an inverse relationship between loyalty and grievance filing would be expected. In

this study, we were unable to obtain data about suggestion plans, quality circles, and other potential voice mechanisms. But the inclusion of GRIEVERATING and PERQUAL, respectively, in the first and second studies reported below provide partial measures of employees' perceived grievance procedure positivity (negativity).<sup>3</sup>

## THE EMPIRICAL EQUATIONS

As noted in our introduction, the study of grievance filing behavior has predominantly been the domain of organizational behavioral scholars, while the study of quit behavior has largely been the domain of labor economists. Drawing upon the research from these respective disciplines, we can identify the control variables that should be included in each of the functional equations in order to estimate  $P(\text{Voice})$  and  $P(\text{Exit})$ .

### Control Variables for Equation (1)

First, and perhaps the most challenging variable from a conceptual perspective, is individuals' membership status within the union (UNIONMBR) that represents them, which has been shown to be associated with grievance filing propensity (Boroff 1993). Yet, the very reason that individuals join unions may be to secure collective voice. So, the use of voice can arguably be conceived of as both a dependent and an independent variable (Intriligator 1978; Lee 1978). In the former case, union membership can help explain the likelihood to use voice; in the latter case, voice can be an explanatory variable for union membership. To address this endogeneity of union membership and voice, we shall subsequently estimate a system of simultaneous equations using the first of two data sets obtained for this study. At this juncture, though, we merely recognize union membership as an important control variable.

Beyond union membership, there are several other individual characteristics that have been associated with the use of voice. Minorities (MINORITY) and employees with greater length of employment or service in a firm (SERVICE) are more likely than others to use the grievance process (Boroff 1990). By contrast, the use of voice has been shown to be negatively associated with the age (AGE) and the education (EDUCATION) level of grievants. Further, men are more likely than women (MEN) to file grievances (Ash 1970; Lewin and Peterson 1988), and employees with relatively high occupational status (HIGHOCCUP), all else equal, are less likely to voice a complaint than relatively low occupational status employees (Boroff and Lewin 1994). Additionally, Boroff (1993) has observed that grievance filing is lower among individuals who fear organizational punishment (REPRISAL) or who exhibit overall satisfaction with the firm (SATISFACTION).

## Control Variables for Equation (2)

The second equation, the likelihood to exit the firm, or  $P(\text{Exit})$ , has its own set of control variables which are drawn from the literature on job mobility. In this literature, union membership (UNIONMBR) has been shown to be negatively related to quit behavior (Bartel 1979; Freeman and Medoff 1984). But, we are again confronted with a potential endogeneity issue if UNIONMBR is included as an independent variable in explaining the propensity of individuals to exit a firm. Unions attempt to secure economic rents for their members, thereby lowering the probability that union members will exit (quit) the firm. At the same time, individuals may join unions in order to obtain such economic rents. So, as will be done with equation (1), we shall subsequently estimate a simultaneous equation version of  $P(\text{Exit})$  in order to minimize potential estimation bias, again using one of the two data sets obtained for this study.

Other variables have also been shown to be associated with employee propensity to exit the firm. Younger persons (AGE) and men (MALE) are more likely to quit their jobs; higher pay (WAGES) reduces the probability of quitting (Blau and Kahn 1981); single women are more apt to quit their jobs than their married counterparts (MARRIED) (Viscusi 1980); better-educated workers (EDUCATION) are less likely to quit than poorly-educated workers (Weiss 1984); and fringe benefits (BENEFITS) are negatively associated with turnover rates (Mitchell 1983). Additionally, the effect of minority status (MINORITY) on quit behavior is indeterminate (Boroff and Ketkar 1994; Sichernan and Galor 1990); the length of employment (SERVICE) has been found to be negatively related to quit behavior (Bartel 1979; Freeman and Medoff 1984); and employee satisfaction (SATISFACTION) with the firm is also negatively related to the propensity to exit the firm (Carston and Spector 1987; Mobley et al. 1978, Mowday et al. 1984).

In sum, the conceptual framework from which our estimating equations are derived distinguishes among employees who have and have not experienced unfair workplace treatment and identifies grievance procedure usage (the exercise of voice) and the intent to exit among those who have experienced unfair workplace treatment as the main dependent variables. Further, the framework incorporates employee loyalty to the firm and employee perception of the quality of the grievance procedure as main independent variables, as well as the control variables described above. All of this constitutes a more comprehensive test of Hirschman's model than has been attempted heretofore.

## DATA AND EMPIRICAL ESTIMATION

To test for the likelihood of employee use of voice and employee intent to exit the firm,  $P(\text{Voice})$  and  $P(\text{Exit})$  respectively, we rely on two unique data sets. Concerning the first of these, a survey instrument was administered in October 1991 to a

random sample of nonmanagement employees of a large, U.S.-based multinational telecommunications firm.<sup>4</sup> Individual employees worked in the firm's manufacturing and services divisions and were represented by one of two unions, each of which had negotiated an agency shop provision in its contract with the firm. The two unions have represented employees of the firm for more than 50 years.

The respondents answered a series of questions concerning their attitudes toward their employer, the union that represented them, and the grievance procedure under which they operated as well as their use of the grievance procedure. The survey instrument's construction and subsequent administration was guided by Dillman (1978); of 8,100 surveys mailed, 3,160 were completed and returned, representing a response rate of 39 percent.

Concerning the second data set, a survey instrument was administered in mid-1987 to 1,300 nonmanagerial employees of a large, U.S.-based multinational firm that specializes in overnight mail and freight delivery.<sup>5</sup> At the time of the survey, this firm was entirely nonunion but maintained a multi-step grievance procedure which we refer to as the Company Complaint Procedure (CCP). The CCP was instituted early in the company's history, in part for the express purpose of remaining nonunion, and managerial personnel as well as employees are eligible to file written complaints via the CCP. Under this procedure, complaints are "heard" by employees' peers, company officials, or both. Final binding decisions are made at the last step of the procedure by senior company officials; put differently, this procedure does not culminate in arbitration.

For administration of the survey instrument in this firm, 900 surveys were randomly distributed to employees irrespective of their actual use of the CCP, while the remaining 400 surveys were distributed to known employee users of the CCP. Special procedures were taken to ensure the confidentiality of the CCP users as well as the anonymity of all respondents.<sup>7</sup> A total of 579 fully usable surveys were completed and returned to the researchers for a response rate of 43 percent.

For the first of these two firms, the average survey respondent was about 43 years old and had about 13 years of schooling. Moreover, 49 percent of the respondents were female, 17 percent were minority group members, and 67 percent were married; they averaged some 17.6 years of work experience and earned approximately \$31,500 annually from employment with this firm. The respondents were employed in such jobs as tester, payroll clerk, operator, technician, data systems clerk, and service representative. These data were used to estimate the  $P(\text{Voice})$  and  $P(\text{Exit})$  equations.

### Estimating $P(\text{Voice})$

If we were to measure  $P(\text{Voice})$  using a single equation, it would be as follows (regression coefficients are suppressed):

$$P(\text{Voice}) = B_0 + \text{GRIEVERATING}_1 + \text{LOYALTY}_2 + \text{EXITOPTION}_3 + \text{UNIONMBR}_4 + \text{SATISFACTION}_5 + \text{REPRISAL}_6 + \text{EDUCATION}_7 + \text{MINORITY}_8 + \text{HIGHOCCUP}_9 + \text{SERVICE}_{10} + \text{AGE}_{11} + \text{MALE}_{12} + e_1. \quad (3)$$

However, because of the endogeneity of  $P(\text{Voice})$  and the UNIONMBR variable, we first estimate the likelihood of being a union member as a function of voice and then estimate  $P(\text{Voice})$  as a function of union membership.

The literature on correlates of union membership is extensive (see, e.g., Heneman and Sandver 1983; LeLouarn 1980; for respective literature reviews; Fiorito and Greer 1986; Gordon and Long 1981; Hills 1985; Leigh and Hills 1987). Since our main interest is in controlling for the determinants of union membership in order to avoid biased estimates of the effects of loyalty on voice and exit, we first estimate union membership using  $P(\text{Voice})$  as an independent variable together with the personal characteristics variables that the received literature indicates are associated with union membership (Blinder 1972; Getman, Goldberg, and Herman 1976; Kochan 1978; Uphoff and Dunnette 1956).

Next, we estimate  $P(\text{Voice})$  as a function of respondents' perceptions of the effectiveness of the grievance process and their loyalty to the firm, controlling for the perceived viability of the exit option, union membership status, and employee satisfaction with the firm. We also control for employee concerns about reprisal for filing grievances and for length of service with the firm. Because the demographic variables that are used to predict union membership are the same as those used to predict the likelihood to use voice, we omit them from the estimate of  $P(\text{Voice})$ .

#### Estimating $P(\text{Exit})$

Based on the independent variables previously specified, a single empirical equation measuring  $P(\text{Exit})$  would be as follows:

$$P(\text{Exit}) = B_0 + \text{GRIEVERATING}_1 + \text{LOYALTY}_2 + \text{EXITOPTION}_3 + \text{UNIONMBR}_4 + \text{SATISFACTION}_5 + \text{EDUCATION}_6 + \text{MINORITY}_7 + \text{BENEFITS}_8 + \text{WAGES}_9 + \text{SERVICE}_{10} + \text{MALE}_{11} + \text{AGE}_{12} + \text{MARRIED}_{13} + e_1. \quad (4)$$

Again, however, because of the interrelationship between  $P(\text{Exit})$  and UNIONMBR, we create two equations which will be solved simultaneously. The likelihood of an employee being a member of the union is estimated in the same manner as reported previously.  $P(\text{Exit})$  is then estimated as a function of the grievance rating and respondents' loyalty to the firm, again controlling for the viability of the exit option as well as for respondents' union membership status, satisfaction with the company, length of service in the firm, marital status, and benefit levels.

## Operationalizing the Variables

All of the variables in equations (3) and (4) were constructed from responses to the questions contained in the aforementioned survey instrument. Appendix A summarizes the questions we relied upon to form the empirical measures for these equations (and variants thereof). Some variables, such as EDUCATION, AGE, and SERVICE, were formed straightforwardly; however, others required more complex construction. In equation (3), the dependent variable  $P(\text{Voice})$  measures whether an employee actually filed one or more grievances in response to perceived unfair treatment. The effectiveness of the grievance process, GRIEVERATING, was measured by a question that asked respondents to rate the "quality" of the grievance (voice) mechanism. LOYALTY was created from three statements included in the survey that collectively measure the respondent's attachment to the firm. These statements have frequently been used in research on employee loyalty (Rusbult et al. 1988). The viability of the exit alternative, EXITOPTION, was formed from two survey questions which have often been used in research on job mobility (Price and Mueller 1981, 1986).

In equation (4), the dependent variable  $P(\text{Exit})$  measures the degree to which an employee intends to leave (exit) the firm. It was constructed from responses to two survey questions in which employees indicated the degree to which they had considered and continue to consider leaving (exiting) the firm.

## RESULTS FOR DATA SET #1

Prior to estimating these equations, we censored the data to include only those employees who perceived themselves to have experienced unfair treatment; this was done in order to comport with the "deteriorated state" condition of Hirschman's model.<sup>8</sup> This procedure reduced the sample for analysis to approximately 950 employee respondents. The employees of this firm who indicated that they had experienced some unfair treatment were more likely to be male, union members and to have more work experience with the firm, higher earnings, more education, lower satisfaction with and loyalty to the firm, a lower rating of grievance procedure effectiveness (quality), and greater perceived exit options than employees who did not report experiencing unfair treatment.

### Estimating Equation (3)—The Determinants of Voice

Following the approach outlined above, we first used a two-stage least squares procedure to estimate the probability of an employee in the aforementioned telecommunications company being a union member and the probability of an employee filing a grievance (i.e., exercising voice). We then used a logistic regression procedure to generate reduced form estimates of these probabilities, and con-

**Table 1.** Logistic Regression Estimates of  $P(\text{Voice})$  and  $P(\text{Exit})$ , Data Sets #1 and #2  
(Changes in Probabilities)

Dependent Variable	Data Set #1		Data Set #2	
	$P(\text{Voice})$	$P(\text{Exit})$	$P(\text{Voice})$	$P(\text{Exit})$
Independent Variable:				
Grievrating	.007	-.078***	NA	NA
Loyalty	-.067***	-.078**	-.102**	-.203**
Exitoption	-.013	.263***	NA	NA
Satisfaction	.007**	-.241***	NA	NA
Reprisal	-.013**	NA	NA	NA
Education	-.007**	-.014**	-.024	.113
Minority	.019**	.042**	.256	NA
Wages	.099**	.178**	NA	NA
Service	-.222	-.021***	NA	-.081
Sex	-.013*	-.050***	.237	.356
Married	NA	.050	NA	NA
Perqual	NA	NA	-.040	-.186**
Age	NA	NA	-.240	NA
Highoccup	NA	NA	.158	-.049
$P(\text{Exit})$	NA	NA	1.09**	NA
$P(\text{Voice})$	NA	NA	NA	-.980**
Constant	.620**	2.59***	1.86	-.186
Pseudo $F$ -statistic	3.50***	5.24***	1.90***	12.150***
$N$	958	978	220	223

Notes: \*Significant at  $p = < .10$ .

\*\*Significant at  $p = < .05$ .

\*\*\*Significant at  $p = < .01$ .

verted these to changes in probabilities evaluated at the mean of the dependent variable in equation (3) (Schmidt 1978). Because the results of the two procedures were very similar, and also because our main focus is on the determinants of  $P(\text{Voice})$ , not union membership, we limit the discussion to the changes in probabilities derived from the reduced form estimates of equation (3); these are shown in column 1 of Table 1.<sup>9</sup> Note that (for reasons discussed in Appendix A) the variable WAGES served as a proxy for the variable HIGHOCCUP and that due to colinearity with the variable SERVICE the variable AGE was dropped from these estimates.

In column 1 of Table 1, we observe an unexpected and significantly negative coefficient on LOYALTY. This indicates that employees who are *more* loyal to the firm are *less* apt to grieve in the face of unfair treatment than employees who are *less* loyal to the firm. Moreover, this finding emerged when controlling for

employee fear of reprisal for filing a grievance,<sup>10</sup> employee belief about the viability of an exit option (i.e., leaving the firm), and other variables. The coefficient on the GRIEVERATING variable has the expected sign but is not statistically significant. Thus, among employees who have experienced unfair treatment in the workplace, perceived effectiveness (or quality) of the grievance procedure does not influence the probability of their actually using the procedure—exercising voice.

#### Estimating Equation (4)—The Determinants of Exit Intent

Note that the variable BENEFITS was omitted from equation (4) because negotiated benefits do not vary among represented employees of this firm except by seniority, which is measured by the variable SERVICE. Here, too, WAGES serving as a proxy for HIGHOCCUP and AGE was omitted from the analysis due to its colinearity with SERVICE. The changes in probabilities for the independent variables resulting from logistic estimation of the reduced form of equation (4) are shown in column 2 of Table 1.

In this case, we observe the expected negative and significant relationship between LOYALTY and  $P(\text{Exit})$ . In addition, the negative and significant coefficient on perceived effectiveness (quality) of the grievance process (GRIEVRATING) comports with our a priori expectation. Further, perceived availability of job opportunities in the labor market (EXITOPTION) is, as expected, significantly positively related to  $P(\text{Exit})$ , and seniority or work experience with the firm (SERVICE), employee satisfaction with the firm (SATISFACTION), education and sex (female status) are, also as expected, significantly negatively related to  $P(\text{Exit})$ . Among other control variables, occupational status (proxied by WAGES) and marital status (married) are, unexpectedly, significantly positively related to exit intent, as is minority status, in data set #1.

## RESULTS FOR DATA SET #2

Here, as before, the data were censored to include only those employees who perceived themselves to have experienced unfair treatment. This procedure reduced the sample for analysis to approximately 220 employee respondents. The employees of this firm who indicated that they had experienced some unfair treatment were more likely to be male and to have more work experience with the firm, higher earnings, more education, lower satisfaction with and loyalty to the firm, and a lower rating of grievance procedure quality (effectiveness) than employees who did not report experiencing unfair treatment.

Because the employees included in data set #2 were not unionized, it was not necessary to perform two-stage least squares estimation of  $P(\text{Voice})$  and  $P(\text{Exit})$ . In addition, certain variables for which data were available from data set #1 were not available from data set #2; these included EXITOPTION, SATISFACTION,

and REPRISAL. Further, HIGHOCCUP was entered directly into the analysis of data set #2 using a five-point scale of the respondent's occupational position in the firm. A complete list and descriptions of the variables used to test data set #2 is contained in Appendix B.

Before proceeding to estimate  $P(\text{Voice})$  and  $P(\text{Exit})$  using data set #2, the potential influence of an employee's intent to leave (exit) the firm on the filing of a CCP (i.e., the exercise of voice) merits attention. Perhaps because of the widespread use by labor economists of Hirschman's exit-voice-loyalty framework, exit (or quitting or intent to leave) is overwhelmingly treated as a dependent variable. However, intent to leave may itself moderate relationships with other independent variables and the use of voice in the employment context.

On the one hand, such intent may spur employees to file grievances because they are less likely than those who do not intend to leave to be concerned about potential negative consequences of grievance decisions. On the other hand, intent to leave may reduce the likelihood of grievance filing because employees who have such intent are less concerned than employees who do not have such intent about the potential positive consequences of grievance decisions (Feuille and Delaney 1993). In any case, previous work by Boroff (1990) suggests that employee intent to leave the work organization does influence the likelihood of grievance filing. Consequently, and also because measures of EXITOPTION and REPRISAL were not available from data set #2, we include an intent to leave variable  $P(\text{Exit})$  in a second estimate of  $P(\text{Voice})$ , with  $P(\text{Exit}) = 1$  if the respondent employee intends to leave the firm, and  $P(\text{Exit}) = 0$  if the respondent employee does not intend to leave the firm.<sup>11</sup>

Unlike  $P(\text{Voice})$ , which measures actual behavior,  $P(\text{Exit})$  reflects the attitudes of respondent employees. In both cases, however, the dependent variable is binary. Consequently, the correct functional form of the estimating procedure is one which constrains the probability function to between zero and 1 (Aldrich and Nelson 1984). For consistency with equations (3) and (4) but modified to take account of the somewhat different variables included in data set #2 from those included in data set #1, the estimating equations for  $P(\text{Voice})$  and  $P(\text{Exit})$ , using data set #2, are as follows:

$$P(\text{Voice}) = B_U + \text{LOYALTY}_1 + \text{PERQUAL}_2 + \text{P(Exit)}_3 + \text{AGE}_4 + \text{MALE}_5 + \text{EDUCATION}_6 + \text{HIGHOCCUP}_7 + \text{MINORITY}_8 + e_1. \quad (5)$$

$$P(\text{Exit}) = B_U + \text{LOYALTY}_1 + \text{PERQUAL}_2 + \text{P(Voice)}_3 + \text{MALE}_4 + \text{EDUCATION}_5 + \text{HIGHOCCUP}_6 + \text{SERVICE}_7 + e_1. \quad (6)$$

Column 3 of Table 1 presents the changes in probabilities for the independent variables included in equation (5) derived from logistic estimation of this equa-

tion. Observe that LOYALTY is significantly inversely associated with the probability of using voice— $P(\text{Voice})$ . In other words, among employees who believe that they have experienced unfair treatment in this organization, the more loyal the employee the lower the likelihood of using the CCP. This finding is again contrary to the proposition embedded in Hirschman's model that loyalty and the use of voice are positively correlated—but is consistent with Birch's (1975) expected relationship between these two variables. It also comports with evidence produced by Boroff (1991) in a related study.

Also observe from column 3 of Table 1 that PERQUAL is inversely (though insignificantly) associated with the probability of using voice. That is, the higher the perceived quality of the CCP the less likely is the employee to file a written complaint. It is possible that this relationship is moderated by employees' previous experiences with the CCP. Specifically and consistent with other research (Boroff 1990), employees who previously filed written complaints and who subsequently lost the decisions made in those cases may rate the CCP lower than employees who won their decisions or who did not file complaints. It is not possible to test this relationship here because the model underlying equation (5) will not converge if decision outcome (OUTCOME) is included as a right-hand side variable (OUTCOME varies only when  $P[\text{Voice}] = 1$ , and there are no outcomes when  $P[\text{Voice}] = 0$ ). Nevertheless, this finding is consistent with (1) concepts of procedural justice (Sheppard, Lewicki, and Minton 1992), (2) the distinction between coverage and use of certain third-party dispute settlement procedures, such as arbitration (Delaney 1983), and (3) other empirical evidence drawn from studies of grievance procedure effectiveness in unionized settings (Lewin and Peterson 1988).

The results of estimating equation (5) also show that  $P(\text{Exit})$  is significantly positively associated with the use of voice. In other words, among employees who have experienced unfair treatment, those who intend to leave the firm are more likely to file a written complaint than those who intend to stay with the firm. As before, this finding is contrary to the expected relationship derived from Hirschman's (1970) model. Using this data set, it is not possible to determine whether the propensity to exit (stay with) the firm preceded the use of voice or whether the actual use of voice influenced employee-complainants' intent to exit (stay with) the firm.<sup>12</sup> In any case, these caveats do not negate the finding of a positive relationship between  $P(\text{Exit})$  and  $P(\text{Voice})$ , or the judgment that this finding is contrary to expectations derived from the exit-voice model.

In equation (6),  $P(\text{Exit})$  serves as the dependent variable with  $P(\text{Voice})$  included as an independent variable. Changes in probabilities for the independent variables included in equation (6) which resulted from logistic estimation of this equation are shown in column 4 of Table 1. Observe that both LOYALTY and PERQUAL are significantly inversely associated with the probability of an employee's intent to leave the firm. In other words, the more loyal the employee and the higher the employee's perceived quality of the CCP, the lower is the employee's intent to

leave the firm. Of the control variables included in this equation, none are significantly related to P(EXIT).

Data set #2 also provides an opportunity to examine the effect of voice (filing a written complaint) on the intent to leave (exit from) this nonunion company. Clearly, the central proposition derived from Hirschman's (1970) work is that the use of voice will be negatively correlated with exit, and (just as clearly) the central finding from labor economists' studies of unionism is that unions reduce employee quits. Is this prior theoretical and empirical research supported by the results from econometric testing of data set #2?

The answer to this question is "no," based on the results of estimating equation (6), again as shown in column 4 of Table 1. The use of voice (more precisely, the probability of using voice by filing a complaint under the CCP) is significantly positively associated with employee intent to leave the firm. This finding is consistent with the results of other recent studies of nonunion grievance systems (Boroff 1991; Lewin 1987, 1992).

As with the empirical findings from testing the  $P(\text{Voice})$  equation (5), the findings from testing the  $P(\text{Exit})$  equation may be moderated by employees' experiences with using the CCP—specifically, by the outcomes of decisions rendered under this grievance-like system. However, a separate regression estimate of equation (6) which incorporated this variable found no significant association between OUTCOME and  $P(\text{Exit})$  ( $t$ -value = 0.50). In addition, and because PERQUAL and OUTCOME were significantly positively correlated ( $r = 0.38$ ,  $\alpha = 0.0001$ ), another  $P(\text{Exit})$  equation was estimated which included OUTCOME and excluded PERQUAL. Again, no significant association between OUTCOME and  $P(\text{Exit})$  resulted from this estimate.

## DISCUSSION

How do the findings from this study illuminate the relationships among exit, voice, and loyalty? First, in the face of unfair treatment and controlling for an exit option in both a unionized and nonunion firm, it is *less* loyal employees who are more likely to use voice *and* to exit the firm—but these may not necessarily be the same "less loyal" employees! By itself, employee loyalty to the firm does not distinguish between the use of voice and the intent to exit the firm. Instead, employees' fear of reprisal for using voice negatively influences the probability that an employee (in the unionized firm) will actually exercise voice. At the same time, perceived effectiveness (quality) of the voice mechanism coupled with the availability of alternative employment opportunities strongly influence, in opposite directions, an employee's intent to leave the firm.

In addition, the findings from this study enhance our understanding of who does *not* use voice and who does not intend to exit the firm. Keeping in mind that we have included in our multivariate analyses only those employees who have expe-

rienced unfair treatment (and who therefore might be most likely to exercise voice), the more loyal the employee the less likely is the employee to exercise voice *and* to intend to leave the firm. Further, fear of reprisal for exercising voice is significantly inversely related to the probability of employees (in the unionized firm) actually exercising voice, and these "unfairly" treated loyal employees might arguably be said to suffer in silence.

Conceptually, these results and interpretations are compatible with theoretical propositions offered by two political scientists. For example, in critiquing Hirschman's framework, Barry (1974) argues that loyalty may be unrelated or even inversely related to the exercise of voice. He criticizes Hirschman's concept of loyalty for being an "ad hoc equation filler" (Barry 1974, p. 95) lacking substantive content. According to Barry, loyalty cannot be directly observed but instead is invoked as an explanation of why some people who could be expected to quit do not, in fact, do so. Barry further proposes that once a customer (and presumably an employee) decides to stay with the firm (i.e., fails to exit), there is an additional choice to be made between voice and silence. Proceeding from Barry's amended version of Hirschman's model, loyalty may well be uncorrelated with voice but positively correlated with silence.

Another political scientist, Birch (1975), goes further in judging loyalty to belong to a family of concepts which also includes allegiance and fidelity. He illustrates this with reference to a "loyal party member," a term which "...is normally applied to the man who accepts what his leaders decide, not to be the constant critic" (Birch 1975, p. 74). Birch further observes that when a manager refers to one of his employees as a "loyal worker," he is unlikely to be referring to a shop steward. Birch concludes that Hirschman is "simply wrong" about the voice-inducing property of loyalty in both economic and political contexts. It follows, says Birch (1975, p. 75), that "loyalty and voice are correlated inversely rather than positively."

The statistical findings produced in this study appear to support these political science-based arguments. If voice and exit are on the same side of the "low loyalty" spectrum, we may ask if there is a positive association between the two. More pointedly, does an employee's use of voice subsequently render the employee more likely to exit (or to consider exiting) the firm? Our answer to this question is, "perhaps, but not necessarily." Admittedly, this is an equivocal answer to the question, but one which we believe is warranted at this stage of our research.

Consider once more the finding that the viability of the exit option (the availability of employment opportunities elsewhere) is positively associated with intent to exit the (unionized) firm, while length of service is negatively associated with intent to exit the firm (both in unionized and nonunion settings). It is possible, of course, for an employee's assessment of available labor market opportunities to change over time. However, given the negative association between  $P(\text{Exit})$  and  $\text{SERVICE}$ , as each year goes by, it becomes increasingly improbable that an employee will exit the firm. This suggests that intent to exit the firm does not nec-

essarily or solely flow from the use of voice. Further, in the unionized firm, we found an insignificant correlation between employee intent to exit the firm and employee use of voice ( $r = 0.00041$  at  $p = 0.99$ ). Therefore, it does not appear that an employee's use of voice provides a "springboard" to the employee's intent to exit the firm.

Going further, examination of the relationship between grievance outcomes—specifically, grievances lost by employees<sup>13</sup>—and intent to exit the (unionized) firm revealed only a slight and marginally significant positive association between these two variables ( $r = -0.07$  at  $p = 0.13$ ). Finally, we conducted a multivariate analysis (not shown here) in which the use of voice was regressed on subsequent intent to exit the (unionized) firm<sup>14</sup>; again, no significant result was observed (standardized beta = 0.008;  $t$ -statistic = 0.3).

By contrast, in the nonunion firm included in this study the use of voice (i.e., the probability of using the CCP) was significantly positively associated with employee intent to exit the firm (Column 4 of Table 1) and, as noted earlier, this result remained significant when the outcomes of grievance decisions were taken into account. Perhaps the absence of a union to represent employees in this firm is part of the "explanation" of this finding, but other factors, including fear of reprisal for using the grievance (complaint) system in this firm, which we were not able to measure, may also be at work here. What may be most appropriately concluded at this point is that the unequivocal proposition derived from Hirschman's (1970) exit-voice-loyalty model, namely that (the use of) voice and (intent to) exit are inversely correlated is not supported, indeed, appears to be contradicted, by this study.

## CONCLUSIONS

The findings from this study provide some new insights into the relationships among exit, voice, and loyalty in an employment context. Using behavioral and perceptual data from samples of employees in one large unionized firm and one large nonunion firm who have experienced unfair workplace treatment, we found consistently strong negative relationships between employee loyalty and actual use of the grievance procedure. This relationship is opposite to that derived from Hirschman's (1970) exit-voice-loyalty model. However, we also found consistently strong negative relationships between employee loyalty and employee intent to leave (exit) the firm. This relationship is consistent with that derived from the exit-voice-loyalty model. Putting these two sets of findings together, we conclude that employee loyalty translates into "silence." Further, because this analysis is one of the first to have focused exclusively on employees who (believe that they) have experienced unfair treatment, we believe that it may be *strongly* concluded that loyal employees "suffer in silence" rather than exercise voice.

We noted earlier that prior studies have not fully specified or tested the exit-voice-loyalty framework. In particular, those studies have ignored loyalty alto-

gether (or have assumed that it is somehow embodied in voice), have rarely examined the actual use of voice, and have failed to distinguish between employees who have and have not experienced unfair workplace treatment. Consequently, the findings of this study (and related studies: Boroff 1990, 1991; Lewin 1987, 1993; Lewin and Peterson 1988, 1991) call into question both the conceptual foundations and the empirical validity of the exit-voice-loyalty framework as it applies to the employment relationship.

Further, the findings from this study also have certain implications for research on organizational justice. Recall that employee perceptions of the effectiveness (quality) of the grievance procedure were insignificantly associated with  $P(\text{Voice})$  and significantly inversely associated with  $P(\text{Exit})$ . This suggests that the more employees perceive such a procedure to be just or fair, the less likely they are to (intend to) leave the firm. At the same time and for the unionized employees included in this study, the fear of reprisal for using the grievance procedure was significantly negatively associated with the use of the procedure—even though these are unionized employees who presumably have legal protection (under the National Labor Relations Act) against such reprisals. Employee concerns about reprisal for exercising voice surely blur the distinction between procedural and distributive justice. Given this finding, the sharp distinction between these two types of organizational justice that has been made by many scholars warrants rethinking and perhaps reconceptualization.

However, even if and as additional research into organizational justice in the context of the employment relationship is undertaken, more conceptual and empirical work needs to be done on the issues of exit, voice, and loyalty taken up here. For example, in this study we were unable to determine whether intent to leave the firm preceded or followed the filing of grievances, though we do know that these two phenomena did not occur simultaneously. Consider the possibility that the filing of grievances, especially by employees who (say that they) have experienced unfair treatment, may reflect an accumulation or progression of incidents about which action (grievance filing) is finally taken. If an "accumulation" or "progression" story is indeed at work here, then grievance (or complaint) filing may well signal the employee's intent to leave the firm rather than remain with the firm. This matter warrants further investigation (using longitudinal rather than cross-sectional research designs). So, too, does the proposition that a voice mechanism operating in a unionized or nonunion context reduces the probability of an employee quitting (or intending to exit) the firm. Not only was evidence to support this proposition not found in the present study, some evidence to the contrary was adduced!

Finally, this study underscores the importance of distinguishing between employees who have and have not experienced unfair workplace treatment and of perceptual data in the analysis of grievance/complaint systems. Recognition of the former should spur researchers to formulate new and revise existing models of workplace dispute resolution, while recognition of the latter should lead research-

ers to strengthen their primary research design and data collection efforts. It is also possible, and from our perspective, desirable, that such initiatives will foster closer links among scholars in economics, organizational behavior, and industrial relations, who have in common theoretical and empirical interests in workplace dispute resolution.

## APPENDIX A

### Variables In Equations (3) and (4)

*P*(Voice) measures the likelihood of an employee having used the grievance process. It equals 1 if the employee filed a grievance in response to perceived unfair treatment and 0 otherwise. It is operationalized with the following questions from the survey instrument: "Have you ever experienced unfair treatment by management?" and "Did you file a grievance to correct this unfair treatment?"

*P*(Exit) measures a respondent's self-reported (future) intent to leave the firm. It is operationalized as an index ranging from 1 (no expressed intent) to 5 (high expressed intent) and was formed from the following disagree/agree questions: "I am seriously considering quitting this firm for an alternative employer," and "During the next year, I will probably look for a new job outside this firm." Cronbach's alpha for these items was 0.8.

GRIEVERATING measures the employee's perceived effectiveness (or quality) of the grievance procedure. The grievance procedure rated by the employee was the one contained in the collective bargaining agreement between the union that represented the employee and the company. This variable is operationalized with the following question from the survey instrument: "Overall, how would you rate the grievance procedure where you work?" with the rating scale ranging from 1 (poor) to 5 (excellent).

LOYALTY measures the employee's loyalty to the firm and is operationalized following the procedures developed by Rusbult and associates (1988). Specifically, the following disagree/agree questions were used to construct an index for this variable which ranges from 1 (least loyal or low loyalty) to 5 (most loyal or high loyalty): "I generally say good things about this firm even when other people criticize it," "I sometimes wear clothing (hat, jacket, pin, etc.) that bears the firm's logo or symbol," and "The people in charge of this firm generally know what they're doing." Cronbach's alpha among these items was 0.7.

EXITOPTION represents the employee respondent's assessment of the viability of his/her exit option and is based on measures of employment opportunity developed and reported by other researchers (Price and Mueller 1981, 1986). Specifically, the following disagree/agree questions were used to form an index for this variable ranging from 1 (poor exit options) to 5 (good exit options): "It is possible

for me to find a better job with another employer than the one I have now with this firm," and "Acceptable jobs with other employers can always be found." Cronbach's alpha for these variables was 0.7.

UNIONMBR is coded 1 if the respondent is a member of one or the other of the two unions that represent employees of this firm, 0 otherwise.

SATISFACTION measures the employee's satisfaction with the firm and is based on the following disagree/agree question, ranging from 1 (strongly disagree) to 5 (strongly agree): "I am satisfied with the firm as an employer."

REPRISAL is the degree to which protection from reprisal for filing a grievance is important to the employee respondent. This variable is operationalized with one survey question containing nine items which the respondent ranked from 1 = not at all important to 9 = most important. One of these items was "no reprisal for filing a grievance."

EDUCATION measures the self-reported years of formal schooling completed by the employee respondent.

MINORITY measures the self-identified ethnic status of the respondents. It equals 1 if the respondents said they were a member of a minority group, 0 otherwise.

WAGES represents the employee respondent's self-reported annual earnings. For the unionized employees of this firm, higher annual earnings implies higher occupational ranking so that WAGES are effectively a proxy for an occupation variable (see also Boroff and Lewin 1996).

SERVICE is the number of years the employee respondent has been employed by the firm.

SEX is the gender of the respondent, coded 1 = female, 0 = male.

AGE is the age of the respondent in years.

MARRIED is coded 1 if the respondent reported being presently married, 0 otherwise.

## APPENDIX B

### Variables In Equations (5) and (6)

*P*(Voice) measures the probability of the respondent's filing a complaint, with 1 = experienced unfair treatment and filed a complaint, 0 = experienced unfair treatment and did not file a complaint.

LOYALTY measures the degree of loyalty of the respondent on a 1 = least loyal, 16 = most loyal scale. This index was based on employees' responses to five questions asking about how they would react to a work order that violates government safety regulations, their preferences for a union or outside representative (such as an attorney) to advocate their complaints under the CCP, their choice among four alternative company programs for dealing with workplace complaints (including

the CCP), and their confidence in the firm's senior management. For further detail about the construction of this LOYALTY index, see Boroff and Lewin (1994).

PERQUAL measures the respondent's perceived quality of the Company Complaint Procedure (CCP) on a 1 = lowest quality, 10 = highest quality scale.

P(Exit) measures the respondent's intent to leave the firm, with 1 = intent to leave, 0 = no intent to leave.

AGE is the age of the respondent in years.

SEX is the gender of the respondent, coded 1 = female, 0 = male.

EDUCATION measures the self-reported years of formal schooling completed by the employee respondent.

HIGHOCCUP measures the employee respondent's occupational position in the firm on a 1 = lowest ranking, 5 = highest ranking scale.

MINORITY measures the self-reported ethnic status of the employee respondent, with 1 = racial minority, 0 = otherwise.

SERVICE is the number of years the employee respondent has been employed by the firm.

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## NOTES

1. This paper draws from an attempts to integrate the findings reported in Boroff and Lewin (1994, 1996; also see Lewin and Boroff 1994).

2. A referee for the first draft of this paper makes the point that the issue of estimating the exit-voice tradeoff is "identical to the one of estimating the trade off between wages and fringe benefits. Individuals with higher bargaining power have higher wages *and* fringe benefits (emphasis in the original). If we do not adequately control for bargaining power, we often get a positive coefficient for fringe benefits in a wage equation. If we can control for bargaining power, then a negative tradeoff results, as theoretically expected." In the present paper, limiting the analysis to those employees who have experienced unfair workplace treatment—or discontent—can be said to provide the type of control recommended by this referee. In addition, and as is more fully explained in the following text, we also include in data set #1 a variable measuring employee satisfaction (SATISFACTION) with the firm.

3. This point was raised by an external referee to whom we are indebted for doing so.

4. These data are more fully described in Boroff and Keefe (1991).

5. This survey was designed by Prof. Alan Westin of Columbia University, with the assistance of Prof. David Lewin. A detailed description of this firm's company complaint procedure (CCP) is contained in Westin and Feilu (1988).

6. The identification of CCP users was determined by a review of written complaint files. These confidential data were provided to the researchers by the firm's vice president of human resources, to whom we express our appreciation.

7. From the completed surveys, we were able to determine who among the respondents perceived themselves to have experienced unfair workplace treatment and who actually used the CCP in the face

of unfair treatment. Specifically, the survey included the following question: "Within the past year, do you feel that you personally have experienced unfair treatment by management?" ("yes"—"no")

Respondents were also asked, "Have you ever filed a CCP yourself?" ("yes"—"no") Further, all respondents irrespective of their use of the CCP were asked to rate the quality of the CCP. The relevant question was: "Overall, on a scale from 1 to 10, with 10 being 'excellent,' 5 being 'average,' and 1 being 'poor,' how would you rate the CCP?"

8. The relevant survey question was: "Have you ever experienced unfair treatment by management?"

9. Similarly, columns 2-4 of Table 1 present changes in probabilities for the independent variables included in equations (4), (5), and (6), respectively, which were also evaluated at the means of the dependent variables in each of those equations. The reduced form logistic estimates of equations (3)-(4) are available on request from the authors and may also be found in Lewin and Boroff (1994). The full results of the two-stage least squares estimates of the  $P(\text{Voice})$  as well as the  $P(\text{Exit})$  equations (the latter being more fully discussed later in the text) are also available on request from the authors and may be found in Boroff and Lewin (1996).

10. In a study of a nonunion complaint procedure, Boroff (1991) found that fear of reprisal was a predictor of perceived complaint procedure effectiveness. Hence, it might be argued that GRIEVERATING captures employee concerns about reprisal and that REPRISAL should not be included in our model. However, the correlation between GRIEVERATING and REPRISAL was  $-0.02$ , and colinearity was not present. Furthermore, fear of reprisal is only one of several predictors of grievance procedure effectiveness (Boroff 1993; Lewin and Peterson 1988).

11. The specific question asked whether or not the respondent expected to be working for this firm three years from now, with the answers constrained to "yes" and "no."

12. Two factors support an inference that intent to exit the firm precedes the decision to use voice. First, in a related study, Boroff (1991) found that nonusers of the CCP feared reprisal for filing written complaints whereas users of the CCP did not. The absence of fear of reprisal may stem from previously formed intentions to leave the firm. Second, and as will briefly be discussed later, intent to leave the firm is unrelated to the outcomes of complaint settlement decisions. This may indicate that the complainant's intention to leave the firm was formed prior to using the CCP.

13. Respondents who grieved were asked to report the outcomes of their grievances. Their choices were: "I won my grievance," "I lost my grievance," "There was a compromise," "My grievance is still pending," and "My case was dropped." From the responses to this question, a three-point scale was created ranging from 1 = "I lost my grievance" to 3 = "I won my grievance." Grievances that were settled through compromise were valued at the midpoint of the scale, while pending cases and dropped cases were excluded from the analysis.

14. As noted earlier, and as we constructed it, the use of voice reported by respondents to our survey occurred in the past. But we also asked the respondents about their *future* intent to exit the firm. In this way, we sought to ensure that we were not measuring the same point in time for "voice" and "exit." It can be argued, of course, that an employee considers the exit option even before perceived unfair treatment occurs (and thus before voice is exercised). Even so, in light of the absence of a significant association between exit and voice, we believe that using VOICE as an independent variable in the estimation of  $P(\text{Exit})$  does not result in correlated error terms.

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