JOB SECURITY AND EMPLOYEE ABSENTEEISM: AN EMPIRICAL ANALYSIS

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Summary:
See abstract on following page.
Abstract

Several multivariate models specifying determinants of absenteeism can be found in the literature. These models have limited their focus to characteristics operating within the organization. Few, if any, have looked outside the organization, at the potential environmental factors that may influence, or in part, determine individual absenteeism. In this paper, a model is proposed and tested which views several social, organizational and individual determinants of absenteeism as interacting with external, economic factors to determine the frequency of employee absences. In addition, different relationships are hypothesized for different reasons for being absent.

Results indicate that relationships between tenure, role support, the perceived probability of layoff and intrinsic satisfaction on the one hand and absence behavior on the other are different depending upon the economic conditions prevailing and the reason for the absence.

It is concluded that these differences are likely to be due to the meaning that is attributed to absence behavior under different conditions. Future research might profitably focus on identifying the various meanings employees attribute to such behavior and the conditions under which such meanings get elicited. The attribution of such meanings may be closely tied to how individuals decide to be absent.
Industrial absenteeism is both costly (Mirvis & Macy, 1976; Macy & Mirvis, 1976; Mirvis & Lawler, 1977) and difficult to reduce. Steers and Rhodes (1978) estimate the total annual cost of absenteeism at $26.4 billion. Moch and Fitzgibbons (1979) report that annual production losses attributable to sickness in one department on one of several assembly lines in a medium-sized manufacturing plant were approximately $57,000. This amount suggests that the Steers and Rhodes estimate may not be far off. One problem associated with reducing the costs associated with absenteeism, however, is the absence of empirically assessed multivariate models specifying its determinants. Absenteeism is almost certainly determined by a variety of social, organizational, economic, and individual factors; yet, as Johns (1978) observes, "...absence research has typically considered a limited range of predictors and relied upon zero-order analysis." Moreover, as Steers and Rhodes (1978) point out, "...the current literature largely assumes that job satisfaction represents the primary cause of absenteeism." This seems to be the case, despite the contention of Nicholson et al. (1976) that "...the common view of absence as a pain-reductive response on the part of the worker is naive, narrow, and empirically unsupported." Clearly, empirical assessments of multivariate models which consider social, economic and organizational factors in addition to individual satisfaction are in order. The present research attempts to respond to this need. It develops and assesses a multivariate model which considers the impact of several types of determinants on absenteeism. In addition, it
assesses the differential impact of these factors under varying conditions of employee job security.

DETERMINANTS OF ABSENTEEISM

Three multivariate models specifying determinants of absenteeism can be found in the literature (Gibson, 1966; Nicholson et. al., 1977; Steers & Rhodes, 1978). They are of varying complexity (e.g., linear vs. interactive); all, however, take into account social, individual, and organizational factors predicting to absenteeism. These factors include individual beliefs, goals or abilities; social components such as work group cohesion and perceived leadership style; and organizational characteristics such as absenteeism policies, procedures and control mechanisms.

A set of variables generally overlooked by the current models involves contextual factors, variables characteristic of the organization's environment. These include the degree of market competition, government regulation and legislation or product demand. Long ago Behrend (1959) suggested that the influence of the general economic situation on the incidence of absenteeism needed to be examined. In a previous study (1953), she had found that absence rates declined during periods of high unemployment. The implicit rationale being that individuals would be less likely to be absent and thereby jeopardize their jobs when opportunities for alternative employment are reduced. While such contextual factors are potentially important for explaining absence behavior, little empirical research has followed Behrend's lead.
The Proposed Model

Like models proposed by Gibson (1966), Nicholson et al. (1977) and Steers and Rhodes (1978), the model assessed here includes societal, organizational, and individual level variables. In addition, it distinguishes between variables which reflect the individual employee's setting and individual satisfaction. Variables were selected because they could be expected to represent incentives or pressures, facilitating or inhibiting attendance behavior. A distinction also is made between different reasons for absence behavior and it is argued that different factors are likely to facilitate or inhibit absences attributable to different reasons. Specifically, employees may be absent due to illness or to other excused or unexcused reasons. Excused absences are not likely to be taken as indicators that the employee is unreliable. They therefore are not likely to affect an employee's employment or promotion prospects. Employees who are frequently ill, however, may be viewed as less reliable, both because of their physical limitations and because absences reported as illness often are viewed with suspicion, the "real" reason being less legitimate. Finally, unexcused absences can have unambiguously negative implications. Employees who frequently are absent for no legitimate reason usually are viewed as being unreliable and therefore are unlikely candidates for promotion or even for continued employment.

Absences due to illness or to other excused or unexcused reasons may vary depending upon whether economic conditions are such that absences are likely to lead to terminations or layoffs. For example, responsible employees may be absent primarily for excused reasons such
as family obligations. They may rarely be absent for unexcused reasons unless economic conditions are such that layoff is extremely unlikely. Similarly, employees who have physically strenuous jobs may tend to be ill; however, this may result in absenteeism primarily when the costs of absenteeism are low, i.e., when economic conditions make layoffs or terminations unlikely.

In sum, reasons given for absences and economic conditions need to be taken into account along with the more frequently studied variables which facilitate or inhibit absence behavior. Together, these considerations may allow for a more complete specification of the determinants of absenteeism. The resulting model is rather complex, but so is the phenomenon of absenteeism itself.¹

**Social Factors Likely to Affect Absence Behavior.** Three variables were selected to tap the extent to which employees were likely to experience family pressures which could affect their attendance behavior. First, employee sex frequently has been found to be associated with absence behavior. Females tend to be more frequently absent than males (Covner, 1950; Kerr *et. al.*, 1951; Kilbridge, 1961; Isambert-Jamati, 1962; Yolles *et. al.*, 1975; Flanagan, *et. al.*, 1974; Garrison & Muchinsky, 1977; Johns, 1978).² This difference may be due to differences in the social roles females and males play. To the extent that females are expected to be more responsive to family needs while males are expected to concentrate on work, we can expect females to be more frequently absent from work in order to take care of family matters. On the other hand, as Nicholson *et. al.* (1976) and Johns (1978), have suggested, differences in absence behavior by sex may be due to differential so-
cialization. Female workers may develop a distinct "absence culture" (Nicholson et al., 1976) which encourages or condones absence behavior.

If the social role hypothesis explains differences in absence behavior by sex, we would expect sex differences in the frequency of excused absences. Females would legitimately claim that family duties keep them from work. This should occur regardless of economic conditions. Also, if differential absence by sex is due to different social roles, differences in absence behavior by sex would not occur for unexcused absences, again regardless of economic conditions.

If differences by sex occur for sickness absences, they might be due to differential levels of health by sex. Ferriss (1971), for example, reports that females more than ten years old are more likely than males to experience restricted activity attributable to illness or injury. Also, visits to physicians are more frequent for females than for males (Ezzati & McLemore, 1979). The "absence culture" hypothesis, however, suggests that females will be more frequently absent than males for unexcused reasons. Since it is costly to be absent for this reason, females may report in sick or claim family duties in order to avoid the costs of unexcused absences. If this is the case, we would expect differential absences by sex to occur for excused and sickness reasons particularly when the costs of unexcused absences are high, i.e., when economic conditions make layoff or termination a real possibility. The results of the present study therefore should help determine the relative utility of the "absence culture" and the social role explanations for differential absence behavior by sex.
Two other social factors were considered. Family size has been shown to be positively associated with absence behavior (Naylor & Vincent, 1959; Isambert & Jamati, 1962; Beatty & Beatty, 1975). However, Nicholson and Goodge (1976) and Ilgen and Rollenback (1977) report inconsistent results and Garrison and Muchinsky (1977) report that family size and absence behavior are unrelated.

To focus most directly on incentives and disincentives for absence behavior, it is probably most useful to focus on the number of dependents rather than family size per se. It is likely that the number of dependents provides an incentive or disincentive to be absent depending upon the reason for absence and upon the level of job security. For example, employees with many mouths to feed will be constrained to be present if absence involves loss of pay or possible loss of employment. They therefore will be disinclined to be absent for unexcused reasons, particularly when economic conditions lower their job security. On the other hand, employees who have many dependents will feel pressures to be absent in order to care for them. To the extent that such pressures result in absenteeism, however, absences should be excusable, and employees with many dependents should be absent more often than others for excused reasons, regardless of economic conditions. By distinguishing among reasons for absences and between conditions of varying job security, therefore, it should be possible to assess the relative importance of the absence incentives and the disincentives that are generated by having many dependents. If so, insight may be gained into why associations reported in the literature between family size and absenteeism have been inconsistent.
The last social factor to be considered is similar to the number of dependents. It is whether or not employees are the primary source of financial support for their immediate families. According to Rhodes and Steers (1978), this has been studied only once, and the relationship among British male operatives was found to be zero (Buck & Shimmin, 1959). However, primary wage earners may be less likely to be absent for unexcused reasons during times of low job security than at other times or for other reasons. Were they to lose their job or compromise a possible promotion by being absent, their families would suffer. Primary wage earners may even tend to work while sick or choose work over other activities in order to provide for their families. If so, such behavior is likely to occur most frequently when economic conditions are such that job security is low. By distinguishing among times as well as reasons for absence, therefore, it may be possible for the first time to document a relationship between being a primary wage earner and absence behavior.

Organizational Factors Affecting Absence Behavior. The organizational variables used here reflect the employee's position in the seniority system and in the patterns of shift work. The first of these, the number of years the employee has worked for the organization, has been studied frequently in absence research. Some have found a positive relationship between absence behavior and tenure (e.g., Baumgartel & Sobol, 1959; Martin, 1971). Others have reported a negative relationship (e.g., Metzner & Mann, 1953; Waters and Roach, 1971 & 1973; Bernardin, 1977). Still others found either no relationship between these variables or mixed results (e.g., Weaver & Holmes, 1972; Nicholson et al., 1977).
Many organizations, like the one studied here, base layoff decisions primarily upon seniority. It is possible, therefore, that those who have been employed for a long time can be absent, even for unexcused reasons, without severely compromising their employment prospects. On the other hand, those with greater tenure are likely to have resolved many of the pressures and problems which keep them from work. Those who experience such pressures and fail to resolve them so as to allow for regular attendance are likely to quit or be laid off before they attain a position of substantial tenure and job security. In general, these two contrasting effects may cancel each other out, resulting in a net relationship of zero. Under conditions of low job security, however, those with high tenure may be less responsive to the implications of unexcused absences than their more vulnerable co-workers. We therefore might expect them to be relatively more absent for unexcused reasons during such times. They may even be less willing to work while sick and to choose work over other legitimate responsibilities than those who are more concerned about keeping their jobs.

When economic conditions increase the demand for labor and, therefore, increase job security, the opposite pattern may appear. Tenured people may be less absent than their younger co-workers, because they are likely to have resolved the problems and pressures which lead to excused and to unexcused absences. They may also be less likely to report in sick; however, this will undoubtedly be confounded by the fact that actual illnesses are likely to increase, at some point, with age. In any case, distinguishing between times during which virtually all employees have a considerable measure of job security and times when
economic conditions make being laid off a real possibility should shed some light on the relationship between tenure and absence behavior, a relationship which to date has been poorly understood.

Shift is the other organizational variable included in the study. Despite the fact that the effects of shift are likely to be substantial, they have been neglected in absence research (Nicholson, Jackson, & Howes, 1978). Shift has been associated with a variety of physical and psychological problems experienced by employees (Mott et. al., 1965; This-Ebenon, 1958; Wyatt & Mariott, 1953; Dunham, 1977). These could lead to differential sickness absences by shift. Family and other activities may inhibit attendance for second shift (e.g., 7-11 p.m.) personnel; however, these demands should be almost non-existent for those working nights (e.g., 11 p.m.-7 a.m.). We might therefore expect fewer excused absences for third shift employees and more excused absences for second shift personnel. Although these patterns may vary depending upon the level of job security, those involving excused absences are likely to be relatively stable across time. These absences are considered legitimate and generally do not reflect adversely on an individual's employment prospects. However, given likely suspicions about reported sicknesses, it is possible that employees who experience shift-associated illness will be less likely to report in sick when job security is low.

**Individual Setting Factors Likely to Affect Absence Behavior.**

Individual setting factors concern the problems and prospects with which employees are—or think they are—confronted. Individual setting variables
included in this study are the extent to which employees feel their supervisor supports them in their role, role overload, the perceived probability that the employee will leave the organization and the perceived probability that the employee will be laid off.

Supervisory role support and the lack of perceived role overload were expected to be inversely related to absence behavior despite the fact that several studies reported by Rhodes & Steers (1978) failed to document a relationship between supervisor style and absenteeism. No studies reported by these authors considered role overload. Employees feeling support are likely to be attracted to work and those feeling overloaded are likely to have a disincentive to attend. Moreover, these factors might play a more important role to the extent that job security is high and/or legitimate excuses can be found. Employees who are concerned about retaining their jobs (low job security) and who do not have legitimate alternatives to work (absences will be unexcused) may be more willing to tolerate role overload and a lack of supervisory support than their more secure co-workers. Security needs may preclude social concerns or concerns about experiencing stress. If so, employees experiencing stress or a lack of role support may be more absent than others, except when economic conditions result in low job security and absences are unexcused.

The perceived probability of turnover or layoff may be related to absence behavior in several ways. Owens (1966) found that employees who were about to be laid off were more absent than others. Hershey (1972), on the other hand, found no relationship between these variables. Those about to be terminated may be absent in order to look for other work.
If so, they would be absent for excusable reasons. Such employees also may feel they have nothing to lose by being absent. Feeling that they will be let go regardless of what they do, they may be more favorably inclined toward unexcused absences than are other workers. Employees who feel they may be terminated therefore may be more frequently absent than others for excused and for unexcused reasons. Having little incentive to work while sick, they may also exhibit more frequent absences due to sickness. Moreover, there is no immediately apparent reason why these relationships should vary depending upon economic conditions.

Layoffs, however, are different from terminations in that they often are temporary, reflecting economic factors more than employee worth or promise. Employees who feel they are likely to be laid off therefore may be more hopeful than those who feel they may be terminated. They may try to reduce the chances of layoff by exhibiting exemplary attendance behavior. Such behavior could enhance the chances for recall even if it failed to avoid the layoff. Under conditions of economic restriction when the layoff is clearly due to contextual factors, therefore, employees who feel they may be let go may be less absent than others, especially for unexcused reasons. They may also wish to earn as much money as possible before being laid off. Under conditions of economic expansion, however, layoffs may be viewed more as a function of the organization's assessment of the individual's performance and worth. Employees who feel they may be laid off despite a favorable labor market, therefore, may feel they have little to lose by being absent. Like those about to be terminated, they may even be more
absent, especially for unexcused reasons, than their more secure co-workers.

**Intrinsic Satisfaction and Absence Behavior.** Several researchers have reported a negative relationship between satisfaction with one's work and absence behavior (Metzner & Mann, 1953; Indik, 1965; Waters & Roach, 1971 & 1973; Newman, 1974; Dittrich & Carrel, 1976; Smith, 1977; Garrison & Muchinsky, 1977; Nicholson et al., 1977). Only one study has reported a positive relationship between these variables (Kerr et al., 1951). Moreover, the tabulations provided by Rhodes and Steers (1978) make it clear that satisfaction with the work itself has been much more consistently associated with absence behavior than has satisfaction with co-workers, with physical working conditions, supervision, pay, or promotion. The emphasis for this research, therefore, was placed on work satisfaction and specifically on intrinsic satisfaction, satisfaction with the rewards employees obtain as a direct consequence of the nature of the work they perform (Hackman & Lawler, 1971; Hackman & Oldham, 1976).

The impact of intrinsic satisfaction is likely to vary by the level of job security and by the reason for absence. However, there are two contrasting predictions. First, it might be, as some need theorists have suggested, that intrinsic satisfaction will act as a motivator only after lower-order needs, such as security needs, have been reduced (Maslow, 1954). If this is the case, the impact of intrinsic satisfaction on attendance behavior should occur primarily when economic conditions generate and maintain a high level of job security. Furthermore, it might be that, under secure conditions, intrinsically satisfied persons will
be particularly unlikely to have unexcused absences, as opposed to excused absences or sicknesses. They are at least as likely as others to have legitimate external pressures which keep them from work. They are also probably equally likely to contract illness. While they may more frequently choose to work than engage in other activities and while they may be more likely than others to work while they are sick, they should almost never be absent without excuse. For dissatisfied workers, the nature of their jobs may act as a disincentive to attend. Intrinsically satisfied people, however, should come to work to enjoy the rewards of the work itself, at least to the extent that their security needs have been met.

Need theories recently have been challenged in a way directly relevant to this prediction. Salancik and Pfeffer (1977, 1978) have argued that felt needs and even need satisfaction may arise as post-hoc rationalizations used by individuals to explain their behavior or their commitment to a specific course of action. Intrinsic needs and intrinsic rewards or satisfaction therefore may be used by employees to justify—to themselves as well as to others—exemplary reliability and presence at work when it is unpleasant—or impossible—to justify such behavior on the basis of purely extrinsic factors. Simply put, employees may conjure up intrinsic satisfaction to justify continued presence to the extent that they don't want to admit to others—or perhaps even to themselves—that they are really at work because they have to be. If such attributions are being made, they ought to occur primarily when economic conditions force attendance by inducing low job security. Reported intrinsic satisfaction, therefore, should be negatively associated with absence be-
behavior primarily under conditions of low security, a prediction exactly opposite to that which might be made by need theorists.\(^3\)

Summary

Absence behavior may be understood by observing how individual, organizational, and social factors interact with the economic factors of the organization's environment. In addition, absences attributable to different reasons are likely to be determined by a different constellation of factors. Eight variables were identified as potential determinants of absence behavior: sex, the number of dependents, whether the employee was or was not a primary wage earner, tenure, shift, supervisory role support, role overload, and intrinsic satisfaction. In addition, two variables—perceived probability of layoff and probability of turnover—were seen as reflecting the employee's perceptions of their future employment prospects. The proposed model suggests that the relationships between these variables and absence behavior will vary in predictable ways depending on economic conditions and the reason for the absence.

STUDY AND METHODS

The Site

Employees involved in the study worked in four departments of a medium-sized assembly and packaging plant located in the South. The plant was one of several operated by a national organization. Demand for the products produced by this organization tends to be cyclical, so seasonal layoffs are the rule. Short-range demand also is somewhat unpredictable, so layoffs, even during peak season, are not unusual.
Two waves of survey data designed to gather information about some of the possible determinants of absenteeism were obtained. Questionnaires were administered in May of 1977 and in May of 1978. Four-hundred and nine non-supervisory personnel from the four departments—packaging, assembly, warehouse, and sanitation—responded to the time one questionnaire. This represented a response rate of 70%. Four hundred and sixty-two non-supervisory employees from each of the four departments answered the time two questionnaire. These individuals constituted 78% of the non-supervisory employees employed in the four departments at time two. Five hundred and twenty-one non-supervisory individuals employed at time one were also employed at time two. Two hundred and sixty-four, 51%, of these responded to our questionnaires at both time periods. Absence data also were gathered for the two points in time. Time one data covered the period between January 1 and December 31, 1977. Time two data covered the same period for 1978.

The original design called for model testing using time one data with replication using the time two information. Intervening events, however, preempted this plan. Severe snowstorms in the northern states made plants in these states inoperative. Production therefore was shifted to the southern plants during the period which is normally characterized by low demand. In addition, severe cold in the northern states and increasing fuel costs placed a premium on southern production even after the snow in the north had been removed. Demand experienced by the plant studied, therefore, varied significantly between time one and time two. During the first year there was an average of .288 involuntary layoffs among the 264 employees responding to the time one and the time two
surveys. This represents 76 separate layoffs. Four employees experienced five distinct layoffs during 1977. These figures contrast sharply with time two data. Because of the increased demand during time two, there were no involuntary layoffs among those responding to our time one and time two surveys. Consequently, job security for employees in the four departments studied changed considerably between time one and time two.

Frequent absences in this plant, as in many others, are cause for dismissal. Not all absences, however, are legitimate excuses for dismissal. Employees may be absent for legitimate reasons. They also may report in sick. In the plant studied here, dismissal or other sanctions were legitimate reasons when employees failed to report or when they presented an illegitimate excuse. As in many other organizations, plant officials viewed frequent sicknesses with considerable skepticism, suspecting the "real" cause often lay elsewhere. Even casual observation indicated a tendency for sicknesses to fall disproportionately on Mondays and Fridays.

The plant under study classified absences as excused, due to sickness, and as unexcused. It therefore was possible to construct separate measures of absence frequency for each of the reasons. These measures, in order, reflect declining legitimacy and accordingly had increasingly negative implications for promotion and even for continued employment in the organization. As noted earlier, these implications were expected to be differentially salient depending upon economic conditions—time one when product demand and job security were low and time two when demand and job security were high.
Methods and Measures

Measures of nine of the ten independent variables used in the study were gathered by questionnaires applied at each of the two time periods. Employees were asked to report their sex, the number of dependents they supported, whether or not they were the primary source of financial support for their family, their shift, and the likelihood that they would be laid off because there wasn't enough work (7 point scale). In addition, scales measuring role support, role overload, probability of turnover, and intrinsic satisfaction were constructed by combining scale items developed by the University of Michigan Survey Research Center (Seashore et. al., forthcoming). The measure of tenure was taken from plant files recording the number of years the employee had worked in the plant. Inter-correlations among the independent variables, including means, standard deviations and average correlations among scale items at each time period, are reported in Table 1. Inspection of this table reveals considerable consistency across time in all measures save supervisory role support. This is probably due to the fact that supervisors tended to be rotated, and an employee's supervisor at time one was unlikely to be his or her supervisor at time two. Also, within either time period correlations among independent variables are sufficiently low to preclude significant problems of multicollinearity. The only intratime correlation to exceed .50 involves tenure and the probability of layoff at time one. This is not surprising, since layoffs to a considerable extent were based on seniority.

Insert Table 1 about here
Measures of excused absences were constructed by adding the number of excused absences to the number of absences "with permission" to obtain the total number of excused absences. A measure of unexcused absences was built by adding the number of failures to report to the number of unexcused absences to obtain the total number of unexcused absences. The number of sickness absences were recorded without change. All of these frequencies were obtained from plant records.

Voluntary absences due to lack of work, involuntary absences (layoffs), absences due to jury duty, military leave, leaves of absence, death in the family, accidents, vacations, and voluntary time off when there was insufficient work to justify presence, were not included in the measures of the frequencies of excused, unexcused, and illness absences. Absences due to disciplinary layoffs also were excluded. Means, standard deviations, and ranges of excused, sickness, and unexcused absences for both time periods are presented in Table 2. The statistics in Table 2 indicate a significant amount of stability in the distributions of each type of absence over time, indicating that the changes in economic conditions had no main effect on absenteeism.

Correlations among absence frequencies both across types within time period and across time periods are presented in Table 3. These correlations provide evidence that absences for different reasons were fairly independent. Moreover, there are fairly substantial associations across time for both excused and sickness absences. There is less association between unexcused absences at time one and unexcused absences at time two.

Insert Tables 2 and 3 about here
RESULTS

Analysis was directed toward identifying 1) relationships between the independent variables and absence behavior, 2) differences in relationships across time for the same type of absence and 3) differences in relationships within time across absence types. Accordingly, hierarchical regressions were run relating the frequency of absence for each reason at each time period with several possible combinations of independent variables. This procedure allowed not only for comparisons across time and across absence type; it also allowed for calculation of the unique contribution each group of independent variables makes to variance explained in absence behavior. Results (standardized regression, Beta, coefficients, and $R^2$) of the hierarchical regressions for excused absences are presented in Tables 4a and 4b. Those for sickness absences are presented in Tables 5a and 5b, and results of unexcused absences are presented in Tables 6a and 6b.\textsuperscript{5}

Insert Tables 4-6 about here

Each line in each of these tables presents the Beta coefficients for variables included in the regression and the overall $R^2$ for that regression. Time one results (low product demand and job security) are presented in the "a" tables while time two results (high product demand and job security) are presented in the "b" tables. By comparing $R^2$'s, it is possible to assess the variance explained overall by each group of independent variables as well as the explained variance which is unique to that group. The size and significance level of individual variables provide indicators for which variables within each group account for the
variance explained by each group. By comparing coefficient size and significance levels between "a" and "b" tables, it is possible to assess differential association between the independent variables and absenteeism under different economic conditions. By comparing columns across tables 4, 5, and 6, it is possible to assess differential association for excused, sickness and excused absences.

Social Factors. The impact of sex is evident for excused absences (Table 4). Under conditions of both high (4a) and low job security (4b), females are more absent than males, and this pattern holds when organizational factors, individual context, and intrinsic satisfaction are controlled. While the coefficients do not always attain statistical significance, their direction is the same for sickness absences as it is for excused reasons. The impact of sex on the frequency of unexcused absences, however, does not follow this pattern. Under conditions of low job security (time one), the relationship approaches statistical significance \( p = .09 \) but is in the opposite direction. Males in the sample are more frequently absent for unexcused reasons than are females. These findings provide fairly strong support for the argument that the social role of women rather than "absence culture" accounts for differential absenteeism by sex.

Further support for this argument is provided by the absence of substantial differences across time. If women share an "absence culture" which encourages absenteeism, females probably would be more likely to find legitimate excuses or to report in sick when the costs of unexcused absences are high as opposed to low, i.e., in time one. Such a difference is not evident for excused absences. It is evident but insignificant
for sickness absences. This difference between time one and time two is evident for unexcused reasons; however, the relationship between sex and unexcused absences under conditions of high job security—when an "absence culture" should be most in evidence—is not significantly different from zero. Moreover, the trend, showing females to be less absent than males for unexcused reasons under conditions of low job security, suggests that females are even less likely than males to respond to any unexcusable incentives such as an "absence culture" when those absences could compromise their jobs.

The number of dependents is negatively associated with the number of unexcused absences and the number of sickness absences; however, the relationships, in both cases, are statistically significant only under conditions of low job security. It appears that dependents act as incentives to attend rather than as pressures inducing absence. Those with dependents cannot afford to compromise their employment prospects. There is no evidence that employees in the sample were absent in order to care for dependents.

There is little evidence that being a primary wage earner reduces absenteeism. The relationship between primary wage earner and absenteeism is statistically significant only for sickness absences when jobs are insecure; however, the significance under conditions of simultaneous controls for all other variables is less than that generally considered adequate (p < .05). The trend suggests that those whose families depend primarily on them for financial support are less absent, but the evidence is by no means conclusive.
Overall, social factors account for a statistically significant proportion of the variance in absence behavior for excused reasons and for sickness reasons. The 5% to 7% of the overall variance explained also is doubtless a much larger percentage of the *explanable* variance, that remaining after the effect of unpredictable absences have been partialled out. Even controlling for the other three types of variables, social factors are significant. They account for between 3% (time two) and 4% (time one) of the variance in excused absences beyond that explained by the other variables and for between 3% (time two) and 7% (time one) of the variance in sickness absences beyond that explained by the other variables in the model. A minimum of 4% increase is required to attain statistical significance (*p* < .05); therefore, a strict reading of Tables 4 and 5 would conclude that social factors have an affect on excused and sickness absences, but only when job security is low. Under these conditions, females are more absent than males for excused reasons, and those with dependents are less likely to be absent due to sickness. When job security is low, males may feel particularly constrained to choose to work over other legitimate activities. When job security is low, employees with dependents appear to prefer to work while sick and/or be less likely to use illness as an excuse for absence. Having dependents may sensitize them more than others to avoid behaviors which could compromise their employment prospects.

**Organizational Factors.** In five of the six sets of regressions in Tables 4-6, tenure is shown to have a negative relationship with absence behavior. Employees who have worked longer in the plant have fewer ex-
cused absences during times of low job security. They also are less absent due to sickness or unexcused reasons regardless of the level of job security. There is therefore no evidence that more tenured employees are more likely to be absent than others. There seems to be no tendency for these workers, certain that their seniority will protect their jobs, to be absent. The only condition in which tenure was found to be unassociated with absence was when job security was high and the absences were excused. Even then, when there is the least threat to continued employment, there was a significant negative zero-order relationship between tenure and absence behavior. When individual context factors were introduced, however, this relationship dropped to zero. Controlling for the extent to which employees felt they were likely to be laid off, the relationship between tenure and excused absences evaporated.

In the plant studied here, therefore, it seems that employees who remain either 1) have adjusted to pressures leading to absence behavior so as to allow for regular attendance or 2) face fewer such pressures. More tenured personnel are consistently less absent, save when job security is high and they have a legitimate excuse for their absence. There is no evidence whatsoever that they are more absent than their newer co-workers at any time for any reason.

Shift also is related to absence behavior. It had been expected that second shift personnel would be more absent than others for excused reasons. This occurred, and being on second shift was not associated with any other type of absence. However, employees on second shift had more excused absences only during times of low job security. If any-
thing, we might have expected the opposite. Being on third shift was not associated with absence frequency for any of the three reasons studied here. There is no evidence, therefore, that they are less absent for excused reasons because they experience fewer pressures from legitimate alternatives to work. Finally, neither of the shift variables were associated with the frequency of absences due to sickness. There is no evidence, therefore, that shiftwork leads to physiological or psychological problems that result in absence behavior.

Overall, organizational factors by themselves account for between 5% and 12% of the variance in absence behavior for different reasons under different economic conditions. Partialing out the effects of other variables, they contribute between 2% and 9% to variance explained beyond that explained by other factors. In all cases save excused absences under conditions of high job security, this increase in variance explained is statistically significant.

**Individual Context.** Role support, role overload, and the perceived probability of turnover appear to play only minor roles as determinants of absence behavior. Role overload is not associated with absence behavior of any of the three types at either of the two time periods. Supervisory role support, as expected, was negatively associated with absence behavior, but only for excused absences when job security was high. It appears that supportive supervisors can reduce absence behavior when there is minimal threat to job security. When absences have implications for job security or, perhaps, for promotions, however, the impact of supervisor support evaporated. Perhaps, in this instance,
security needs take precedence over social needs. The overall impact of role support, in any case, is marginal.

The perceived probability of turnover is associated with absence behavior only for unexcused absences. Employees who feel that may quit or take a job with another employer are more likely than others to be absent for unexcused reasons. This relationship is statistically significant for low job security conditions; however, it is of almost equal magnitude under conditions of high job security and approaches statistical significance (p = .10). These findings suggest that employees who are likely to turn over are less sensitive to the possibility of offending their employer than are their fellow workers.

Controlling for the likelihood of turnover, the perceived probability of layoff appears to play a quite different role in determining absence behavior. Under conditions of high job security, those who feel they may be laid off are more likely than others to be absent for excused reasons. As noted earlier, those who view themselves as likely to be laid off during peak periods may see the layoff as due to factors other than fluctuating demand. For example, they may feel they will be let go because they are inferior workers. If so, they may be less hopeful about recall and more likely to choose legitimate alternatives to work.

This possibility would account for the fact that, net of other factors, those who feel they are likely to be laid off during periods of low demand are less absent for excused reasons. Still hoping for recall, they may be interested in demonstrating their commitment and, perhaps, even in
reducing the chances of layoff in the first place. These employees are not less likely to be sick under conditions of low demand, however. Also, we would expect them to be less likely than others to be absent for unexcused reasons, especially when job security is low. While the direction of this coefficient is in the expected direction in Table 6a, it is statistically significant only when demand and therefore job security is high. Better understanding of the relationship between the perceived probability of layoff and absence behavior, therefore must await future research.

Overall, individual context variables alone account for between 2% and 10% of the variance in different types of absence behavior at different times. Alone, they account for between 5% and 6% of the variance in unexcused absences \( (p \leq .05) \) and 10% of the variance in excused absences when job security is high \( (p < .01) \). The variance in sickness absences explained by these factors is not significant for either time period; nor is it significant for excused absences when job security is low. Individual context variables constitute between 1% and 5% of explained variance in absence behavior beyond that explained by other variables. Only in the cases of excused (5%) and unexcused (4%) absences at time two is this contribution statistically significant \( (p \leq .05) \). It appears that individual context variables contribute to our understanding of absence behavior primarily when economic conditions afford the employee a relatively high degree of job security.

**Intrinsic Satisfaction.** Intrinsic satisfaction is associated with the frequency of excused and sickness absences, but this relationship
is statistically significant under conditions of simultaneous controls only when job security is low. When job security is high, the relationship between intrinsic satisfaction and absenteeism is essentially zero. In addition, intrinsic satisfaction is not significantly associated with the frequency of unexcused absences at either point in time.

The only condition under which intrinsic satisfaction contributed to variance explained in addition to other variables was that of low job security. This contribution was 2% for excused absences \( (p < .05) \) and 3% \( (p < .05) \) for sickness absences. The evidence, therefore, appears to support a cognitively-based theory rather than a needs-based theory relating intrinsic satisfaction and absence behavior. Contrary to expectations, employees who view themselves as being intrinsically satisfied are just as likely to be absent for unexcused reasons as their less satisfied colleagues. Moreover, intrinsically satisfied personnel are not less likely to be absent for sickness or for excused reasons when job security is high and, presumably, security needs are met. This relationship occurs only when job security is low. The evidence therefore supports the argument that employees create intrinsic satisfaction as a palatable rationale for doing what they have to do in order to keep their job. Those who feel they might have to show exemplary attendance behavior in order to keep their jobs may be aided—psychologically and even behaviorally—by increasing their sensitivity to intrinsic rewards associated with the jobs.

**SUMMARY AND DISCUSSION**

The results document several substantial differences in the degree of association between absence behavior and several independent variables
for data gathered only one year apart. The relationships between tenure, role support, the perceived probability of layoff, and intrinsic satisfaction on the one hand and absence behavior on the other vary substantially across time even within absence type. These results seem to suggest that differences in the economic conditions existing at time one and at time two play a role in determining the determinants of absenteeism.

When job security is low, those with many dependents and long tenure, and, perhaps, those who are primary wage earners, are less likely than others to be absent. These are the people who either experience the greatest pressure to work or have adjusted to pressures in a way conducive to regular attendance.

Our society expects males to hold down jobs while females are responsive to family duties. Such duties produce legitimate reasons for absences, and females are more likely than males to be absent for excused reasons; however, females are not more likely than males to be absent for unexcused reasons.

Those who see themselves as likely to leave the organization are more absent than others for unexcused reasons. Presumably, they can discount the costs of such absences. Finally, when jobs are insecure, those who report more intrinsic satisfaction are less likely than others to report in sick or choose to be absent for legitimate reasons. Intrinsic satisfaction may help them engage in behaviors they do not exhibit in less threatening times.

When jobs are relatively secure, sex and tenure exhibit the same direct effects on absence behavior that occur when jobs are insecure. The probability of turnover also is positively associated with unexcused
absences at both time periods. However the probability of layoff during times of high demand is positively associated with excused absences when jobs are secure, yet this relationship is negative when jobs are less secure. Under these conditions, employees may avoid absences in order to decrease the chance for layoff and to increase the chances for recall when the demand for labor increases. When jobs are secure and recall almost certain, employees may be less sensitive to the costs of excused absences. The only significant relationship between role support and absence behavior occurs during the second time period. Perhaps social needs take precedence over security needs when employment is secure.

Overall, no variable was associated with all three absence types at both time periods. The factor most consistently related to absence behavior was tenure, yet even this relationship evaporated when the absence was least threatening to continued employment: excused absences when demand was high.

Data reported here suggest that the meaning employees attribute to absence behavior—i.e., its implications for job security—plays a major role in determining what employees take into account when making decisions to be absent. This inference, however, remains just that: an inference which must be investigated in future research. Such research should identify alternative meanings which absence behavior may elicit and document conditions—such as frequent layoffs—under which different meanings get elicited. Such attributions are very likely determined by cultural belief systems, and by culturally conditioned values and norms.

In the plant studied here, there was a strong belief, supported by management policy, that absences, especially unexcused absences, led to
layoffs and to termination. There were, in fact, twenty-one separate disciplinary layoffs during the two years of this study. These usually were the result of a high frequency of unexcused absences. Also, considerable value appeared to be placed upon economic well-being. This could explain why those with dependents were less likely to be absent rather than more. Income may have been more important than personal contact. Future efforts, however, could seek to assess these and other variables thereby contributing further to our understanding of absence behavior.
Many researchers have called for distinguishing among absences attributable to different reasons (e.g., Nicholson et al., 1977; Muchinsky, 1977). Kerr, Kappelmeier, and Sullivan (1951) argue that "...certain types of absenteeism are completely unrelated to certain other types." Steers and Rhodes (1978) argue that a distinction must be made between voluntary and involuntary absences. Nicholson et al., (1976) separates medically certified and medically uncertified absences. Garrison and Muchinsky (1977) distinguish paid from unpaid absences. Newman (1974) focuses on unexcused absences, and Pocock, Sergeant and Taylor (1972) separate certified and uncertified sicknesses from other types. There are numerous difficulties associated with successfully distinguishing among absences along any of these lines. For example, it may be impossible to determine when mounting pressures of family duties or other factors make the decision to be absent really involuntary. An alternative approach, adopted here, is to accept the classification of absence into categories of excusable, sick, and unexcusable as important regardless of the accuracy of the scheme for classifying voluntary or involuntary, certified or "false" illnesses, etc. Being absent for unexcused reasons will tend to have more negative implications than sicknesses, and sickness absences are likely to lead to more negative attributions than excused (or certified) absences.

For most of these and for many of the following references, the authors made extensive use of the excellent summary of absenteeism research compiled by Rhodes and Steers (1978).

These considerations do not imply that felt intrinsic satisfaction is a consequence rather than a cause of attendance behavior. It could be that intrinsic satisfaction is a consequence of extrinsic factors such as job security and that it is a necessary (but not necessarily sufficient) cause of absence behavior. Felt intrinsic satisfaction may provide the acceptable rationale without which employees could find it very difficult to work while sick, to forego family duties or pleasures, and, in general, to be absent as infrequently as they are.

This does not mean there were no involuntary layoffs during time two. Employees terminated prior to May, 1978, would not have taken the time 2 survey. Those terminated during 1978 might not have chosen to take both surveys. Likewise, new employees who took the time two survey might have been laid off after May, 1978. These people would not have had the opportunity to take the time one survey.

R²'s reported in these tables are smaller than those usually required to indicate a substantial impact. However, this is a problem endemic to research on absenteeism, since most of the variance doubtless is due to excused, unexcusable or sickness absences due to reasons which are not measured. The R²'s reported in Tables 4-6 are quite respectable, given those usually reported in absence research.
The plant studied here is somewhat unique in having many long-time employees. This is evident in Table 1 which shows the average tenure at time two to be 18.2 years. This is in part due to the fact that the plant offered relatively higher hourly wages for non-skilled labor. This doubtless sensitized employees to any threat to their job security.

Role overload, however, was related to the frequency with which employees asked for and took time off when there was insufficient work to keep them busy. Not surprisingly, those reporting more role overload were significantly less likely to take time off for lack of work. This relationship was statistically significant when all other variables in the model were controlled, and it held up under conditions of both high and low job security.
REFERENCES


Flanagan, R.J., Strauss, G., & Ulman, L. Worker discontent and work place behavior. Industrial Relations, 1974, 13, 101-123.


Naylor, J.E., & Vincent, N.L. Predicting female absenteeism. Personnel Psychology, 1959, 12, 81-84.


Wyatt, S., and Marriott, R. Night work and shift changes. *British Journal of Industrial Medicine, 1953, 10*, 164-172.

Table 2

Average Frequencies of Absences for Three Reasons at Two Points in Time

<table>
<thead>
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<th></th>
<th>$\bar{X}$</th>
<th>s.d.</th>
<th>Minimum</th>
<th>Maximum</th>
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</thead>
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<td>1.33</td>
<td>1.76</td>
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Table 3

Correlations Among Absence Frequencies for Three Different Reasons at Two Points in Time (N=264)

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<th>Sick $t_1$</th>
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<th>Sick $t_2$</th>
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<td>.25**</td>
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<td>.24**</td>
<td>.66**</td>
<td>.18**</td>
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<td>2) Sick</td>
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<td>.66**</td>
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<td>.16**</td>
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<td>.07</td>
</tr>
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</table>

* $p \leq .05$
** $p \leq .01$
Table 4
Hierarchical Regressions T1 and T2 of Excused Absences by Social Factors (SF), Organizational Factors (OF), Individual Context (IC) and Individual Satisfaction (IS)

**a. (Jobs Insecure) Time 1**

<table>
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<th>Variables Included</th>
<th>Sex</th>
<th>Dependents</th>
<th>Prim. Wage Earner</th>
<th>2nd Shift</th>
<th>3rd Shift</th>
<th>Role Support</th>
<th>Role Overload</th>
<th>Prob. of Turnover</th>
<th>Prob. of Layoff</th>
<th>Intrin. Satis.</th>
<th>R²</th>
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<td>.19*</td>
<td>-.07</td>
<td></td>
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<td>IC</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>-.23**</td>
</tr>
<tr>
<td>IS</td>
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<td></td>
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<td>-.06</td>
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<td>.01</td>
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<td>.20**</td>
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**b. (Jobs Secure) Time 2**

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<th>Role Support</th>
<th>Role Overload</th>
<th>Prob. of Turnover</th>
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<td>.12**</td>
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<td>SF/OF/IC/IS</td>
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<td>.18**</td>
<td>.15**</td>
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</table>

1. 1=Male, 2=Female
2. 1=No, 2=Yes
3. 1=No, 2=Yes

*p < .05
**p < .01
Table 5
Hierarchical Regressions T1 and T2 Frequencies of Sickness Absences by Social Factors (SF), Organizational Factors (OF), Individual Context (IC), and Individual Satisfaction (IS) Variables

### a. (Jobs Insecure) Time 1

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<th>Wage</th>
<th>Earner</th>
<th>Tenure</th>
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<th>3rd Shift</th>
<th>Role Support</th>
<th>Role Overload</th>
<th>Prob. of Turnover</th>
<th>Prob. of Layoff</th>
<th>Intrinsic Satis.</th>
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<th>Prob. of Layoff</th>
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