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A MEASURE OF PERCEIVED EQUITY

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DEVELOPMENT AND VALIDATION OF
A MEASURE OF PERCEIVED EQUITY

By

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ABSTRACT

DEVELOPMENT AND VALIDATION OF A MEASURE OF PERCEIVED EQUITY

By

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While equity theory explains some work related behavior, researchers in organizations have faced measurement problems. These include the absence of standardized measures of amount of perceived equity-in-equity, and the lack and/or unreliability of records for such criterion behaviors as employee performance, tardiness and absenteeism.

Questionnaire instruments measuring perceived equity and attitude towards tardiness, absenteeism and performance were developed. Using 240 employees representing six occupational groups, perceived equity was related to employee attitudes towards performance, absenteeism and tardiness. For construct validation purposes, the instruments were correlated with measures of job satisfaction, need achievement and locus of control.

Results indicated a positive relationship between perceived equity and advocacy of punishment for tardiness, absenteeism and poor performance for high-ranked but not low-ranked occupations. Equity was also positively related to job satisfaction and internal locus of control.

Implications of findings for organizations are discussed and directions for future research are suggested.

IN MEMORY OF MY MOTHER

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INTRODUCTION

Since Adams (1963, 1965) formulated equity theory, numerous research studies have been conducted to test the predictions of the theory. Clearly evident from these studies is the absence of standardized instruments for measuring the amount of equity or inequity individuals perceive in work situations (see Adams and Freedman, 1976). Another weakness of equity theory research is that indicated by Tornow (1971); that research on the theory has not looked at the effects of personality variables on the perception and/or resolution of inequity. Notable, too, in the literature on the equity concept, is a tendency to treat the equity framework as a theory of job satisfaction (e.g., Wexley and Yukl, 1977; Lawler, 1973; and Vroom, 1965). While there is little doubt that job satisfaction and equity are closely related concepts, research has not indicated they are identical constructs. And a practical problem faced by equity theory researchers in organizational field settings is one of criteria measurement. Too often, records for such employee work behaviors as performance, absenteeism and tardiness that researchers use as criteria are absent and/or unreliable.

In a 1963 paper, Adams presented a theory of work motivation based on Festinger's (1957) theory of cognitive dissonance. Adams suggested that in work situations individuals contribute their education, intelligence, training, experience, skill, seniority, age, sex, status, ethnic background, and the effort expended on the task. In return for these inputs, individuals receive from the job situation outcomes like pay,

rewards intrinsic to the job, seniority benefits, fringe benefits, job status and other benefits. Whether or not each one of the above inputs and outcomes are considered relevant and are actually applied in a given situation depends on the individual's perception. According to Adams, equity exists when a person perceives that his outcomes-inputs ratio is equal to the outcomes-inputs ratio of a comparison other. The comparison other is another person in a similar situation; for instance, a co-worker. When a person notices that his outcomes-inputs ratio disagrees with the outcomes-inputs ratio of a comparison other, then he feels inequity. There is some evidence to show that past outcomes-inputs ratio of an individual may induce present feelings of inequity, Pritchard et al. (1970). This suggests that sometimes an individual's previous outcomes-inputs ratio may serve as the basis of comparison.

The concept of comparison other has lately been expanded. Goodman (1974, 1977) argued that individuals use multiple referents; other, self, and system: other referenced comparisons concern matching outcome-input ratios to those of others within or outside the organization. Self-referenced comparisons involve the comparison of a person's current situation with some past situation experienced by the individual. And lastly, system-referenced comparisons concern matching what the individual had been promised with what is actually present.

In his later formulation, Adams (1965) pointed out that equity theory is a general conceptual framework of social exchange and is not limited to work situations alone. He presented a mathematical formulation as follows: If $\frac{O_p}{I_p} = \frac{O_a}{I_a}$ then equity is perceived as the ratios

are seen to be equal. But if $\frac{O_p}{I_p} < \frac{O_a}{I_a}$ or $\frac{O_p}{I_p} < \frac{O_z}{I_z}$, then inequity is

felt since the ratios are perceived unequal.

The presence of inequity creates tension in the person and the amount of this tension is proportional to the magnitude of inequity felt. To eliminate the tension, the individual will be motivated to remove or reduce the inequity. The strength of this motivation increases with the magnitude of the inequity perceived. The inequity is removed or reduced by increasing or decreasing inputs or outcomes depending on whether these were lower or higher relative to those of comparison other. The person may also leave the field, change comparison other, cognitively distort his inputs or outcomes or distort those of comparison other, or force comparison other out of the situation. When choosing a method to reduce inequity the person attempts to maximize valued outcomes and minimize increasing inputs that are costly to change. The person resists cognitive distortions of inputs central to his self-concept and is unwilling to alter cognitions about his outcomes. But the person will be less resistant to changing comparison other's inputs and outcomes. The person leaves the field only under high magnitudes of inequity that cannot be resolved by other methods. At lower levels of inequity absenteeism may occur as a means to resolve feelings of inequity.

Internal-external locus of control (Rotter, 1966) is a construct which, like equity, has been shown to have considerable influence on the work experience of individuals (see Valecha, 1972; Andrisani and Nestel, 1976). In order to fully understand the human aspect of the work environment, it is necessary to relate constructs like equity and locus of control and other work related variables which have a collective and/or independent impact on the work environment.

This study is an attempt to develop a standardized measure of perceived equity in work situations. The relationship between this

measure of perceived equity and organizational employee attitudes towards tardiness, absenteeism, and performance is assessed. In addition, the relationship between perception and resolution of inequity and the personality variable of need for achievement is investigated. Finally, the link between locus of control, job satisfaction, and equity is explored.

Equity Theory and Research in Work Related Social Exchanges

Perhaps because equity theory was first formulated with a focus on work related situations, initial research from which the theory drew support almost exclusively dealt with human interactions in work or simulated work situations. But more recently, however, researchers have applied the equity framework to other areas of human interactions as well (Walster et. al., 1973). Walster et. al., have revised and extended Adams' original formulation and presented it as a general theory of social behavior. Equity theory has been used to explain behavior of parties to exploitative, helping and intimate relationships. But because the literature from non-work social exchange situations is not directly relevant to the questions being addressed in this paper, it will not be reviewed. The interested reader is advised to see the excellent summary by Walster, Bersheid and Walster (1973). Instead we turn to equity theory research in work related situations.

As earlier indicated, initial research on the equity norm concentrated on testing the theory's predictions in human interactions in work settings. It does not seem necessary to review all the literature on equity theory predictions. Excellent summaries of these studies can be found in Adams (1965), Lawler (1968), Opsahl and Dunnette (1966), Pritchard (1969), Weick and Nettet (1969) and, Goodman and Friedman (1971), Carrell and Dittrich (1978). Instead, only a brief summary of some of the most significant findings from equity theory research will

be outlined here.

Many laboratory-type studies focused on resolution of inequity and performance (Goodman and Friedman, 1971). In most of these studies the researcher hired persons for part-time work and paid them more or less than the going rate to induce inequity, or paid them more or less than the going rate and told them their qualifications were lower than a comparison other receiving the same pay. The pay is usually on hourly or piece rate basis and the dependent variable has been measured by number and quality of units of work completed and attitudinal responses of subjects to questionnaires administered at the end of the "employment".

One of the four basic hypotheses tested in these studies is that overpaid hourly subjects will produce more than equitably paid subjects to resolve inequity. Even though research findings on this hypothesis are somewhat mixed, better controlled studies have supported the hypothesis (Adams and Rosenbaum, 1962; Arrowood, 1961; Goodman and Friedman, 1969; Pritchard et. al., 1970). Another hypothesis tested is that overpaid piece-rate subjects produce work of a higher quality but lower quantity than equitably paid subjects. Data from studies testing this hypothesis has been generally confirmatory of equity theory (Adams and Rosenbaum, 1969; Adams, 1963b; Adams and Jacobsen, 1964; Goodman and Friedman, 1969; Wood and Lawler, 1970). The third hypothesis tested is that underpaid-hourly subjects decrease inputs to achieve equity. Although this hypothesis received some empirical support, too few studies have been conducted on this hypothesis to reach a definitive confirmation of the hypothesis (Goodman and Friedman, 1971). Another hypothesis tested is that underpaid piece rate subjects produce a greater quantity of work but of lower quality than equitably paid controls. Although only a few studies have been conducted with underpaid piece rate subjects

equity theory has received support (Andrews, 1967; Lawler and O'Gara, 1967).

A comparatively few number of studies focused on inequity resolution strategies not based on performance. These studies found that a person allocates outcomes to himself and comparison other in a manner proportional to their respective inputs. As might be expected, not all studies conducted to test equity theory predictions yielded supportive results. However, most of the studies with non-confirmatory findings had methodological weaknesses, e.g., see Goodman and Friedman (1971).

As research on Adams' equity concept continues to grow and expand into many areas of social interaction, more recent evidence indicates there are important applications in social behavior involving monetary exchanges. The equity conceptual framework has profitable instrumental application in work situations. Maintaining equitable allocations in work settings elicits and maintains high performance, as Leventhal (1976) observes. He points out that equitable allocations of resources and rewards reinforce the behaviors of the more productive workers and ensures they have greatest access to essential resources. Equitable allocations also deliver low reinforcement to low performers thereby forcing them to perform better or dissatisfying them so much that they eventually quit and this upgrades overall quality of performance. Support for this line of thought was also found by Clark (1958) who studied labor efficiency in supermarkets where inequity was present among some workers. His results were that labor costs were much higher in supermarkets where inequity existed than where little or no inequity was perceived present.

Sometimes overpayment inequity may be intentionally produced to maximize productivity for a short period of time. This instrumental use of inequity may, however, destroy an organization's capacity to operate

profitably in the long run (Leventhal, 1976).

Another piece of evidence strongly militating for continued use of equity theory principles in work situations is the view expressed by Deutsch (1975), that in cooperative relations in which economic production is the primary goal, equity rather than equality or need, is the basis for distributive justice between or among the participants.

Most of the studies that we reviewed which tested equity theory required that the researcher induce feelings of equity or inequity among subjects to observe its resolution. This is often difficult to do in natural organizational environments. Consequently, all but a small number of field studies on the equity norm have been laboratory studies (see Lawler, 1968; Pritchard, 1969; Goodman and Friedman, 1971; and Carrell and Dittrich, 1978).

A novel and interesting approach to studying equity/inequity and its resolution in natural organizational settings would be to look at the relationship between amount of perceived equity or inequity and organizational members' attitudes toward tardiness, poor performance and absenteeism. This approach seems theoretically sound since it can be expected that the magnitude of equity or inequity present can affect organizational members' attitudes towards these job aspects. Practically, such an approach allows for an indirect investigation of the link between the concept of equity on one hand and performance, tardiness and absenteeism on the other by avoiding the measurement problems associated with these criteria.

On the basis of equity theory predictions and the literature discussed, it can be expected that organizational members perceiving equity would view absenteeism, tardiness, and poor performance negatively while those members perceiving inequity would view the three job aspects less negatively. The present study will examine the relationship between

perceived equity and employee attitude toward poor performance, absenteeism, and tardiness.

Need for a Measure of Perceived Equity

Despite an enormous body of research literature, equity theory is conspicuous in its lack of well developed standard measures. Researchers have had to construct their own tools to measure perceived equity and/or its resolution each time. In work situations, researchers have measured perceived equity mostly through inequity resolution strategies like increases or decreases in performance and/or quality of performance. In addition, perceived equity has been measured directly through subject responses to attitudinal questionnaires administered after completion of task or simulated task; Adams and Rosenbaum, (1962); Arrowood, (1961); Goodman and Friedman, (1969); Pritchard et. al., (1970); Wood and Lawler, (1970); Tornow, (1971); etc. In some studies turnover has been used as an indicator of perceived equity/inequity, Telly, French, and Scott, (1971); Dansereau, Cashman and Graen (1973); Finn and Lee, (1972); Planz, (1970); and Valenzi and Andrews, (1971).

In his investigation of moderators of inequity perception and resolution Tornow (1971) constructed what he called the Tornow Input Output Checklist (TIOC) which he used to classify individuals into those perceiving ambiguous job elements as inputs and those perceiving such elements as outcomes. This instrument does not measure perceived equity, however, though individuals classified into one of the two categories will perceive more, or less equity in a situation. In a study aimed at the examination of various operational definitions of job satisfaction, Wanous and Lawler (1972) contended that one of the measures in their questionnaire was measuring perceived equity in a job situation. They wrote: "First, an individual can ask himself if his present job provides

equitable outcomes...for the inputs it requires. This is an equity comparison and can be measured by the discrepancy between a Should Be item and Is now item..." (p. 97). Part of their questionnaire asked workers to rate on a seven-point scale how much of 23 characteristics (including self-esteem, opportunity for growth, pay) was present on their job and how much they (workers) believed there should be. Though the worker responding to this questionnaire may not compare outcomes-inputs ratio to that of comparison other but base it on his previous outcomes-inputs ratio or merely on what he believes he ought to get for his inputs, the Should Be Is Now discrepancy is an indication of perceived equity. However, the Should Be Is Now discrepancy measure is only a small component of a large questionnaire designed to measure and define the broader and rather elusive concept of job satisfaction.

More recently, a 31-item questionnaire designed to measure perceived equity was developed by Dittrich and Carrell (1976). The limitation of this instrument is that it relies solely on the individual's..." own internally derived standard for comparison..." (Carrell, 1978, p. 111) to determine equity. Literature already reviewed clearly show that multiple referents are used in equity considerations. These referents include a comparison other (Adams, 1963, 1965), a person's past outcome-input ratio (Pritchard et. al., 1970), an outcome-input ratio unique to the individual, and what had been promised compared to what currently obtains (Godman, 1974, 1977). Because of this theoretical weakness of the Dittrich-Carrell instrument, the vacuum for standardized measures of equity continues to exist.

It is clear from this brief review of the tools and techniques employed to measure perceived equity/inequity in a given situation, that standard measures of perceived equity are still lacking. Stressing the

need for the development of such measures, Adams and Friedman (1976) wrote:

Development in any science is contingent, in part, upon precise measurement of variables. Equity theory is no longer at the stage of establishing basic functional relationships. Some research effort must be devoted now to measurement, not only in order that the theory might better be tested and refined, but so that it might be confidently applied to social problems. Concern for social justice has never been keener and more pervasive, and equity theory has obvious relevance to possible solutions. Yet, it is doubtful that theorists could contribute more than general principles...An important reason is that we cannot measure with precision the magnitude of existing social injustice...A priority, then, is the development of psychometric technology for the measurement of the components of inequity. (p. 53).

Considering the diversity of areas of human social interaction to which equity theory has successfully been applied as an explanatory concept, it is not possible to develop a single tool that can measure perceived equity in all these areas. For instance, a measure of perceived equity in intimate relationships will be different from that used in a work situation. Because of the important applications the equity framework has in work settings (which have been discussed earlier) and because of the author's leaning of interests towards this area, one of the purposes of this study is to develop a measure of perceived equity in a given organizational work situation. This choice is not meant to imply that this author does not value the importance of equity theory application in non-business work settings. Rather, it is hoped that the development of the measure will serve as an impetus to developing similar measures in other fields of social interactions.

Equity and the Need for Achievement

Most researchers on equity theory have adopted a nomothetic approach and attempted to test the theory's predictions in terms of how the average individual would react in an equitable or inequitable social exchange situation. Individual differences appear not to be considered.

Pointing this out, Tornow (1971) wrote that the general weakness of equity theory was its failure to consider the effect of individual difference variables on perceived equity. Tornow supported his criticism by demonstrating that whether or not individuals perceived ambiguous job elements (like responsibility, challenge, task complexity) as inputs or outputs moderated perception and resolution of inequity. Another study that showed individual difference effects on equity perception and inequity resolution was that of Glass (1964). In a study where subjects' self-esteem was experimentally raised by providing "authoritative" information on subjects' personalities, high self-esteem subjects justified their harmful actions (by derogating their victims) more than did low self-esteem subjects. Other individual difference variables moderating inequity perception and resolution were demonstrated in a study by Blumstein and Weinstein (1969). These two researchers observed that persons high on a trait called Machiavellianism (defined as "the orientation toward manipulation of one's fellow man as a means of achieving personal goals", {p. 410}) were opportunistic in allocation of rewards. These individuals tried to get as much reward for themselves as possible even when they contributed less than others. Individuals with high need for social approval, on the contrary, claimed less reward for themselves than their inputs merited in an effort to avoid their partners seeing them as greedy.

An individual difference variable of high significance in work situations--due to the importance of high performance in these situations--is need for achievement. The person with high need for achievement is intrinsically motivated to perform highly on tasks of medium difficulty and where feedback is available. Such a person derives more pleasure from task accomplishment and frustration from failure than

a person with low need for achievement. There is some evidence suggesting that need for achievement can affect inequity perception and resolution. Penner (1967) found that high performers were more likely to be dissatisfied with pay; that high inputs appeared to lead to feelings of inequity. Klein and Maher (1966) observed that college graduates were more likely to be dissatisfied with pay than non-college graduates when education was used as an input. While high academic qualifications and high performance do not necessarily indicate high need for achievement, it can reasonably be assumed that they do in fact imply some need for achievement.

It appears plausible that persons with high need for achievement and consequently high performance, though this may not necessarily be the case, would perceive more disadvantageous inequity than persons with low need for achievement. Another purpose of this study, therefore, is to investigate the effect of need for achievement on perception of equity. This will be done by relating scores on a measure of need for achievement--the need for achievement subscale of the EPPS--and scores on the Perceived Equity Measure (PEM). Persons scoring high on the achievement scale would be expected to perceive more inequity on PEM. Individuals scoring low on the need achievement scale would be expected to perceive less inequity.

Equity and Job Satisfaction

A concept whose relationship with performance in work organizations continues to be rather elusive is job satisfaction. Studies to establish the link between job satisfaction and performance have often yielded contradictory findings. Since the classical Hawthorne studies in the thirties and the resultant human relations approach to increasing productivity, many contended that satisfaction led to high performance.

Other researchers have found that it is good performance that leads to satisfaction because of the rewards that are contingent upon Performance; for example, Vroom (1964), Lawler and Porter (1967). One clear thing, however, is that whatever the nature of the link between satisfaction and performance, organizations always prefer satisfied to dissatisfied workers. Perception of equity should be an important ingredient of job satisfaction, in fact, some researchers have viewed equity as a theory of job satisfaction, e.g., Lawler (1973), Vroom (1964) and Wexley and Yukl (1977). However, it must be emphasized here that whereas job satisfaction lacks a clear relationship with performance, equity considerations have a direct effect on performance, at least as demonstrated in previously cited laboratory studies. So if an instrument to measure perceived equity is developed, the instrument would not just constitute another measure of job satisfaction. A measure of perceived equity/inequity would enable organizations to change employees' performance by establishing equity when this is found to be lacking. Further, such a measure would enable the investigation of the strength and extent of the relationship between job satisfaction and equity.

On the basis of the literature just presented, it can be expected that measured job satisfaction will be closely related to perceived equity yet not so closely related to justify treating the two concepts as one and the same.

Equity and Internal-External Locus of Control

According to Rotter (1966), internal-external locus of control refers to the degree to which a person perceives success and failure as being either contingent on personal actions and initiative or on factors unrelated to one's actions and initiative. At one end of the scale are highly internal persons who perceive effort to be largely instrumental

in meeting with success or failure. The opposite end of the continuum represents individuals who view failure and success as unrelated to their efforts and initiative.

Although voluminous research literature exists (see Lefcourt, 1973 and Joe, 1971) on the internal-external construct and despite the constructs' important implications for work situations, research on it has paid little attention to the relationship between Locus of Control and work experience variables (Andrisani and Nestel, 1976). Only recently have some attempts been made to relate the internal-external framework to work-related variables. Valecha (1972) using an all male sample found that for whites, internality was positively related to high status occupations and high knowledge about the world of work--that is, occupants of high status positions and people who scored high on an occupational information test scored high on internality. Valecha further observed that internal whites with low levels of education (12 years or less) made better progress on the job than externals. In a longitudinal study to relate internal-external control to work experience, Andrisani and Nestel (1976) utilizing an all male sample concluded that internal-external control has influence on the success of individuals in the world of work. They had observed that internals experienced more advancement on seven of ten dimensions that included annual earnings, hourly earnings, occupational attainment, job satisfaction and perceived financial progress. They also concluded from their data that while internality or externality is considered a stable personality variable, success at one's job enhances a shift from external to internal control.

Since internal-external locus of control influences an employee's job outcomes like occupational attainment, hourly and annual earnings, perceived financial progress and job satisfaction, it can be expected

that locus of control will have some impact on the perception of equity. In our quest to fully understand the work scene, it is important to examine the relationships among variables that collectively or independently impact on the work scene. This study will, therefore, explore the relationship between equity and internal-external locus of control. As there is no basis to speculate as to the nature of the relationship between the two constructs, no apriori hypothesis will be advanced.

It is important to note, too, that the two studies (Valecha, 1972; and Andrisani and Nestel, 1976) which related internality-externality to work experience variables used all male samples. The present study will use males as well as females to inquire into the link between internal-external control and the job-related variables of equity, job satisfaction, need for achievement, and worker attitudes towards tardiness, absenteeism and performance.

Based on the research evidence presented, three hypotheses will be tested in this study:

Hypothesis 1: Employees perceiving equity will view absenteeism, tardiness and poor performance as serious offenses while those perceiving inequity will view these three job factors as not being serious offenses. In other words, there will be a significant correlation between perceptions of equity and perceptions of the seriousness of absenteeism, tardiness and poor performance.

Hypothesis 2: Employees with a high need for achievement will perceive more inequity than those with low need for achievement while those with low achievement need will perceive more equity than individuals with high need for achievement. Thus a negative correlation between equity and need for achievement is predicted.

Hypothesis 3: Job satisfaction will be positively and significantly correlated with perceived equity but the correlation will be of such

low magnitude that equity and job satisfaction cannot be considered identical constructs.

METHOD

Subjects

Subjects were 240 full time male and female employees of a large state university in Michigan. These employees who were drawn from all the university's academic and service departments consisted of 72 secretaries, 34 clerks, 42 technicians, laboratory and research assistants, 43 supervisors, 35 managers, and 14 janitors. Except for the janitors, subjects were randomly selected from among all employees in their particular work group using the listings in the university's faculty and staff directory. Janitors, not listed in the directory, were chosen in such a manner as to represent as many departments as possible in their sample.

Procedure

Five questionnaire measures - the Perceived Equity Measure (PEM), the Machungwa Employee Attitude Towards Wrong Doing (MEATWD), the need for achievement subscale from Edwards Personal Preference Schedule, the abbreviated Rotter Internal-External Locus of Control Scale (Valecha, 1972) and the short form version of the Minnesota Satisfaction Questionnaire (Weiss et. al., 1967) - comprised the main research instruments. The PEM and MEATWD had been constructed and pretested by the author (see Section on Instruments). The three other scales were chosen on the basis of their appropriateness for the study and demonstrated validity and reliability in field research.

For purposes of making the total questionnaire--consisting of five measures--appear short, and because the need for achievement scale and the Rotter Internal-External scale both use a forced choice format,

these two measures were combined by arranging items from the two scales in alternating sequence. The resultant combined scale (need for achievement and Internal-External control) was for convenience named the Need Preference Survey. Except for the Machungwa Employee Attitude Towards Wrong Doing Scale which was labelled as the "MEATWD Survey", the Perceived Equity Measure and the Short form of the Minnesota Satisfaction Questionnaire were properly identified by their full names, (see the Appendix).

The combined five-measures questionnaire was mailed to 540 employees of a large midwest state university. These employees, drawn from all academic and supportive service departments of the university were asked in a cover letter to fill out the questionnaire and send it back in an enclosed postage paid return envelope. The letter which emphasized anonymity of respondents explained that the questionnaire survey was being conducted by a student as part of his graduate work.

The 540 employees belong to five of six work categories that had been chosen for the study. The six categories of janitor, clerk, secretary, technician/research and laboratory assistant, supervisor and manager were picked for the following reasons: First, these job positions are very common to most industrial work organizations. Thus comparisons of findings can be easily made if this study is repeated in any other work organization. Secondly, the use of job positions that vary so much in status, power, pay and benefits offered will enable interesting group comparisons. And from a purely practical point of view, employees in the chosen work categories deal with some amount of paperwork (with the exception of janitors) and are more likely to respond to a rather long mail questionnaire.

The sample itself was chosen after carefully studying the listings in the university's faculty and staff directory. It had been decided to sample randomly from among all the employees listed in each of five of the six chosen job categories (janitors were not listed in the directory). The size sampled in each category reflects consideration of the number of employees in that work group and the likelihood that employees may have quit or changed jobs since the directory had been printed about a year before. Care was taken to ensure that all departments were represented in the subsamples where possible. Proceeding on the basis of the above considerations, names of 150 secretaries, 100 clerks, 100 technicians/research and laboratory assistants, 115 supervisors, and 75 managers were listed from the directory. Questionnaires were then mailed to these people.

The janitors, officially designated as custodians, presented a special problem. Being unlisted in the directory, these people could not be reached by mail. Hence it was decided to deliver questionnaires personally to these employees when they reported for work in the evenings in various buildings. Attempts were made to distribute questionnaires in such a way as to include janitors from as many departments as possible. Due to the very high rate of refusal to participate among these employees and difficulties in finding them (they move and work in different parts of the building) only 47 questionnaires were personally delivered.

Research Instruments and Variables¹

The major variable of interest in this study is the amount of equity as measured on the perceived equity measure.

¹A copy of the research instruments used in the study is shown in the Appendix.

The Perceived Equity Measure (PEM)

The PEM is a 20 item pencil and paper instrument that can be group administered to workers in work settings. It has a reliability of .87 and measures the amount of equity employees perceive on their job situation. On the PEM the individual's basis for comparison include co-workers in similar jobs, workers in other departments and/or other organizations, and the individual's unique psychological standard--what amount of each job factor he/she thinks should be present. Statements on the instrument seek the individual's perceived equity about pay, promotion, job autonomy and nature of job itself, fringe benefits, supervision and treatment by supervisors.

Respondents indicate their agreement or disagreement with each statement on a five-point scale by checking "strongly agree", "agree", "not sure", "disagree" or "strongly disagree". The respondent's total score is found by adding up scores on all 20 items. The higher the total score, the greater the amount of equity perceived; the lower the score, the greater the magnitude of inequity perceived.

Construction of PEM

Initially 42 items were selected out of the total number of 60 constructed. These 42 were administered to a randomly selected sample of 60 employees of Michigan State University. This sample consisted of 20 janitors, 20 secretaries and 20 professors. It had been originally intended to subdivide the PEM into five subscales: pay, promotion, job itself and autonomy, fringe benefits, and supervision and treatment. But a factor and reliability analysis of the data showed no evidence of the existence of these subscales. Items with very low internal consistency were dropped from the scale so that only 20 items were retained in the instrument.

Administered together with the original 42 item scale was one item (asked only to the professors within the sample) which was meant to get an indication of the validity of the scale. This item asked the professors in the sample to respond "yes" or "no" to the question: "Recently there has been a move to unionize faculty members at MSU. Do you favor such a move?" It was reasoned that those who refused unionization can be assumed to perceive more equity than those who favored unionization. The dichotomous responses to the unionization question were correlated with the total scores on the retained 20 items. A nonsignificant but positive relationship ($r = .247$, $p = .12$) was obtained. Despite the low correlation, it is important to note that the relationship is reasonably large and in the predicted direction.

Need for Achievement Scale

There are not many paper and pencil measures of the need for achievement suitable for use in organizational work situations which have demonstrated validity and reliability. The need for achievement subscale from the EPPS, however, is one that has been said to have promise with regard to validity (McKee, 1972). The scale consists of 15 pairs of statements. Only one statement in each pair is indicative of need for achievement. Since the scale is ipsatively scored, the individual's score on this subscale is the total number of achievement-related items he or she chooses out of a possible total of 15.

On the scale used in this study, four (non-scoring) filler statements were included. This brought the number of statements to 19. The statements of this scale were combined with those from the internal-external locus of control. The resulting combined instrument was named the Need Preference Survey.

Minnesota Satisfaction Questionnaire (MSQ) - Short Form

This pencil and paper instrument consists of 20 items which measure intrinsic, extrinsic and general job satisfaction. The 20 items are a subset of the long version of the MSQ which has 100 items. On the short form, as on the long version, respondents are asked to indicate their satisfaction or dissatisfaction with a given job aspect on a five point scale. Scoring on the scale is done in such a way that a high score means very satisfied while a low score indicates dissatisfaction.

According to Weiss, Dawis, England and Lofquist, the 20-item version has internal consistency reliability ranging from .77 to .92 for samples of engineers, machinists, toy and electrical assembly workers. Construct validity of the instrument has been demonstrated in studies of occupational differences in job satisfaction, and in studies relating satisfaction and satisfactoriness as specified by the theory of work adjustment (Weiss, Dawis, England, and Lofquist, 1967).

Abbreviated 11-item Rotter I-E Scale (Valecha, 1972)

This pencil and paper scale measures internal and external locus of control as described by Rotter (1966). The scale has 11 pairs of statements (one pair being a non-scoring filler) which Valecha (1972) selected from the original 29-item Rotter I-E scale. Valecha chose the 11 items on basis of their being more general, adult-oriented and work related. Like the 29-item Rotter scale, the abbreviated version uses a forced choice format and scores can range from zero for the most internal to ten for the most external.

Although Valecha (1972) slightly modified the scoring to allow for a more graduated distinction between internality and externality, and although he did not report data on the scale's reliability, his study with a sample of 4330 males demonstrated convergent validity for the instrument.

In the present study, the scoring format of the original Rotter I-E scale was used. However, the scoring was reversed so that a high score meant high internality and a low score meant high externality.

As earlier indicated, items from this scale were combined with those from the need for achievement scale to form the "Need Preference Survey". (In the appendix, Locus of control items are numbered even from 2 through 20 under the Need Preference Survey questionnaire).

The main dependent variable in this study is the attitude towards tardiness, absenteeism and performance as measured on the questionnaire described below:

Machungwa Employee Attitude Towards Wrong Doing (MEATWD)

The MEATWD is a 24-item pencil and paper scale designed for group or individual administration in work settings. The scale was constructed by the author specifically for this study and it measures attitudes of employees towards tardiness, absenteeism and poor performance on their jobs. Respondents show agreement or disagreement to the attitude statements on a five point scale ranging from "Strongly Agree" to "Strongly Disagree".

Responses are scored in such a way that respondents who view employee tardiness, absenteeism and poor performance as serious offenses (deserving some type of punishment) get a high score. Respondents who feel that tardiness, absenteeism and poor performance are only minor misdeeds which should be pardoned get a low score. Although there is yet no data on the MEATWD's validity, a close examination of the items shows them to have good face and content validity. When the scale was administered to 80 senior and junior undergraduate students taking a management class and who indicated that they had a part or full time job, a reliability (coefficient alpha) of .82 was obtained. A factor

analysis of the data showed that the scale was unidimensional.

Other Variables

Information on respondents' sex and job position was also collected.

Data Analysis

Pearson product moment correlations were computed among the five scales. Correlations between sex and scores on each scale were also computed. The sample was divided into the six occupational categories and correlations among the five scales, and between sex and the scales were computed separately for each occupational group.

Multivariate analysis of variance (Cohen and Burns, 1977) was performed to simultaneously test the effect of sex and occupational group on the five dependent measures. As two of the occupation groups (clerks and secretaries) consisted of only female employees, they were excluded from this analysis since multivariate analysis of variance cannot be performed with blank cells.

One way analysis of variance (in which the clerks and secretaries were included) was conducted to test for the effect of occupational group on scores on the dependent measures. Post hoc comparisons of means (Scheffe, 1959) for the six occupational categories from the five scales were subsequently performed to check for any significant differences in means.

Reliability analysis (internal consistency) of the scales was also performed.

RESULTS

Table 1 presents reliabilities obtained from the study for the five scales. These results indicate that the two new scales, the Perceived Equity Measure (PEM) and the Machungwa Employee Attitude Towards Wrong Doing (MEATWD) have high reliability. Coefficient alpha for PEM and

the MEATWD was .89 and .86 respectively. On splitting the sample into occupational groups, reliability for the PEM ranges from .86 for technicians to .90 for janitors and secretaries. On the MEATWD, reliability ranges from .76 for technicians to .88 for managers. The Minnesota Satisfaction questionnaire showed the highest reliability while the two ipsatively scored scales (need for achievement and locus of control) showed rather low internal consistency.

Table 1

Reliabilities (internal consistency) of the Scales
Used in the Study

	All Groups	Secre- taries	Clerks	Tech- nicians	Super- visors	Man- agers	Jan- itors
PEM	.89	.90	.88	.86	.87	.89	.90
MEATWD	.86	.83	.85	.76	.81	.88	.86
NACH	.56	.62	.54	.60	.46	.60	.55
LOCONT	.65	.69	.67	.38	.60	.72	.31
MSQ	.90	.92	.87	.90	.90	.79	.93

Note: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire.

Examination of relationships among the five variables shows that the hypothesis that there will be a positive significant correlation between perceived equity and attitudes towards wrong doing has not been supported (see Table 2). In fact, a negative though very low and nonsignificant correlation has been obtained between perceived equity and attitudes towards wrong doing ($r = -.022$).

Table 2

Product Moment Correlations Computed Among the Variables
Based on all Occupational Groups in the Study

(N=240)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.00					
PEM	- .143*	1.00				
MEATWD	- .242*	-.022	1.00			
NACH	- .089	.100	.05	1.00		
LOCONT	- .205*	.236*	-.094	.108*	1.00	
MSQ	- .124*	.424*	-.028	-.011	.235*	1.00

*p < .05

Note: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire.

The second hypothesis that need for achievement will be negatively related to perceived equity was also unconfirmed. The relationship observed between the two variables is low and nonsignificant but positive, $r = .10$. It is interesting to note, however, that the relationship between need for achievement and job satisfaction is negative--in the expected direction. Nevertheless, the correlation, $r = 0.011$ is very low and nonsignificant.

The third hypothesis stated that perceived equity will have a positive and significant relationship with job satisfaction but a relationship sufficiently weak to justify treating equity and job satisfaction as different though related constructs. This hypothesis has been supported. The relationship obtained, $r = .424$, which gives a correlation of .473 on correcting for attenuation is positive and significant; however, the low magnitude of this relationship cannot justify

considering equity and job satisfaction as identical constructs.

Sex was related to the five variables examined. The analyses revealed that females perceived significantly less equity and job satisfaction and had lower internal locus of control than males. Women also showed significantly less willingness to punish tardiness, absenteeism and poor performance. Finally, the results indicate that women have a lower need for achievement than men though the difference was nonsignificant. Since two occupational categories in the study were made up of female subjects only, these correlations between sex and the five scales may be confounded with an occupational group effect. Results from multivariate and one way analyses of variance (presented on pages 29-32) deal with this problem.

From Table 2, it can be seen that persons high on internality perceive more equity, $r = .236$ and show more job satisfaction, $r = .235$ than persons high on externality. Need for achievement had a very low but positive relationship with locus of control.

To allow further examination of the relationship among the variables, the sample was divided into occupational groups. Correlations among the variables are presented in Table 3.

Although the hypothesis that employees perceiving equity will view absenteeism, tardiness, and poor performance as serious offenses was not confirmed for the whole sample, the hypothesis has been supported for supervisors ($r = .27$, $p < .05$) and managers ($r = .359$, $p < .05$) as can be seen from Table 3 (d) and 3 (e). The relationship between the two variables for the other four groups varies from an almost zero correlation for clerks and technicians to a negative correlation for secretaries and janitors.

To discount the possibility that the correlations between equity and attitudes towards wrong doing for managers and supervisors might be due to chance fluctuation from those of the rest of the sample, the Box (1950) test as described by Winer (1971) was performed. Box's test checks the equality and symmetry of covariance matrices and yields a statistic (and corresponding degrees of freedom) with a sampling distribution approximated by the chi square distribution. Results from this test, $\chi^2(90) = 142.05$, $p < .05$, confirmed that correlations between the two variables obtained for managers and supervisors were not due to chance variation from those of the rest of the sample. That is, managers and supervisors who perceive equity feel significantly more strongly than secretaries, clerks and technicians that tardiness, absenteeism and poor performance must be penalized.

The second hypothesis that employees with high need for achievement will perceive less equity than those with low achievement need has not been supported even with the sample categorized into occupations. The nonsignificant correlations between equity and need for achievement range from a low positive for managers and technicians, near zero for secretaries and supervisors to a low negative for clerks and janitors.

Finally, the proposition that equity and job satisfaction will have a significant positive relationship has received support from all occupational groups studied. Correlations range from .40 for clerks to .49 for managers. These correlations are sufficiently low to question the notion that equity and job satisfaction are one and the same construct.

An observation of interest from Table 3 is that managers show a very low negative and nonsignificant correlation ($r = -.03$) between locus of control and job satisfaction while correlations between the two variables for the whole sample was positive and highly significant.

Table 3

Summary of Product Moment Correlations Among Variables with Sample Categorized by Occupation

Secretaries (a)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		-.08	1.0			
NACH		.09	.06	1.0		
LOCONT		.28*	-.20*	.07	1.0	
MSQ		.41*	-.07	.006	.30*	1.0

Clerks (b)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		.04	1.0			
NACH		-.19	.02	1.0		
LOCONT		.18	.13	.09	1.0	
MSQ		.40*	.13	-.02	.08	1.0

Technicians (c)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		.03	1.0			
NACH		.22	.03	1.0		
LOCONT		.16	.08	-.05	1.0	
MSQ		.42*	-.03	-.24	.15	1.0

Supervisors (d)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		.27*	1.0			
NACH		.08	-.07	1.0		
LOCONT		.31*	-.19	.43*	1.0	
MSQ		.46*	.20	-.01	.31*	1.0

Managers (e)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		.36*	1.0			
NACH		.20	.18	1.0		
LOCONT		.37*	.12	.001	1.0	
MSQ		.49*	.32*	-.04	-.03	1.0

Janitors (f)

	SEX	PEM	MEATWD	NACH	LOCONT	MSQ
SEX	1.0					
PEM		1.0				
MEATWD		.17	1.0			
NACH		-.33	.64*	1.0		
LOCONT		-.01	-.05	.17	1.0	
MSQ		.46*	.04	.06	.52*	1.0

* p < .05.

NOTE: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire.

To test for the effects of occupational group and possible interactions between sex and occupational group on the five scales, multivariate analysis of variance was performed. Results from this analysis show nonsignificant effects for sex, and sex by occupation interaction: multivariate F values for sex, and sex by occupation are $F(5, 120) = 1.41$, $p > .23$ and $F(15, 331) = 1.26$, $p > .22$ respectively. The multivariate F value for the effect of occupation was significant, $F(15, 331) = 2.69$, $p < .0007$. These results are further illustrated by univariate F-tests which are reported in Table 4.

Table 4

Summary of univariate F-tests for the effects of sex, occupation, and sex by occupation with secretaries and clerks excluded from the analysis.

<u>Source</u>	<u>Df</u>	<u>PEM</u>	<u>MEATWD</u>	<u>NACH</u>	<u>LOCONT</u>	<u>MSQ</u>
Sex	1, 124	3.5 (585.6)	1.61 (150.5)	.89 (6.3)	1.45 (7.3)	.60 (69.7)
Occupation	3, 124	4.67* (781.5)	3.12* (291.4)	2.17 (15.3)	.77 (3.7)	1.22 (141.6)
Sex X Occupation	3, 124	.90 (150.8)	1.9 (181.7)	.92 (6.5)	.35 (1.7)	1.22 (141.0)

* $p < .05$

Note: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire. Mean squares are in brackets below corresponding F's.

There are no significant differences due to sex on the five measures. This means that there are no real differences in scores on the five scales attributable to sex for technicians, supervisors, managers and janitors from this sample. It will be recalled that correlations between sex and the five scales (see Table 2) had indicated males to

have greater equity, more job satisfaction and higher internal control than females. Men also showed more willingness to punish absenteeism, tardiness and poor performance than women. In fact a look at the overall mean scores of the two sexes presented in Table 6 seem to support this view. But the fact that the MANOVA tests do not support this conclusion seems to indicate that occupational rather than sex effects account for these differences. These two apparently conflicting findings are explained by the fact that two of the six occupational groups (secretaries and clerks) were uni-sex. So what appears as sex differences might really be differences due to occupation. However, since the MANOVA analysis which disconfirmed differences due to sex did not include secretaries and clerks, it is not possible to tell from these data whether differences reflected in the correlations between sex and the five scales (see Table 2) are due to sex or occupational group effect.

Occupational Differences: The univariate F values reach significance on the PEM and MEATWD scales (see Table 4) for occupational group effect. That is, significant differences are present among occupational groups on perceived equity and attitude towards wrong doing. To further examine these occupational group differences and also to include clerks and secretaries in this examination, a one-way analysis of variance was conducted. Results from this analysis are presented in Table 5.

Results reported in Table 5 indicate that significant occupational group differences exist on three of the five scales. Group differences are present in perception of equity, attitudes towards wrong doing and on internal-external locus of control. No significant differences are observed in need for achievement and job satisfaction.

Table 5

F-tests from one-way ANOVA for the effect of occupational group
with secretaries and clerks included in the analysis

<u>Source</u>	<u>df</u>	<u>PEM</u>	<u>MEATWD</u>	<u>NACH</u>	<u>LOCONT</u>	<u>MSQ</u>
Between	5	3.51*	6.10*	1.79	3.71*	1.69
		(167.2)	(101.6)	(7.2)	(5.3)	(183.9)
Within	234					
Total	239					

*p .05.

Note: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire. Mean squares are in parenthesis below with F values.

Post hoc comparison of occupational group means (see Table 6) showed that managers perceive significantly more equity ($p < .05$) than secretaries and janitors while supervisors perceive more equity than janitors. These results are significant at $p < .05$.

Comparison of means on the MEATWD indicated managers and supervisors have significantly higher mean scores ($p < .05$) than secretaries, clerks and janitors. That is to say, managers and supervisors feel more strongly than secretaries, clerks and janitors that absenteeism, tardiness and poor performance should be punished.

Other significant differences in means were found on the internal-external locus of control scale. Here, janitors showed more internality than secretaries and clerks ($p < .05$). Differences between other occupational groups were nonsignificant.

Table 6

Mean and Standard Deviation scores of the sample categorized
by occupational group and by sex

Sex		n	PEM	MEATWD	NACH	LOCONT	MSQ
Secre-	F	72	62.6 (12.9)	60.4 (8.9)	9.2 (2.8)	4.8 (2.4)	71.9 (16.1)
tar-							
ies	F	34	63.1 (12.8)	61.7 (10.3)	8.7 (2.6)	4.5 (2.4)	69.5 (16.8)
Clerks							
Techni-	M	20	64.4 (11.7)	72.2 (8.1)	9.5 (2.7)	5.8 (2.1)	71.1 (13.8)
cians	F	22	63.3 (14.9)	73.9 (7.8)	8.8 (2.8)	5.8 (1.9)	74.7 (11.1)
	M&F	42	64.3 (13.3)	66.5 (8.9)	9.2 (2.7)	5.8 (2.0)	72.9 (12.5)
Super-							
visors	M	22	65.2 (11.9)	69.5 (9.9)	9.7 (2.4)	5.9 (2.1)	77.7 (8.4)
	F	21	64.8 (14.1)	75.3 (7.3)	9.3 (1.9)	4.9 (2.5)	72.6 (12.7)
	M&F	43	65.0 (12.8)	70.7 (9.8)	9.5 (2.1)	5.4 (2.3)	75.2 (10.9)
Manag-							
ers	M	31	71.6 (11.0)	72.5 (11.6)	10.3 (2.8)	5.9 (2.5)	77.8 (7.7)
	F	4	58.5 (13.2)	74.0 (9.0)	9.8 (1.7)	5.5 (1.9)	78.7 (7.3)
	M&F	35	71.1 (11.9)	71.3 (12.7)	10.2 (2.7)	5.9 (2.4)	77.9 (7.6)
Jani-							
tors	M	9	55.7 (14.9)	78.0 (12.5)	7.3 (3.7)	6.7 (1.9)	73.3 (6.6)
	F	5	50.8 (16.0)	85.6 (10.7)	9.4 (3.7)	6.2 (1.9)	75.0 (18.9)
	M&F	14	53.9 (14.9)	61.0 (15.1)	8.1 (3.7)	6.5 (1.9)	73.9 (11.8)
All							
Groups	M	82	66.6 (12.6)	78.8 (10.0)	9.6 (2.8)	5.9 (2.2)	75.7 (9.9)
	F	158	62.6 (13.4)	73.4 (10.8)	9.1 (2.6)	4.9 (2.4)	72.1 (15.1)

Note: Abbreviated scale names are: PEM - Perceived Equity Measure, MEATWD - Machungwa Employee Attitude Towards Wrong Doing, NACH - Need for Achievement Scale, LOCONT - Internal-External Locus of Control, and MSQ - Minnesota Satisfaction Questionnaire. SD's are in parenthesis next to the mean.

DISCUSSION

The hypothesis that employees perceiving equity on their jobs will be negatively disposed towards absenteeism, tardiness and poor performance has been supported for the two higher professional groups in the sample. That is, managers and supervisors believe that tardiness, absenteeism and poor performance must be punished. This finding is interesting but not surprising. Perhaps because managers and supervisors are not so easily subjected to punishment for some absenteeism,

tardiness and some poor performance--performance is difficult to measure, and tardiness and attendance records are hardly kept at these levels--these employees feel some type of "immunity" from punishment. Nevertheless, they advocate some punishment when the same offenses are committed by those they lead.

It is not difficult to understand why perceived equity was not related to advocacy of punishment for absenteeism, tardiness and poor performance among clerks, secretaries and technicians. Because lower level employees are more easily subjected to disciplinary action for absenteeism, tardiness, and poor performance, it seems reasonable that they would advocate pardoning rather than punishing the offenses. This reason also accounts for the lower mean scores of janitors, clerks, secretaries and technicians on the MEATWD scale compared to manager's and supervisors. However, it is difficult to explain the negative but nonsignificant relationship ($r = -.17$) between perceived equity and attitudes towards wrong doing obtained for janitors. It is important to note, too, that employee attitudes towards wrong doing correlated nearly zero ($r = .02$) with job satisfaction across the six occupational groups. Only managers in the sample show a positive significant correlation between job satisfaction and advocacy of punishment for tardiness, absenteeism and poor performance. Supervisors have a positive but nonsignificant relation of .20. All other groups have low nonsignificant correlations--close to zero for janitors, clerks, secretaries and technicians.

It would seem, therefore, that in the comparatively lower level positions of janitor, clerk, secretary and technician, neither the amount of equity nor job satisfaction appear to be determining factors in whether employees feel that worker wrong doing deserves punishment or

ought to be excused. On the basis of this finding, it can be said that organizations need to provide more than equitable conditions and job satisfaction for their employees at these levels to create the "right" worker attitudes towards tardiness, absenteeism and below par performance. At the higher positions of manager and supervisor, organizations must provide conditions that lead to perception of equity and feelings of job satisfaction since equitable conditions and job satisfaction appear to influence attitudes towards tardiness, absenteeism and poor performance. This is particularly important because it may be that subordinates soon learn their bosses' attitudes towards important issues on the job. And knowledge by subordinates that their bosses strongly advocate punishment for some offenses may act as a deterrent towards commission of such offenses.

As predicted, the relationship between perceived equity and job satisfaction is positive and significant ($r = .424$, $p < .05$) but is of so low a magnitude that equity and job satisfaction cannot be considered identical constructs. On categorizing the sample by occupation, correlations between the two constructs range from .402 for clerks to .493 for managers. Considering that the Perceived Equity Measure and the Minnesota Satisfaction questionnaire showed such high reliabilities (coefficient alphas of .89 and .90 respectively) correcting for unreliability in the two instruments only raises the correlation between the two variables to .473 over the whole sample. The failure of this study to obtain a stronger relationship between equity and job satisfaction, therefore, cannot be attributed to unreliability of the measuring devices. We must conclude that there is no empirical justification for the view held by some that equity and job satisfaction are one and the same construct.

The hypothesis that need for achievement will have a significant negative correlation with perceived equity received no support from this study. Contrary to predictions, a positive but nonsignificant relationship ($r = .10$) was observed for the two variables over the entire sample. Grouping the sample by occupation revealed near zero correlations for secretaries and supervisors. The two variables have positive but nonsignificant correlations for managers ($r = .20$) and technicians ($r = .22$), while clerks and janitors have negative but nonsignificant relationships, $-.19$ and $-.33$ respectively. It is difficult to account for these unsystematic patterns of correlations between need for achievement and perceived equity. The low internal consistency $r = .56$ obtained for the need achievement scale perhaps explains in part this strange pattern of correlations. But it seems from this sample that need for achievement does not appear to enter into considerations of equity in any systematic manner. More research utilizing a more reliable need for achievement scale is necessary to reach some definitive conclusion regarding the nature of the relationship between equity and need for achievement.

Internal locus of control was found by Andrisani and Nestel (1976) to be related to job satisfaction, occupational attainment, hourly and yearly earnings, and perceived financial progress. Results from the present study are in line with the Andrisani and Nestel findings. A significant positive relationship between job satisfaction and internality ($r = .235$, $p < .05$) was observed. Perceived equity shows a relationship of about the same magnitude with internal locus of control ($r = .24$, $p < .05$). These results suggest that persons tending to believe themselves in control of much of their destiny perceive more fairness and enjoy more satisfaction on the job than their colleagues with

external locus of control. Perhaps because the high internals perceive themselves to have some control over, and have some input into their eventual outcomes, they feel more equitable and satisfied with their jobs. On the other hand, employees who believe themselves "pushed around" and powerless to meaningfully affect their own outcomes on the job are more likely to feel inequitable and dissatisfied with their job situations.

Analysis of differences of group means show amount of perceived equity and job satisfaction is greater for the higher occupational groups of manager and supervisor compared to janitors, clerks and secretaries. Technicians tend to fall in between. Although not all differences among group means on equity and job satisfaction are significant, these results provide clear support for findings from a large body of research literature which has consistently reported higher professional groups showing more satisfaction than lower professional groups (see Herzberg, Mausner, Peterson and Capwell, 1957).

The occupational groups did not show any significant differences in need for achievement. Nevertheless, managers and supervisors had higher mean scores than the other groups with the janitors scoring the lowest. Due to the low reliability of the need for achievement scale, no definitive conclusion can be reached regarding occupational group differences in need for achievement from this study. More research is necessary to establish these differences.

One interesting result is that janitors show a significantly higher mean on internality than clerks and secretaries. Differences among other groups were nonsignificant. An explanation for this might be that janitors (at the university studied) work at night with little presence of bosses; so they work more independently and perhaps perceive themselves to have a lot of control on the job. Such a situation would

lead these employees to shifting towards more internal control over a long period--a person may shift towards internal or external control over a long period of time depending on experiences (see Andrisani and Nestel, 1976). It must be noted, however, that since the janitors consisted of both men and women while secretaries and clerks were composed of females only, this result may be confounded with a sex effect.

Sex correlated negatively with all five scales in the survey (see Table 2). This means that females had lower mean scores than males on all the questionnaires. The correlations between sex and perceived equity, employee attitudes towards wrong doing, locus of control, and job satisfaction are statistically significant. This means that women perceived less equity than men and felt that tardiness, absenteeism and poor performance were not as serious offenses as the men thought. Further, women showed less internal control and had lower job satisfactions than men. But as these results were not confirmed by multivariate analysis of variance performed on the four groups that had both men and women in them, these findings are confounded by occupational group effects. As indicated earlier, we cannot tell therefore whether the observed differences are due to sex or occupational group. However, mean scores of the two sexes (see Table 6) show men to have higher means than women on all five scales in the survey. Hence, relying solely on these mean scores and without making any reference to the statistical significance of the findings, we can state that males show more equity, greater job satisfaction and higher internal locus of control and regard tardiness, absenteeism and poor performance more seriously than women.

CONCLUSION

Two research instruments, one measuring amount of equity perceived by employees and another measuring employee attitudes towards wrong

doing in organizational work situations have been developed. Both questionnaires are short, easy and quick to administer to individuals or groups in work settings. The questionnaires are easy to score and obtained scores are easy to understand and interpret.

The Perceived Equity Measure (PEM) has high internal consistency, $r = .89$. When the sample is categorized by occupation, the instrument's reliability ranges from .86 for technicians to .90 for secretaries and janitors. The fact that PEM showed a significant positive correlation with job satisfaction is a good indication of its validity. Occupational group differences obtained among the six groups studied (more equity for higher occupational positions and less equity for the lower positions) further attests to the instrument's validity. Further empirical validity is demonstrated by the confirmation of a predicted relationship between PEM and the MEATWD for managers and supervisors even though this relationship was not found for clerks, janitors, secretaries and technicians. In addition, PEM shows good convergent and discriminant validity; it correlates positively and negatively with variables which correlate positively and negatively with job satisfaction, respectively (see Table 2).

The Machungwa Employee Attitude Towards Wrong Doing (MEATWD) has good internal consistency; ranging from .76 for technicians to .88 for managers. Over the whole sample, the scale has a reliability of .86. This instrument has good face and content validity. The fact that a predicted relationship between the MEATWD and PEM was confirmed for high level occupation employees and the observation that high level occupational groups advocate punishment for absenteeism, tardiness and poor performance more than the low level occupational groups is an encouraging sign of the MEATWD's empirical validity. However, since predicted relationships between PEM and MEATWD were not found for low level

occupational groups, further research is necessary to establish the MEATWD's validity.

Besides developing the PEM and MEATWD, the present research effort has related in one study of the constructs of equity, achievement need, locus of control and job satisfaction. In addition, a new indirect approach to linking employee tardiness, absenteeism and performance to other work related variables through measuring employee attitudes has been introduced. The sample for the study was carefully chosen to include occupational groups most common in industrial organizations and which vary widely in status, pay, responsibilities and educational backgrounds.

The research presented here is not free of limitations, however. First, all measures used in the survey are perceptual and based on questionnaire responses; this might lead to spuriously high correlations among variables. A second limitation (common to all mail surveys) is that there was some self selection process among questionnaire respondents. Of 580 questionnaires mailed including 47 hand-delivered to janitors, only 240 or about 41% were completed and returned. One can only speculate as to what motivated those who responded and those who never did. If the respondents are those perceiving some equity and enjoying some job satisfaction and the nonresponding employees are unhappy in their jobs or vice versa, then the findings of this study would be invalid. Finally, sizes of some occupational groups were too small compared to other groups in the study: there were 14 janitors in comparison to 72 secretaries in the sample.

Despite these limitations, this study is not without significance. The demonstrated relationship between perceived equity and attitudes of high level occupation employees towards withdrawal behavior and

performance should stress further the need for organizations to provide equitable work conditions to these employees. Further, our findings should put to rest the intuitive appeal enjoyed by the notion that job satisfaction and equity are identical constructs. The indirect approach (introduced here) to measuring worker performance, tardiness and absenteeism through employee attitudes appears promising. Because of measurement problems associated with performance, tardiness and absenteeism in organizations, the need for further development of this method cannot be overstated. As a first step, an attempt must be made to relate employee attitudes towards wrong doing with actual incidents of employee wrong doing. Finally, the perceived equity measure needs to be validated against behavioral measures such as actual tardiness, absenteeism, performance and other work related criteria.

APPENDIX

Please write your job title and indicate your sex in the appropriate space below.

Job title _____ /M.... F....

PERCEIVED EQUITY MEASURE

Below is a list of statements about your job. Please indicate your agreement or disagreement using the scale below.

1 Strongly agree 3 Not sure 5 Strongly disagree
2 Agree 4 Disagree

Write the number you choose on the line next to each statement. For example, if you strongly agree with a statement write 1 next to the statement.

1. Although I am more skilled at my job than others, they will probably be promoted before me.
2. Other people in this company who are as skilled as I am have jobs where they can make more decisions than I do.
3. I would get better fringe benefits if I worked for another company in a similar job.
4. I work harder than other people doing this job but get the same pay.
5. With my skills I should have a bigger say in how I am to do my job.
6. I work harder than other people doing this job but my supervisor does not give me credit for it.
7. People with my job skills get promoted faster in other companies.
8. Employees in other departments have better fringe benefits than we have in my department.
9. My pay would be higher if I worked for another company in a similar job.
10. If I worked for another company and worked this hard I would have been promoted before now.
11. Other people less skilled than I am have more say about how they do their jobs than I do.
12. My supervisor treats other people on this job better than he/she treats me even though I work as hard.
13. Considering my job skills and how hard I work, I should get a higher pay raise.
14. People at other companies who are as skilled as I am have more of a say in how to do their jobs than I have in this company.
15. Even though we have the same skills, employees in other departments get more pay.
16. On my job the treatment you get from the supervisor depends on whether he likes you or not.
17. People who are as skilled as I am are treated better than I am in this company.
18. I would have more freedom on a job like this one if I worked for another company.
19. No matter how much harder you work than other people doing the same job the company still will promote you at the same rate as everyone else.
20. Although we have the same amount of job skill, other people doing this job get paid more than I do.

PEATWD SURVEY

Below is a list of statements about tardiness, absenteeism and performance on the job. Please indicate your agreement or disagreement using the scale below.

1 Strongly agree 3 Not sure 5 Strongly disagree
2 Agree 4 Disagree

Write the number you choose on the line next to each statement. For example, if you strongly agree with a statement write 1 next to the statement.

1. Employees who occasionally come late for work should be excused.
2. Workers who are occasionally absent from work should be excused.
3. An employee who performs poorly once in a while should be excused.
4. Occasional late arriving at work should be punished.
5. Occasional absenteeism by employees should be punished.
6. Anyone who works poorly once in a while should receive a warning.
7. An employee who is only a few minutes late for work should be excused.
8. Employees who work poorly often should be fired.
9. Employees should be allowed to be absent from work for a number of days in a year.
10. If workers have good reasons for performing poorly they should be excused.
11. If a worker has good reasons for arriving late at work, he or she should be excused.
12. Anyone who is absent from work must be fired.
13. Employees who are often absent from work should be fired.
14. Poor performance at work should not be excused for any reason.
15. Workers who come to work very late many times should be fired.
16. As long as a worker has a good reason for being absent he or she should not be punished.
17. Wasting company time while at work is not a serious offense.
18. I feel that being absent once in a while is okay.
19. Employees who waste company materials while at work should not be punished.
20. As long as I have a good reason for arriving late for work, I should be excused.
21. A worker not following a supervisor's instructions should receive a warning.
22. Employees with good reasons for being absent should be excused.
23. As long as an employee has good reasons for performing poorly, he or she should be excused.
24. Employees who damage company tools while at work should be fired.

NEED PREFERENCE SURVEY

Below is a list of thirty pairs of statements about things you like or may not like, and about ways in which you may or may not feel. You are asked to place a check mark (✓) against the statement you like better or one which describes your feelings better.

Please be sure to check only one of the two statements for each pair. That is, check either A or B.

1. A I like to find out what great men have thought about various problems in which I am interested.
B I would like to accomplish something of great significance.
2. A In the long run people get the respect they deserve in this world.
B Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
3. A I like to solve puzzles and problems that other people have difficulty with.
B I like to follow instructions and to do what is expected of me.
4. A The idea that teachers are unfair to students is nonsense.
B Most students don't realize the extent to which their grades are influenced by accidental happenings.
5. A I would like to be a recognized authority in some job, profession, or field of specialization.
B I like to have my work organized and planned before beginning it.
6. A Becoming a success is a matter of hard work, luck has little or nothing to do with it.
B Getting a good job depends mainly on being in the right place at the right time.
7. A I like to be able to do things better than other people can.
B I like to tell amusing stories and jokes at parties.
8. A The average citizen can have an influence in government decisions.
B This world is run by the few people in power, and there is not much the little guy can do about it.
9. A I like to accomplish tasks that others recognize as requiring skill and effort.
B I like to be able to come and go as I want to.
10. A In my case getting what I want has little or nothing to do with luck.
B Many times we might just as well decide what to do by flipping a coin.

11. A I like to be successful in things undertaken.
B I like to form new friendships.
12. A Who gets to be the boss often depends on who was lucky enough to be in the right place first.
B Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
13. A I like to solve puzzles and problems that other people have difficulty with.
B I like to judge people by why they do something--not by what they actually do.
14. A Most people don't realize the extent to which their lives are controlled by accidental happenings.
B There really is no such thing as "luck".
15. A I like to accomplish tasks that others recognize as requiring skill and effort.
B I like my friends to encourage me when I meet with failure.
16. A In the long run the bad things that happen to us are balanced by the good ones.
B Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
17. A I would like to write a great novel or play.
B When serving on a committee, I like to be appointed or elected chairman.
18. A Many times I feel that I have little influence over the things that happen to me.
B It is impossible for me to believe that chance or luck plays an important role in my life.
19. A I would like to be a recognized authority in some job, profession, or field of specialization.
B I feel guilty whenever I have done something I know is wrong.
20. A What happens to me is my own doing.
B Sometimes I feel that I don't have enough control over the direction my life is taking.
21. A I like to do my very best in whatever I undertake.
B I like to help other people who are less fortunate than I am.
22. A I like to be able to do things better than other people can.
B I like to eat in new and strange restaurants.

23. A I like to be able to say that I have done a difficult job well.
 B I like to work hard at any job I undertake.

24. A I would like to accomplish something of great significance.
 B I like to kiss attractive persons of the opposite sex.

25. A I would like to write a great novel or play.
 B I like to attack points of view that are contrary to mine.

26. A I like to be loyal to my friends.
 B I like to do my very best in whatever I undertake.

27. A I like to observe how another individual feels in a given situation.
 B I like to be able to say that I have done a difficult job well.

28. A I like my friends to encourage me when I meet with failure.
 B I like to be successful in things undertaken.

29. A I like to be one of the leaders in the organizations and groups to which I belong.

- B I like to be able to do things better than other people can.

30. A I like to read newspaper accounts of murders and other forms of violence.

- B I would like to write a great novel or play.

- 1 Very satisfied
 2 Satisfied
 3 Neither satisfied nor dissatisfied
 4 Dissatisfied
 5 Very dissatisfied

8. The way my job provides for steady employment
 9. The chance to do things for other people
 10. The chance to tell people what to do
 11. The chance to do something that makes use of my abilities
 12. The way company policies are put into practice
 13. My pay and the amount of work I do
 14. The chances for advancement on this job
 15. The freedom to use my own judgment
 16. The chance to try my own methods of doing the job
 17. The working conditions
 18. The way my co-workers get along with each other
 19. The praise I get for doing a good job
 20. The feeling of accomplishment I get from the job

SHORT FORM OF THE MINNESOTA SATISFACTION QUESTIONNAIRE

Ask yourself, How satisfied am I with this aspect of my job?

- 1 Very satisfied
 2 Satisfied
 3 Neither satisfied nor dissatisfied
 4 Dissatisfied
 5 Very dissatisfied

Write the number you choose on the line next to each statement. For example if you are very satisfied write 1 next to the statement.

On my present job, this is how I feel about . . .

1. Being able to keep busy all the time
2. The chance to work alone on the job
3. The chance to do different things from time to time
4. The chance to be "somebody" in the community
5. The way my boss handles his men
6. The competence of my supervisor in making decisions
7. Being able to do things that don't go against my conscience

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