LOCUS OF CONTROL AS A MODERATOR OF THE RELATIONSHIP BETWEEN INFLUENCE AND PROCEDURAL JUSTICE

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Thesis submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in

Psychology

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January, 1992

Blacksburg, Virginia

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(ABSTRACT)

The present field experiment investigated the interaction between influence and locus of control in determining procedural justice and satisfaction, in a classroom situation. Perceptions of influence accounted for unique variance in procedural justice and satisfaction. The proposed moderating effects of locus of control on the influence-procedural justice and influence-satisfaction relationships were not supported. Unfortunately, the manipulation of influence was unsuccessful, and several methodological considerations are proposed for future research.

ACKNOWLEDGMENTS

I would like to sincerely thank the members of my committee for their help and guidance in this project. Neil Hauenstein, Roseanne Foti, and Joseph Franchina were all very supportive of my efforts and unselfish with their time. I am grateful to have had each one on my committee. In particular, I'd like to thank my advisor, Neil Hauenstein. In addition to giving great advise, I'll always appreciate his efforts to help me see the forest from the trees.

I very much appreciate the friendship of many people I have met in Blacksburg, including Sigrid Gustafson, Kathy Snell, Jerry Bush, Dean Stamoulis, Celeste, Scott and Afton Massie, Mary Lynn Rose, and Kim Randall. In addition to my committee, several friends provided not only support and encouragement, but time and assistance as well. I have Marta Carter, Bob Brill, Gayle Kennedy, and especially Monnie Louise Bittle to thank for making this process as painless as possible. I'd like to give special thanks to Jeff Piston, who more than anyone, understood why we were here. He expanded and tested my perspective on life.

I would like to recognize and thank my family for their support, especially my parents, Jean Frederick and Michael Flinder, and my sister, Teri Flinder. They have, each in their own way, provided examples of perseverance and courage. Last, but of course, not least, I want to thank

Dan Korwan. Dan was certainly my silent partner in this endeavor, and it's impossible to express my appreciation for his love, support, encouragement, and assistance. I feel very fortunate to have come this far with Dan at my side.

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INTRODUCTION

The concept of organizational justice, or fairness, has received extensive attention by managers and researchers alike. Anecdotal evidence (Greenberg, 1990b) illustrates the importance which managers place on appearing fair to their employees, and also illustrates the favorable work beliefs and behaviors that a sense of fairness is assumed to engender. Researchers have demonstrated that employee perceptions of fairness are significantly related to job satisfaction, turnover intentions, trust in management, evaluation of supervisors (Alexander & Ruderman, 1987), employee theft (Greenberg, 1990a), and organizational commitment (Folger & Konovsky, 1989).

Most research on organizational justice has focused on distributive justice, the perceived fairness of the distribution of resources (Greenberg, 1987), and subsequent employee perceptions of fairness. Adam's (1965) equity theory has been the main inspiration for research in the domain of distributive justice. Equity theory, as applied to organizations, focuses exclusively on an employee's perception of inputs made and outcomes received, in comparison to a relevant referent such as another employee or one's past experiences. The outcomes of organizational

pay distributions have received particular attention, most likely because monetary rewards are easily studied within the equity theory framework (Walster, Walster, & Berscheid, 1978).

Equity theory alone, however, does not provide a comprehensive view of the role of justice in organizations. Equity theory espouses a unidimensional approach which conceptualizes perceived justice only in terms of merit or contribution (Leventhal, 1980). Individuals are assumed to judge the fairness of rewards by assessing merit. However, merit is only one of several relevant standards of distributive justice. Other standards of distributive justice include equality, which prescribes that all persons should receive equal outcomes, and need, which prescribes that persons should receive outcomes in proportion to their needs.

A second problem with equity theory in particular, and distributive justice in general, is the sole emphasis on the final distribution of outcomes, while the processes or procedures of outcome distribution are ignored (Leventhal, 1980). In addition to distributional outcomes, perceptions of the rules and processes by which decisions are made may affect perceptions of justice (Leventhal, 1976, 1980; Thibaut & Walker, 1975). Procedural justice has been defined as the perceived fairness of the procedures used in

making decisions, and thus, refers to the means whereby the ends are attained (Folger & Greenberg, 1985).

Thibaut and Walker (1975) were among the first to investigate procedural justice. Their goal was to apply social psychological theory to the area of legal dispute resolution. Hence, their 1975 monograph addressed both psychologists and lawyers. Leventhal (1976, 1980) and Deutsch (1975) examined procedural justice outside of it's original judicial context and paired it conceptually with distributive justice, thus creating a more unified approach to the study of the perceptions of justice.

The importance of procedural justice becomes apparent when the implications of the perceptions of justice and injustice are examined. Barrett-Howard and Tyler (1986) found that procedural and distributive justice were equally important when subjects made decisions about resource allocations. Procedures used by leaders to allocate outcomes had an impact on subsequent evaluations of their leadership ability, independent of actual allocation levels or fairness of the outcomes (Tyler & Caine, 1981). Greenberg (1987) reported that the level of distribution outcomes had no affect on procedural justice perceptions. However, the perceived fairness of outcomes was influenced by procedural justice perceptions.

Greenberg (1986) found that distributive and procedural concerns both contributed to perceptions of fairness in performance evaluations. Several studies have also discovered that perceptions of procedural and distributive justice may not contribute equally to organizational outcome measures. Alexander and Ruderman (1987) surveyed approximately 2800 federal government employees and found that procedural justice accounted for more variance than did distributive justice in measures of job satisfaction, evaluation of supervisor, conflict/harmony, and trust in management. Folger and Konovsky (1989) reported that distributive justice accounted for more variance than did procedural justice in the area of pay satisfaction. However, procedural justice accounted for more variance than did distributive justice in the area organizational commitment.

While evidence exists that perceptions of procedural justice influence outcome measures, the factors that contribute to procedural justice need to be specified. Thibaut and Walker (1975) proposed two criteria by which individuals might judge the fairness of legal procedures: control over processes and control over decisions. Leventhal (1980) proposed that fair distribution procedures are characterized by resource distributions that are consistent across persons and over time, free from bias by

the decision maker, based on accurate information, correctable, representative of all recipients' concerns, and based on prevailing moral and ethical standards.

These two theoretical perspectives appear to be somewhat divergent, possibly because Thibaut and Walker (1975) focused on legal dispute resolutions while Leventhal (1976, 1980) focused on resource distributions. A common emphasis in both theories, however, is the inclusion of influence over decisions. Both Thibaut and Walker's process and decision control, and several factors of Leventhal's such as correctability and representativeness of all recipients concerns, imply varying degrees of influence over decisions. Influence is defined as indirect control over the decision making process by expressing one's opinion. Voice is another concept related to influence that has been examined in the procedural justice literature. Voice refers to the opportunity for expression of opinions in decision making situations and is analogous to Thibaut and Walker's process control. The concept of influence not only includes voice, because of the common emphasis on opinion expression, but also includes indirect control over a decision via the decision maker. Influence does not include decision control because the individual does not make the decision.

Much research in organizational justice has focused on the effects of voice on procedural justice perceptions.

However, Earley (1984, cited in Lind & Tyler, 1988) has demonstrated that subjects may have an illusion of influence in voice manipulations. This finding suggests that perceptions of influence may affect the results of similar studies investigating voice effects, and illustrates the difficulty of identifying the constructs responsible for research findings. It should be noted that studies examining voice opportunities may be confounded by perceptions of influence.

Several studies have reported that voice increases ratings of perceived procedural justice (e.g. Kanfer, Sawyer, Earley, & Lind, 1987; Tyler, Rasinski, & Spodick 1985). Voice has also been shown to be positively related to satisfaction measures (e.g. Jenkins & Lawler, 1981). The results from studies investigating voice, however, have not all found positive relationships between voice and dependent variables. Folger (1977) found that subjects were more dissatisfied with payments when they had the opportunity for voice than when they did not. Locke and Schweiger (1979) reviewed 46 studies of participative decision making and reported conflicting results when the dependent variable was productivity and only moderate results when the dependent variable was satisfaction. These results reveal that dependent variables other than procedural justice are not

always strongly and positively related to opportunities for opinion expression.

One possible explanation for these conflicting results is that one or more individual difference variables may moderate the relationships. Locke & Schweiger (1979) note that some individuals may appreciate the opportunity to influence decisions, while others may not. One individual difference variable of particular interest is locus of control (Rotter, 1966). Locus of control measures the degree to which individuals interpret reinforcement as contingent upon their own actions (internal locus of control) or contingent upon outside forces (external locus of control). Individuals with predominantly internal locus of control (internals) are more likely than those with predominantly external locus of control (externals) to choose jobs that allow them to use their skills and exercise influence on the job (Gable, Thompson, & Glanstein, 1976). Runyon (1973) reported that internals expressed greater satisfaction with supervisors who had participatory styles than did externals. These studies suggest that internals may use the degree of perceived influence to gauge the satisfaction and justice in the work place.

Sweeney et al. (1991) tested the hypothesis that internals who perceive a large degree of influence in the work place would rate procedural justice higher than would

externals. Sweeney et al. (1991) surveyed employees in a Midwest manufacturing firm. Employees completed self-report scales of the following variables: perceived influence, locus of control, and procedural justice. Sweeney et al. (1991) reported that perceived influence led to greater perceptions of procedural justice for internals, than for externals.

Several methodological issues, however, plagued their study. The issues include the confounding of job level and locus of control, the measurement of perceived influence, the operationalization of locus of control, and the use and timing of self-report measures.

The first issue in the Sweeney, et al. (1991) study concerns the employee questionnaire sample. The job levels of the sample were not specified, indicating that employees in more than one job level may have been requested to participate. More importantly, job level was apparently not controlled in the analysis. Internals are more likely to choose jobs that allow them to use their skills and exercise personal influence (Gable et. al., 1976) and to attain higher job levels (O'Brien, 1984). Thus, internals in this sample may hold higher level jobs than externals. If so, the moderating effects of locus of control on the relationship between perceived influence and procedural justice are confounded by job level.

Secondly, the perceived influence measure asked how much input employees felt they had in various work situations, on a seven point scale. Although measuring perceptions of influence accounts for possible individual differences in the way actual influence is interpreted, the actual level of influence is not accounted for. Thus, whether or not influence is responsible for the obtained results cannot be determined. The lack of referents in the measurement instrument may have resulted in an inconsistent report of perceived influence, especially across job levels. Individuals were free to use their own referents when completing the scale, so that individuals with the same level of perceived influence may have responded differently and individuals with different levels of perceived influence may have responded similarly. For example, middle level managers may report a great deal of influence if their referent choice is a subordinate. If their referent choice is a supervisor, however, very little influence may be reported. In addition, the phrase "how much say do you have" may have been interpreted inconsistently because "say" could have been construed as either direct decision control or indirect influence over a decision maker.

The third problem concerns the operationalization of internal and external locus of control. Four work-related items from Rotter (1966) were used to measure locus of

control. The use of situation specific items should offer more precise prediction over a general measure of locus of control such as Rotter's 1966 measure (Rotter, 1975). The mean locus of control score was 3.65 on a 4 point scale, indicating subjects on average reported a high level of internal locus of control. This mean score indicates a possible problem with the accuracy of the measure or lack of discrimination among respondents, possibly due to the social desirability of the work related items. If, however, the scale was accurate, the high mean on the locus of control scale may be indicative of more internals than externals either in the organization, or more likely, of more internal than external respondents.

Unfortunately, the method of operationalizing the internal/external cutoff was not specified. If a split half cutoff was made at the mean (or median split), this procedure may have been inappropriate due to the probability of a non-normal distribution of respondents, as a function of the disproportionate number of internals in the sample. Thus the cutoff may have resulted in many internals inappropriately being grouped in the external category.

A final concern with the Sweeney et al. (1991) study is the use and timing of self-report measures. Self-report questionnaires were used for all data collection. This procedure may have resulted in irrelevant systematic

variance among test scores due to responses partially elicited by the form of the test (Campbell & Fiske, 1959), commonly called common or shared method variance. Common method variance may have artificially inflated correlations among measures due to a similar response bias across measures. In addition, because all measures were mailed to respondents simultaneously, transient mood states may have contributed consistent but artifactual bias across the measures (Podsakoff & Organ, 1986).

In summary, perceptions of procedural justice may be affected by perceived influence, and locus of control may moderate this relationship (Sweeney et al., 1991). Unfortunately, little organizational justice research has investigated individual difference variables. Sweeney et al. (1991) is the only study to examine the moderating effects of locus of control on the perceived influence and procedural justice relationship, and their methodology is seriously deficient.

The purpose of this thesis is to provide further support for the moderating effects of locus of control on the relationship between influence and procedural justice. In addition, this thesis will examine influence and perceived influence to determine if there is a differential impact on the hypothesized relationships. This should clarify previous ambiguous findings regarding influence, and

highlight the need to consider individual difference variables in the field of procedural justice.

LITERATURE REVIEW

Justice Overview

Concerns regarding justice or fairness in organizational contexts have traditionally been viewed from an outcome orientation framework. From this perspective, individuals are expected to evaluate organizational reward allocations and related decision making activities on the basis of the fairness of outcomes. This outcome-oriented justice perspective is traditionally called distributive justice. The most popular distributive justice theory is equity theory (Adams, 1965), which focuses on an individual's perceptions of outcomes received in relation to the inputs of the individual. Individuals are hypothesized to compare their ratio of inputs and outcomes to a relevant referent, such as co-worker or their own past experience.

Distributive standards that have attracted less empirical interest than equity theory are equality and need. Equality prescribes that persons should receive equal outcomes. Need prescribes that persons should receive outcomes in proportion to their needs.

Research in distributive justice, and particularly equity theory, has enjoyed a long history of successful research. It has become clear recently, however, that perceptions of justice or fairness are not limited to the domain of outcomes or rewards (Folger & Greenberg, 1985).

Individuals are sensitive to fairness issues which are independent of the outcomes they receive. Procedural justice is now being studied with increasing frequency, and complements rather than replaces the outcome orientation of distributive justice.

Procedural Justice

In the early 1970's, social psychologists who had been studying distributive justice began to direct their attention to procedural justice. Procedural justice refers to the perceived fairness of procedures used in decision making. Two different conceptual perspectives of procedural justice were developed by Thibaut and Walker (1975), and Leventhal (1976, 1980). Thibaut and Walker (1975) examined the type of control allowed to disputants and an intervening third party in dispute resolution procedures. Control of both the disputants and the third party can be characterized as "process control" and "decision control." Process control refers to control over the development and selection of information subsequently used to resolve a dispute. Decision control refers to the degree to which a participant controls the outcome of the dispute.

Five dispute resolution procedures vary the degree and type of control afforded the intervening third party and the disputants. These procedures are:

1. autocratic procedures - third party has control over processes and decisions;
2. arbitration procedures - third party has control over decisions, but not processes;
3. mediation procedures - third party has control over processes, but not decisions;
4. moot procedures - third party shares control over processes and decisions with disputants; and
5. bargaining procedures - third party has no control over processes or decisions.

The second approach to procedural justice, advanced by Leventhal (1976, 1980), emphasized reward allocation. Leventhal proposed that a number of procedural elements are examined by individuals to evaluate fairness. These procedural elements are:

1. selection of agents - procedures for determining who makes allocation decisions;
2. setting ground rules - procedures for determining and evaluating potential rewards, and the behaviors necessary to attain them;
3. gathering information - procedures for obtaining and using information about reward recipients;
4. decision structure - procedures for defining the structure of the allocation decision process

(e.g., the successive ordering of individual and group decision);

5. appeals - procedures for seeking redress against unsatisfactory decisions;
6. safeguards - procedures for ensuring that the decision-making body does not abuse it's power; and
7. change mechanisms - procedures enabling allocation practices to be altered.

An individual may evaluate any of these procedural elements using six procedural rules. Leventhal assumed that the weighting of the rules may vary according to the situation. However, the rules for weighting were not specified. The procedural rules are:

1. consistency rule - allocation procedures should be consistent across persons and over time;
2. bias suppression rule - personal self-interest in the allocation process should be prevented;
3. accuracy rule - decisions must be based on accurate information;
4. correctability rule - opportunities must exist to enable decisions to be modified;
5. representativeness rule - the allocation process must represent the concerns of all recipients; and

6. ethicality rule - allocations must be based on prevailing moral and ethical standards.

Thibaut and Walker (1975) proposed that the relationship between procedural and distributive justice could be independent, although procedural justice could lead to distributive justice. Leventhal (1976) argued that procedural justice was necessary to establish distributive justice, but in most circumstances distributive outcomes are seen as more important to perceptions of fairness than are the procedures which determine them. Morgan and Sawyer (1979) proposed that in most social situations individuals have difficulty evaluating the value of social exchanges and social status characteristics. Consequently, individuals use procedural rather than distributive cues to determine whether justice has occurred. According to this view, if a fair procedure is followed, it is expected that the outcome will be viewed as fair also.

Empirical Evidence for Procedural Justice. Greenberg (1986) surveyed middle managers to investigate the determinants of performance evaluation fairness. Two factors were revealed, a procedural factor and a distributive factor. The procedural determinants included soliciting input prior to evaluation and using it, two-way communication during the interview, ability to challenge/rebut the evaluation, rater familiarity with the

ratee's work, and consistent application of standards. The distributive determinants included receipt of ratings based on performance, and salary and promotions based on performance ratings. Several of the procedural determinants closely correspond to Leventhal's procedural rules, and Thibaut and Walker's process control.

Based on questionnaire data, Sheppard & Lewicki (1987) identified 16 rules which employees use to evaluate managerial fairness. The rules included all of Leventhal's procedural rules. The additional rules included one distributive fairness rule and nine previously unidentified rules which may have been specific to the managerial fairness situation.

In a recent review, Folger and Bies (1989) reported seven key managerial responsibilities that employees perceive as central to procedural justice. The first is giving adequate consideration to employees' viewpoints, a responsibility which is closely related to Thibaut and Walker's process control. The second is suppressing biases which is directly related to Leventhal's bias suppression rule. The third is applying decision-making criteria consistently across employees, which is directly related to Leventhal's consistency rule. The fourth is being truthful in communication, which is relevant to Leventhal's ethicality rule. The last three are providing timely

feedback to employees after the decision, providing justification for the decision, and treating employees with courtesy and civility.

Tyler (1988) investigated whether procedural justice affected citizen reactions to contacts with the police and court systems, and how citizens defined fairness. Results showed that procedural justice had a major influence on citizen satisfaction. Seven variables influenced perceptions of procedural fairness regarding legal authorities. These variables are: degree to which authorities were motivated to be fair, judgements of their honesty, degree to which authorities followed ethical principles of conduct, extent to which opportunities for representation were provided, quality of decisions made, opportunities for error correction, and whether authorities behaved in a biased fashion. Tyler's results suggested that citizens judge the fairness of procedures according to different criteria in different situations. No evidence indicated that individual differences, such as gender, age, race, education, income or degree of liberalism, produced differences in the use of criteria.

Justice/Outcomes Relationships. Several studies have examined the effect of distributional and procedural justice on various outcome measures. Greenberg (1986) presented evidence that both procedural and distributive justice

concerns contributed to managers' perceptions of fairness regarding performance evaluations. Unfortunately, it was not possible to tell from this analysis if the relative impact differs for distributive and procedural justice.

Barrett-Howard and Tyler (1986) used a vignette paradigm in which subjects were asked to indicate the importance of Leventhal's six rules of procedural justice, distributive justice, and six nonfairness characteristics in making allocation decisions. Results showed that procedural and distributive justice were equally important criteria in allocation decisions, and were more important than nonfairness criteria.

Alexander and Ruderman (1987) factor analyzed survey data from government employees and determined that procedural and distributive justice had different relationships with five outcome variables. Procedural justice accounted for more variance in job satisfaction, evaluation of supervisor, conflict/harmony, and trust in management. Distributive justice accounted for more variance in turnover intention.

Using employee questionnaire data, Konovsky, Folger, and Cropanzano (1987) found that procedural justice accounted for more variance in organizational commitment, whereas distributive justice accounted for more variance in satisfaction with pay. In a survey of employees on pay

raise decisions, Folger and Konovsky (1989) found that distributive justice accounted for more variance in pay satisfaction than did procedural justice. Procedural justice accounted for more unique variance in the variables of trust in supervisor and organizational commitment.

Greenberg (1987) found that fairer procedures lead to perceptions of fairer monetary outcomes, but only when the outcomes were low. Medium and high monetary outcomes were perceived to be fair regardless of the fairness of the procedures used to obtain the outcomes. The level of monetary outcomes had no effect on the perceived fairness of the procedures. This suggests that procedural justice may be a necessary precondition for distributive justice when outcomes are low.

Using survey data, Tyler and Folger (1980) discovered that during contact with police officers, citizens' perceptions of overall fairness depended more on the procedures used by the police officers than on the outcome of the police contact. Tyler and Caine (1981) replicated this finding in the area of leadership endorsement. In the contexts of students' evaluations of teachers and citizens' evaluations of political leaders, fairness of procedures accounted for more variance in ratings of leadership evaluations than the actual outcomes received, satisfaction with outcomes or perceived fairness of outcomes.

Walker, LaTour, Lind and Thibaut (1974) found that fairer trial procedures resulted in greater perceptions of justice and satisfaction for the procedure and the verdict. Lind, Kurtz, Musante, Walker, and Thibaut (1980) conducted a similar trial simulation and obtained comparable results. They also reported that perceptions of procedural justice were not influenced by the outcome of the verdict.

Influence as a Component of Procedural Justice

Influence over decisions or decision makers has been proposed as a strong determinant of perceptions of procedural justice. Leventhal (1980) and Thibaut and Walker (1975) included some form of influence as a component of procedural justice. Thibaut and Walker's (1975) process control emphasizes influence. Several of Leventhal's (1980) procedural justice rules imply varying degrees of influence in decisions such as the correctability and representative rules. Folger (1977) introduced the term voice, which is similar to Thibaut and Walker's (1975) concept of process control. Voice refers to the opportunity to participate in a decision making process by expressing one's opinion.

It should be noted that there is some redundancy in terminology, and at times a lack of precision in operationally defining the above concepts. Control over decisions is sometimes operationalized to include voice or process control. The distinction between voice or process

control, and decision control is sometimes blurred because actual and perceived influence over decisions may not be controlled for or assessed. Although opportunities for voice in experimental studies are frequently not intended to include decision control, individuals may perceive influence (Earley, 1984, cited in Lind & Tyler, 1988). Indeed, when individuals believe their views are not being considered, the justice-enhancing effects of voice can be negated (Tyler, 1987). The perceptions of voice consideration may be related to perceptions of influence. Studies purporting to study the effects of voice may be confounding voice with perceived or actual influence. In field settings the problem may be exacerbated because actual influence may have taken place (e.g. Sweeney et al., 1991).

Empirical Evidence Relating Influence and Procedural Justice. Thibaut and Walker (1975) performed much of the early research on the relationship between procedural justice and influence, and their theoretical and empirical work later inspired work by others. Subsequent research expanded to organizational settings and experimental paradigms.

Research has shown that courtroom situations that give process control to disputants invoke more satisfaction with the procedures, and the procedures are seen as being fairer, than situations in which no process control is allowed

(Walker, LaTour, Lind, & Thibaut, 1974; Lind, Kurtz, Musante, Walker, & Thibaut, 1980). In these situations, disputants prefer adversarial procedures, which gives the disputant more control over evidence presented, to inquisitorial procedures. This preference for adversarial procedures can not be explained by a cultural bias due to the Americans' familiarity with adversarial procedures. Cross-cultural evidence from countries using the inquisitorial courtroom system has produced similar results (Lind, Erickson, Friedland, & Dickensberger, 1978; cited in Lind et al., 1980).

Tyler, Rasinski and Spodick (1985) explored the distinction between process and decision control in the area of leadership endorsement. The results from two surveys and one experiment revealed that the opportunity to express opinions led to increased judgments of procedural justice, independent of decision control. These findings supported the value expressive perspective of voice over the rational perspective. The value expressive perspective suggests that the opportunity to express opinions may have value in itself, independent of its influence on decisions. The rational perspective suggests that the control over decisions, and subsequently outcomes, is the goal of opinion expression.

Lind, Lissak, and Conlon (1983) reported that greater process control enhanced perceptions of procedural justice in nonbinding dispute resolution procedures. The importance of process control in studies of dispute resolution procedures has also been demonstrated in organizational settings. Lind et al. (1983) found that procedures that gave disputants greater process control were perceived as fairer than procedures giving disputants less process control. Similarly, Musante, Gilbert, and Thibaut (1983) found that the ability to choose a decision making rule in a hearing resulted in greater satisfaction with outcomes and procedures, than having no choice regarding decision making rules.

Greenberg (1986) found that several of the determinants of performance evaluation fairness, which were identified as components of procedural justice, were closely related to the concept of influence. These determinants were soliciting input prior to evaluation and using it, and two-way communication during the interview. Dipboye and de Pontbriand (1981) found that self-report ratings of the opportunity to express opinions in a performance appraisal interview was positively related to opinions of the appraisal and appraisal system, after the perceived favorability of the appraisal was controlled for. Jenkins and Lawler (1981) report that employee participation in pay

plan development at a small manufacturing firm increased employee job satisfaction, pay satisfaction, and trust in management.

Kanfer, Sawyer, Earley and Lind (1987) manipulated influential opinion expression by asking subjects to write arguments on why they should receive a prize. In the high influential opinion condition, these written arguments were presented to the decision maker. In the low influential opinion condition, the arguments were only collected after the experiment was concluded. Perceptions of procedural and distributive justice were enhanced in the high but not the low influential opinion condition, independent of the outcome of the evaluation. The high influential opinion condition was also positively related to perceptions of supervisor supportiveness.

In the area of reward distribution, Folger (1977) studied the affects of voice on procedural justice, distributive justice, and satisfaction. In the first manipulation, male subjects were given an inequitable and constant amount of pay over 10 work periods. Subjects given the opportunity to express their dissatisfaction were significantly more satisfied with the payment outcome than were subjects not given the opportunity to express their opinion. A situation in which an outcome produced by a fair procedure is perceived as fairer than the same outcome

produced by a less fair procedure, is referred to as a "fair process effect" (e.g., Greenberg & Folger, 1983).

In Folger's (1977) second experimental manipulation, subject payments were initially very low and subsequently improved over 10 work trials, yet the total remained inequitable compared to a co-worker. Subjects in the voice condition reported lower perceptions of distributive justice compared with subjects in the mute condition. This has been called the "frustration effect." It should be noted, however, that although subjects in the voice condition rated the fairness of the outcomes as lower, they rated the fairness of the procedures as higher than subjects in the mute condition.

While it is clear that the frustration effect occasionally occurs, it is a very rare phenomenon (Lind & Tyler, 1988). Lind & Tyler (1988) propose that the "frustration effect" may occur when the characteristics of the procedure which contribute to perceived fairness are relatively weak and outcomes are low. Individuals may at this time reevaluate the procedure for possible corruption in the decision making process and in the motives of the decision maker. If it appears that the decision maker is manipulating the procedures to mask personal gain, a frustration effect is more likely. Similarly, Cohen (1985) states that the frustration effect may be the result of

employee awareness of a basic conflict of interest with employers. Because of this awareness, limited participation may be interpreted as a strategic device to induce loyalty and commitment.

Locus of Control

Locus of control is a personality variable that is proposed to moderate the relationship between perceived influence and procedural justice in the current study. Locus of control concerns the degree to which persons differ in their generalized expectancies for internal versus external control of reinforcement (Rotter, 1966). Locus of control signifies the degree to which individuals interpret reinforcement as contingent upon their own actions (internal locus of control) or contingent upon outside forces (external locus of control).

Rotter (1966) provides a social learning theory explanation for locus of control. Individuals are proposed to develop generalized expectancies depending on their reinforcement histories. Rotter provides a description of this process as follows:

> As the infant develops and acquires more experience he differentiates events which are causally related to preceding events and those which are not. It follows as a general hypothesis that when the reinforcement is seen as not contingent upon the subject's own behavior that its occurrence will not increase an expectancy as much as when it is seen as contingent. Conversely, its nonoccurrence will not reduce an expectancy so much as when it is seen as contingent. It seems likely that, depending upon the

> individual's history of reinforcement, individuals would differ in the degree to which they attributed reinforcement to their own actions (1966, p. 2).

Internals are more likely to perceive events as due to their own actions than are externals (Rotter, 1966; Spector, 1982). Procedural justice perceptions are expected to increase as influence increases. Consequently, internals are likely to perceive more influence and subsequently greater perceptions of procedural justice.

Several researchers report that internals are more likely than are externals to select situations which enable them to exercise influence, than situations in which no influence is available. Gable, Thompson, and Glanstein (1976) reported that internals are more likely than externals to choose jobs that allow them to use their skills and exercise influence while performing a job. A review by O'Brien (1984) suggests that internals attain higher career levels than do externals.

Indirect evidence supports the prediction that locus of control moderates the relationship between influence and procedural justice. Internals expressed greater satisfaction than did externals with supervisors who had participatory management styles (Runyon, 1973). Driscoll (1978) found that employees' participation in decision making was positively associated with overall satisfaction with the organization. However, greater congruence between desired participation and perceived participation led to

greater satisfaction with both the organization and participation in decision making.

SUMMARY AND HYPOTHESES

This study will assess the relationships between influence, perceived influence, procedural justice, locus of control, satisfaction with class, the instructor, and grade(s), and distributive justice. The majority of studies examining influence and procedural justice have reported a positive relationship (e.g. Lind et al., 1980; Walker et al., 1974). This study also makes the same prediction.

The personality variable, locus of control, has been found to moderate the relationship between perceived influence and procedural justice. Perceived influence leads to greater perceptions of procedural justice for internals than for externals (Sweeney, et al., 1991). This study also makes the same prediction for influence and perceived influence.

Hypothesis 1a: Influence/perceived influence will be positively related to procedural justice.

Hypothesis 1b: Locus of control will moderate the relationship between influence/perceived influence and procedural justice. The correlation between influence/ perceived influence and procedural justice will be stronger for internals than for externals.

Several researchers have noted that the effects of influence on satisfaction have frequently been positive, though inconsistent (Folger, 1977; Locke & Schweiger, 1979). Locus of control may moderate the relationship between influence and the outcome variable of satisfaction with class, the instructor, and grade(s).

Hypothesis 2a: Influence/perceived influence will be positively related to satisfaction.

Hypothesis 2b: Locus of control will moderate the relationship between influence/perceived influence and satisfaction. The correlation between influence/perceived influence and satisfaction will be stronger for internals than for externals.

Broad measures of locus of control such as Rotter's (1966) I-E scale allow prediction in a variety of different situations, however, at a low level of specificity (Rotter, 1975). Consequently, a specific locus of control measure, the Intellectual Achievement Responsibility (IAR) Questionnaire, was utilized to provide more precise prediction in the specific situation of academic achievement.

Hypothesis 3: The moderating effect of locus of control outlined in hypotheses 1 and 2 will be stronger when the IAR questionnaire is used, in comparison to the I-E scale.

Measures of fairness generally have been shown to relate to organizational outcome variables. However, procedural justice has made substantially larger contributions than distributive justice to the variance of job satisfaction and supervisor evaluation (Alexander & Ruderman, 1987). Folger and Greenberg (1985) revealed that perceptions of performance evaluations were more strongly related to procedures rather than to actual outcomes or to the perceived fairness of evaluation outcomes. In the class room situation, the same relationship may exist for the

variable of satisfaction with class, the instructor, and grade(s).

Hypothesis 4: Procedural justice will account for more variance in satisfaction than will distributive justice.

Greenberg (1987) examined the relationship between procedural and distributive justice. Greenberg found that procedural justice only accounted for variance in distributive justice if monetary outcomes were low. In the classroom situation, grades are a relevant measure of outcomes. This study predicts these relationships concerning distributive and procedural justice in a classroom situation, using grades as outcomes.

Hypothesis 5a: Procedural justice will be positively related to distributive justice.

Hypothesis 5b: Exam grades received will moderate the relationship between procedural justice and distributive justice. The correlation between procedural justice and distributive justice will be stronger when the outcome of a grade is low, rather than high.

METHOD

Subjects

The subjects were 97 undergraduate students from Virginia Polytechnic Institute and State University. Students in 3 psychology courses were asked to participate during class time. The classes include two social psychology classes and one industrial/organizational psychology class.

Procedure

The experimenter identified relevant areas of student influence. A pilot questionnaire was developed to assess the level of influence which students perceived in scenarios which reflected influence and the lack of influence in these areas. See Appendix A. The questionnaire was administered to an additional undergraduate psychology class and 43 pilot subject responses were obtained. Mean responses from the questionnaire were used to develop three levels of student influence.

Level of student influence was manipulated from high to low in the three separate classes. During the third week of class the experimenter informed the students that the purpose of the study was to investigate how personality characteristics influence student classroom grade performance. Participation was explained to be voluntary. Students were instructed to read and sign an informed

consent form outlining the time required for data collection and confidentiality of responses if they agreed to participate. By signing the consent form, each student gave permission for their future grades in this course to be released twice. All expect one student in the low influence class agreed to participate.

Students were then asked to complete questionnaires in class measuring variables in the following order: locus of control (Appendices B, C), demographic variables (Appendix D), negative affectivity (Appendix E), and social desirability (Appendix F). Responses were recorded on opscans to reduce human error.

During the class period following feedback from the second exam, students were reminded of the study and asked to complete four scales in class. This allowed sufficient time for students to receive performance feedback for two exams prior to the second data collection. Scales for the second data collection were administered in the following order: perceived influence (Appendix G), procedural justice (Appendix H), distributive justice (Appendix I), and satisfaction (Appendix J). Student responses were again recorded on opscans. Average grades for each student from two exams were obtained from class instructors.

Independent Variables

Influence. Influence was manipulated by varying the amount of student influence over decisions in each class, using data from the pilot questionnaire. Means and standard deviations were roughly equivalent across all questionnaire items. Consequently, varying numbers of influence areas were assigned to the three classes. The low influence class was assigned zero areas of student influence. The medium influence class was assigned three influence areas: format/type of questions on exams, instructor office hours, subject content of lectures. The high influence class was assigned six influence areas: format/type of questions on exams, instructor office hours, subject content of lectures, options to not take an exam or final, number of exams, options for extra credit. Instructors in the medium and high influence classes administered a questionnaire to students during class. The questionnaire polled students regarding their preferences in the areas of influence. Results regarding student preferences were subsequently presented in class and majority student opinion dictated outcomes of the influence areas.

Perceived Influence. A modified version of Vroom's (1960) Psychological Participation (PP) scale was used to measure perceived influence. See Appendix G. Vroom's measure contains 4 items, and responses are made on a five point scale. Vroom's sample obtained an inter-item

correlation of only .05. However, a study using a slightly revised versions of this scale obtained coefficient alphas of .77 and .76 (James, Gent, Hater, & Coray, 1979). The test-retest reliability over seven months for 77 respondents remaining in the same job was .63 (Vroom, 1960).

White & Ruh (1975; also Ruh, White & Wood, 1975) also used a 5 item modified version of Vroom's scale and obtained an internal consistency estimate of .81. In addition to the four items from Vroom's original scale, the additional item used by White & Ruh (1975; also Ruh, White & Wood, 1975) will also be included in this measure. All items were designed to measure participation in work settings, and consequently were modified to make them appropriate for the classroom situation ("immediate superior" changed to "instructor," "job" changed to "class," etc.).

Moderator Variables

Locus of Control, general. Rotter's (1966) Internal-External Locus of Control (I-E) Scale was used to measure generalized locus of control expectancies. See Appendix B. The I-E scale consists of 29 forced-choice items, 6 of which are filler items. Internal consistencies range from .65 to .76, and test-retest reliabilities range from .49 to .83 (Rotter, 1966).

Locus of Control, achievement situations. A modified version of Crandall, Katkovsky, and Crandall's (1965)

Intellectual Achievement Responsibility (IAR) Questionnaire was used to measure locus of control specific to intellectual-academic achievement situations. See Appendix C. The questionnaire was developed for students in elementary and secondary school. However, it had previously been used successfully with a college student population (Ireland-Galman & Michael, 1983). The original scale contains 34 forced choice items. The reported internal consistency of the full scale is .60, and test-retest reliabilities range from .65 to .69. Items were modified to reflect undergraduate situations (i.e. "teacher" changed to "instructor," "school" changed to "college," etc.), but the original concept of the items was unchanged. Because the content of 2 items was inappropriate for college student populations, they were omitted.

Mid-semester Grades. Average mid-semester grades from two exams were obtained from course instructors participating in the study. Both standardized and unstandardized grades were analyzed. Standardizing grades within each class makes grades among the three classes comparable.

Control Variables

Negative Affectivity. Negative affectivity reflects an individuals tendency to respond negatively regardless of the situation. Watson, Clark, and Tellegen's (1988) 10 item

negative affectivity (NA) subscale was included because negative affectivity may correlate highly with measures of satisfaction (Watson, Pennebaker, & Folger, 1987), possibly contaminating the relationships between predictors and satisfaction measures. See Appendix E. Watson et al. (1988) report the obtained coefficient alpha to be .83 and test-retest reliability to be .71.

Social Desirability. Social desirability denotes the extent to which an individual is predisposed to portray themselves in a socially desirable manner. Although the I-E scale was intended to correlate only weakly with social desirability, the relation appears to be equivocal (Spector, 1982). Additionally, Rotter (1975) states that forced choice locus of control measures may change in their relationship to social desirability under different testing conditions. Consequently, Crowne and Marlowe's (1964) Social Desirability (SD) 33 item scale was utilized to assess possible confounding with locus of control. See Appendix F.

Dependent Variables

Procedural Justice. A modified version of Folger and Konovsky's (1989) Procedural Justice (PJ) Scale was used to measure perceptions of procedural justice. See Appendix H. The original measure contains 26 items rated on a nine point scale. The items were factor analyzed, and four factors

were retained; feedback, planning, recourse and observation. One unnamed subscale was eliminated due to low reliability and a marginal eigenvalue. The Cronbach's alpha reliability estimates ranged from .85 to .89 for three subscales (the observation subscale contained only one item).

The items were developed for use in the work place and consequently were modified to make them appropriate for the classroom situation. For example, "supervisor" was changed to "instructor," and "pay raise" changed to "test grade." Because the content of 4 items was inappropriate for college student populations, they were omitted. Because the items were developed and factor analyzed in a situation different from the present study, and it was necessary to omit 4 items, the factor loadings may not be identical in the present study. Consequently, all items were used to produce an overall rating of procedural justice.

Distributive Justice. Distributive justice will be measured with three items scored on a nine point scale. See Appendix I. The items were a modified version of those used by Folger and Konovsky (1989, also Konovsky et al., 1987) to measure the perceived fairness of pay raise decisions, adjusted to measure the perceived fairness of class grades. The coefficient alpha reliability estimate for first two of the three items is .86.

Satisfaction with Outcomes. Satisfaction with classroom outcome variables was measured using modified questions from Alexander and Ruderman (1987) and Tyler and Caine (1981). See Appendix J. Alexander and Ruderman utilized two questions to assess job satisfaction: "Indicate the extent to which you agree with the following statements: All in all, I am satisfied with my job; and, in general, I don't like my job." The obtained coefficient alpha was .72. Tyler and Caine asked students to give an "overall quality rating" of a teacher in an experimental study. Each of these three questions was modified to measure satisfaction with the class, grades, and the instructor, resulting in a total of 9 items.

Analysis

Hypotheses 1, 2, 3, and 5 will be tested using moderated regression. Hypothesis 4 will be tested using multiple regression. Hypotheses 1 (a, b), 2 (a, b) and 3 will be tested by entering the following variables in order: influence, locus of control, influence-locus of control interaction. Hypothesis 5 (a, b) will be tested by entering the following variables in order: procedural justice, grades received, procedural justice-grades received interaction. Hypothesis 4 will be tested by entering the following variables in order, and reverse order: procedural justice, distributive justice.

RESULTS

Descriptive Statistics

Table 1 shows the means, standard deviations, coefficient alpha reliabilities, and intercorrelations among all measures. Table 2 shows the percentage of total for demographic statistics and the mean student grades for each class.

Previous normative data for Rotter's I-E scale are comparable to the scores obtained in the present study. Cellini and Kantorowski (1982) report normative data for undergraduates. The mean I-E score for male students in the present study (9.38) corresponds approximately to the 38th percentile of the normative data, while the mean I-E score for female students (11.39) corresponds approximately to the 46th percentile. The standard deviations of the I-E scale for both males (3.67) and females (4.05) in the present study are similar to those reported by Cellini and Kantorowski (1982) for males and females (4.02 and 3.71, respectively).

One-way ANOVAs of the three classes indicate that there were significant differences based on age ($F(2,93) = 5.76$, $p < .01$), academic year ($F(2,92) = 7.08$, $p < .01$), and unstandardized grades ($F(2,88) = 37.20$, $p < .01$). Multiple comparison tests based on Tukey's Honestly Significant Difference procedure revealed that the medium influence

class was significantly higher than the low and high influence class based on the variables of age and academic year. The high influence class was significantly lower than the low and medium influence groups based on the variable of class mean grade. The correlation between the first and second test grades for the three classes was .92.

ANOVA results showed that there were also significant differences between classes based on procedural justice ($F(2,84) = 7.19$, $p < .01$), distributive justice ($F(2,92) = 18.95$, $p < .01$), and satisfaction ($F(2,84) = 17.58$, $p < .01$). There were no significant differences among groups based on gender ($F(2,93) = .00$, $p > .10$), the I-E scale ($F(2,89) = .35$, $p > .10$), the IAR scale ($F(2,91) = .14$, $p > .10$), negative affectivity ($F(2,90) = .28$, $p > .10$), or social desirability ($F(2,86) = .63$, $p > .10$). See Table 3 for means and standard deviations.

If the self report measure of perceived influence is considered as a manipulation check for the influence manipulation, it becomes clear that the manipulation of influence was unsuccessful. Self report ratings of perceived influence were not in the expected rank order in relation to the high, medium and low influence classes. See Table 3 for perceived influence class means and standard deviations. The perceived influence mean for the low influence class ($M = 13.49$) is the lowest among the classes.

However, the medium influence class ($\underline{M}$ = 15.08) has the highest mean self report rating, while the high influence class ($\underline{M}$ = 14.11) has the medium rating. The three class means of perceived influence are not significantly different from each other based on ANOVA analysis ($\underline{F}(2,92) = 1.32$, $p > .10$).

Multiple comparison tests based on Tukey's Honestly Significant Difference procedure revealed that none of the classes were not significantly different from each other based on the variable of perceived influence. Because the manipulation was apparently unsuccessful, further analysis using class group as an independent variable representing influence would be uninterpretable. Consequently, only results pertaining to perceived influence, and not manipulated influence are presented.

Moderated Regression

Hypotheses were conceptualized within the moderator model, which state that a moderator is a variable that affects the direction or strength of a independent-dependent variable relationship (Baron & Kenny, 1986). Hypotheses were tested using moderated regression, whereby the moderator hypothesis is supported if there is a significant effect of the interaction while the main effects are controlled. The proportion of variance accounted for by the independent variables is partitioned incrementally by noting

the increase in variance accounted after each variable is entered into the model (Pedhazur, 1982). When the interaction term is added to the regression equation last, and accounts for significant additional variance, the moderator hypothesis is supported.

Multicollinearity Assessment. Multicollinearity is defined as near linear dependence among the independent variables (Montgomery & Peck, 1982), and can affect the stability and precision of regression parameter estimates. Multicollinearity was assessed using variance inflation factors (VIFs). VIFs measure the proportion of variance in an independent variable that can be explained by all other independent variables. Orthogonal variables will have a VIF of one. VIFs under five indicate uncorrelated independent variables, and VIFs over five indicate multicollinearity is likely (Montgomery & Peck, 1982).

VIFs were obtained for all models with more than one independent variable unless the model contained an interaction term. Models with interactions were excluded from VIF analysis because interaction variables are combinations of independent variables and consequently would be expected to be highly correlated with their corresponding main effect variables. None of the VIFs in the present analysis exceeded five, consequently multicollinearity problems appear unlikely.

Control and Demographic Variables. Social desirability was measured by self-report ratings because of the possible relationship it may have with locus of control measures. Reported results for hypotheses 1 and 2 do not include the variable social desirability because it was not found to be significantly correlated with the I-E scale (r = -.18, p = .09) or the IAR questionnaire (r = .17, p > .10), and including it in the analyses did not significantly alter any reported results.

Negative affectivity was measured by self-report ratings because of the possibility it may have been correlated with satisfaction. Negative affectivity was not found to be correlated significantly with the dependent variable satisfaction (r = -.16, p > .10). Negative affectivity was included in moderated regression analyses for hypotheses 1, 2, 4, and 5, because of the variable's high correlation with the I-E scale (r = .42, p < .01), the IAR questionnaire (r = -.24, p < .05), and the dependent variable distributive justice (r = -.23, p < .05). Reported results for all hypotheses do not include the variable negative affectivity because it did not significantly alter any reported results.

The demographic variable gender was included in moderated regression analyses for hypotheses 1 and 2 because it was significantly negatively correlated with the I-E

scale ($r = -.23$, $p < .05$) and significantly positively correlated with the IAR questionnaire ($r = .20$, $p < .05$). Both of these correlations indicate that males scored more internally than females. However, the reported analyses for these hypotheses do not include the variable gender because it did not significantly alter any obtained results.

The demographic variable age was included in moderated regression analyses for hypotheses 1 and 4 because of the variable's significant correlation with the dependent variable procedural justice ($r = .24$, $p < .05$). However, reported analyses for these hypotheses do not include the variable age because it did not significantly alter any reported results.

Hypotheses. Hypothesis 1a predicted that perceived influence would be positively related to procedural justice. As predicted, a positive correlation was found between perceived influence and procedural justice ($\underline{r} = .49$, $p < .01$). Hypothesis 1a was supported.

Hypothesis 1b predicted that locus of control would moderate the relationship between perceived influence and procedural justice. The positive relationship between perceived influence and procedural justice was expected to be stronger for internals than for externals. Moderated regression results are presented in Table 4. The interaction between perceived influence and the I-E scale

was not significant (R^2 change = .00, $F < 1$). The interaction between perceived influence and the IAR questionnaire was not significant (R^2 change = .00, $F < 1$). Hypothesis 1b was not supported.

Hypothesis 2a predicted that perceived influence would be positively related to satisfaction. As predicted, a positive correlation was found between perceived influence and satisfaction ($r = .22$, $p < .05$). Hypothesis 2a was supported.

Hypothesis 2b predicted that locus of control would moderate the relationship between perceived influence and satisfaction. The positive relationship between perceived influence and satisfaction would be stronger for internals than for externals. Moderated regression results are presented in Table 5. The interaction between perceived influence and the I-E measure of locus of control was not significant (R^2 change = .00, $F < 1$). The interaction between perceived influence and the IAR measure of locus of control was not significant (R^2 change = .00, $F < 1$). Hypothesis 2b was not supported.

Hypothesis 3 predicted that the moderating effects of locus of control outlined in hypotheses 1b and 2b would be stronger when the IAR questionnaire was used in comparison to the I-E scale. Although there were no significant interactions in hypotheses 1b and 2b, analysis of hypothesis

3 is presented. Hypothesis 3 was tested using a two step hierarchical regression. For the dependent variable procedural justice, the following variables were entered into the regression equation at step 1: perceived influence, the I-E scale, the IAR scale and the perceived influence/I-E scale interaction. Step 1 for the dependent variable procedural justice was significant ($\underline{R}^2$ = .28, $p < .01$). In the second step, the perceived influence/IAR scale interaction was added to the previous model. Additional variance accounted for in step 2 for the dependent variable procedural justice was not significant ($\underline{R}^2$ change = .00, $\underline{F} < 1$). Hypothesis 3 for the dependent variable satisfaction was tested using the same regression equations in steps 1 and 2. Step 1 for the dependent variable satisfaction was not significant ($\underline{R}^2$ = .06, $\underline{F}(4,77) = 1.24$, $p > .10$). Step 2 for the dependent variable satisfaction was also not significant ($\underline{R}^2$ change =.01, $\underline{F} < 1$). Hypothesis 3 was not supported.

Although hypothesis 3 was not supported, further analyses were conducted to determine whether either locus of control measure accounted for significantly more unique variance than the other, for the dependent variable procedural justice. To determine the unique contribution of the I-E scale, perceived influence and the IAR questionnaire were entered into the regression equation at step 1. At

step 2, the I-E scale was added to the model. The change in variance accounted for from step 1 to step 2 determined the unique contribution of the I-E scale. For the dependent variable procedural justice, the unique contribution of the I-E scale was not significant ($\underline{R}^2$ change = .00, $\underline{F} < 1$). The unique contribution of the IAR scale for the dependent variable procedural justice was determined by entering perceived influence and the I-E questionnaire into the regression equation at step 1. At step 2, the IAR scale was added to the model. The change in variance accounted for from step 1 to step 2 determined the unique contribution of the IAR scale. For the dependent variable procedural justice, the unique contribution of the IAR scale was not significant ($\underline{R}^2$ change = .02, $\underline{F}(1,80) = 2.12$, $p > .10$).

The same analyses were conducted for the dependent variable satisfaction. The unique contribution of the I-E scale ($\underline{R}^2$ change = .00, $\underline{F} < 1$) and the IAR questionnaire ($\underline{R}^2$ change = .00, $\underline{F} < 1$) was not significant. In conclusion, there were no significant differences in variances accounted for by the different locus of control measures.

Hypothesis 4 predicted that procedural justice would account for more variance in satisfaction than would distributive justice. This hypothesis was analyzed by determining the unique contribution of each justice variable after the other had already been entered into the model. To

determine the unique contribution of procedural justice, distributive justice was entered into the regression equation at step 1. At step 2, procedural and distributive justice were both included in the model. The change in variance accounted for from step 1 to step 2 ($\underline{R}^2$ change = .08, $p < .01$) determined the unique contribution of procedural justice. The unique contribution of distributive justice ($\underline{R}^2$ change = .31, $p < .01$) was determined similarly. Although both procedural and distributive justice accounted for significant unique variance, distributive justice contributed more unique variance than procedural justice. Hypothesis 4 was not supported.

Further analysis of relationship between procedural and distributive justice, and the dependent variable satisfaction was conducted. Correlations were tested to determine if distributive justice was correlated with satisfaction to a significantly larger degree than was procedural justice. The test of the significant difference between dependent correlations (Cohen & Cohen, 1983) showed that distributive justice was significantly more correlated with satisfaction than procedural justice ($\underline{t}(75) = 2.01$, $\underline{p} < .05$)

Hypothesis 5a predicted that procedural justice would be positively related to distributive justice. As predicted, a positive correlation was found between

distributive justice and procedural justice (r = .45, p < .01). Hypothesis 5a was supported.

Hypothesis 5b predicted that grades received would moderate the relationship between distributive and procedural justice such that the correlation would be stronger when grades are low, rather than high. Since there was a significant difference among grades received between classes, both standardized and unstandardized grades were included in a single series of moderated regression analyses. Unstandardized grades are expected to capture variance related to students' perceptions of final grade outcomes, since grade assignments in all three classes are based on the same absolute cutoff values. Standardized grades are expected to capture variance based on students' perceptions of relative rank within their class, independent of actual grades received. Moderated regression results are presented in Table 6. The interactions between procedural justice/standardized grades and procedural justice/unstandardized grades (R^2 change = .01, $F(2,76)$ = 2.03, p >.10) was not significant[1]. Hypothesis 5 was not supported.

DISCUSSION

This thesis highlights the importance of fairness or justice as a pertinent area of concern in organizational settings. Although the importance of distributive justice in determining perceptions of fairness is well documented (e.g. Greenberg, 1982; Walster, Berscheid, & Walster, 1973) this study draws attention to procedural justice as an essential component of fairness perceptions. The results suggest that distributive justice or equity theory alone are not sufficient explanations of justice perceptions. Although this study only examined the relationship between justice and one outcome variable, satisfaction, other research has demonstrated that distributive and procedural justice are related to such diverse outcome variables as turnover intentions, evaluation of supervisors (Alexander & Ruderman, 1987), and allocation decisions (Barrett-Howard & Tyler, 1986).

The two main proponents of procedural justice, Thibaut and Walker (1975) and Leventhal (1976, 1980), have included components related to influence in their theoretical proposals of procedural justice. The current study also suggests that influence in decision making situations is an important factor in determining perceptions of procedural justice. Influence may contribute to perceptions of procedural justice because it is instrumental in obtaining

desired outcomes (Lind & Tyler, 1988). In addition, voicing one's opinion has been shown to have value independent of the potential for obtaining desired outcomes (Lind & Tyler, 1988).

When self-report ratings of perceived influence are examined, it becomes clear that the manipulation of influence was apparently unsuccessful. A possible explanation for the unsuccessful influence manipulation is the lack of experimental control over classroom conditions that may have contributed to perceptions of influence. For instance, the class instructor for the low manipulated influence class reported implementing the experimental manipulation initially, but subsequently acting on student suggestions made during class to change his lecture style. Unfortunately differences in instructors was confounded with the experimental manipulation.

Another possible explanation for the unsuccessful influence manipulation is that the three classes differed on a number of variables. For example, the medium influence class was significantly higher than the other two classes based on the variables of age and class year. Perhaps more importantly, the high influence class had significantly lower unstandardized grades compared with the two other classes. Unstandardized grades were significantly correlated with both distributive justice and satisfaction.

Future research in the classroom domain would benefit from additional measures to ensure control over extraneous variables such as instructor style and exam grade levels. The use of one instructor in all manipulated influence conditions is recommended as the most efficient and potentially successful means of controlling extraneous variables.

Because the manipulation of influence was unsuccessful, it was impossible to determine if manipulated influence and perceived influence had a differential or equivalent impact on the hypothesized relationships with the dependent variables procedural justice and satisfaction. While perceptions of influence were positively related to procedural justice and satisfaction, the relationships between manipulated influence and procedural justice, and satisfaction could not be meaningfully analyzed.

The relationship between manipulated and perceived influence was not established in this study. Future research would benefit from an effort to systematically establish the contingency between actual influence and perceptions of influence. In this study, uncontrolled variables not identified a priori may have contributed to perceptions of influence and weakened the obtained relationship between the influence manipulation and perceptions of influence. Consequently, the manipulation

may have been unsuccessful because relevant areas of influence were not controlled. A research paradigm that has the potential to avoid this limitation in future research is an open ended questionnaire to assess relevant influence areas in a particular domain, such as the classroom situation. Although the cause of the current unsuccessful manipulation is not known, this procedure would increase the possibility that any subsequent influence manipulations would be successful.

Locus of control was proposed as a relevant individual difference variable predicted to moderate the relationships between influence and the dependent variables procedural justice and satisfaction. Unfortunately, the main relationships of interest, the moderating effects of locus of control on the influence/procedural justice and the influence/satisfacion relationships, were not found.

A possible explanation for the lack of locus of control moderating effects using the IAR scale is the poor internal consistency of the scale. The coefficient alpha for the scale was .60 and the item-total correlations ranged from -.05 to .41. Eight items with item-total correlations below .10 were omitted from the scale and the data were reanalyzed. The revised scale had a coefficient alpha of .68 and item-total correlations between .13 and .47. The hypotheses concerning the moderating effect of the IAR locus

of control scale were tested a second time using the revised scale. Unfortunately, the conclusions of hypotheses 1b and 2b were not altered by utilizing the more internally consistent revised scale.

Very little research has examined individual difference variables in the context of procedural justice. One other research project has investigated the locus of control relationships proposed in this study, and while their research methodology was deficient, they obtained the proposed moderating effect (Sweeney et al., 1991). Since the moderating effects of locus of control is relatively uninvestigated, it is not possible to draw any confident conclusions regarding the viability of this phenomena. Only further study will reveal if locus of control or other individual difference variables have the potential to help explain the justice phenomena of interest.

The moderating effects of locus of control were proposed to be stronger when the IAR questionnaire was analyzed instead of the I-E scale because it was specific to academic achievement situations. Unfortunately, the moderating effects of locus of control were not significant, as was the analysis of this hypothesis. However, the unique variance of the main effects for each scale was assessed to determine if there were significant differences in the variance accounted for by either locus of control

questionnaire. It was concluded that neither scale contributed unique variance beyond the other. From this analysis of the locus of control measures it cannot be concluded that situation specific IAR scale is more appropriate in the classroom situation.

Although specific interaction hypotheses were not supported, significant main effects concerning procedural and distributive justice were found. In hypothesis 4, which tested the relative importance of procedural and distributive justice to the dependent variable satisfaction, distributive justice was found to contribute more unique variance than procedural justice. It should be noted, however, that procedural justice also contributed unique variance. These findings suggest the necessity of considering both procedural justice and distributive justice when fairness is a consideration.

Results supported the hypothesis that perceived influence and procedural justice are positively related. Although this finding is documented in previous research (e.g. Lind et al., 1980; Walker et al., 1974) it is important to note that this study supports this relationship in the classroom situation, where research has been sparse but supportive of the influence/procedural justice relationship (Tyler & Caine, 1981; Tyler, Rasinski, and Spodick, 1985).

Conclusions

The current study replicates previous research which supports the idea that perceptions of influence contribute to perceptions of procedural justice and satisfaction. Unfortunately, the manipulation of influence was deemed unsuccessful and several methodological considerations were proposed for future research in this domain. Locus of control did not have the predicted moderating effect on the influence/procedural justice and influence/satisfaction relationships. Further research is needed to determine whether locus of control is an important variable in the domain of procedural justice.

FOOTNOTE

[1]Separate analyses of the interaction between procedural justice and grades conducted with standardized grades only (R^2 change =.01, $F(1,76) = 1.59$, $p > .10$) and unstandardized grades only (R^2 change =.01, $F(1,76) = 2.03$, $p > .10$) did not alter the conclusions of hypothesis 5.

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Appendix A
Pilot Questionnaire

Listed below are statements describing possible ways instructors make decisions. Each statement reflects a level of influence students had in the instructors decision. Please rate each item on the amount of influence students had. Mark the appropriate answer on your opscan, using the scale below.

1	2	3	4	5	6	7
very low influence			moderate influence			very high influence

1. Your instructor used the class vote as input to decide whether the class would have an option of doing an extra credit assignment.

2. Your instructor used the class vote as input to decide what type of questions would be on your exams.

3. Your instructor decided by himself/herself (without asking the class) if your class would have any options to not take an exam or the final.

4. Your instructor used the class vote as input to decide what instructor office hours your class would have.

5. Your instructor decided by himself/herself (without asking the class) what type of extra credit assignment your class would have.

6. Your instructor decided by himself/herself (without asking the class) if your class could participate in psychology experiments outside of class for extra credit.

7. Your instructor used the class vote as input to decide the subject content of lectures for your class.

8. Your instructor used the class vote as input to decide what dates your class would have their exams.

9. Your instructor decided by himself/herself (without asking the class) if your class could do an extra credit assignment.

10. Your instructor decided by himself/herself (without asking the class) what dates your class would have exams.

11. Your instructor used the class vote as input to decide if your class would have an option to not take an exam or the final.

12. Your instructor used the class vote as input to decide what type of extra credit assignment your class would have.

13. Your instructor used the class vote as input to decide if your class would be able to participate in psychology experiments outside of class for extra credit.

14. Your instructor decided by himself/herself (without asking the class) what type of questions would be on your exams.

15. Your instructor used the class vote as input to decide how many exams your class would take.

16. Your instructor decided by himself/herself (without asking the class) what date your class extra credit assignment was due.

17. Your instructor decided by himself/herself (without asking the class) what the subject content of lectures would be.

18. Your instructor decided by himself/herself (without asking the class) what his/her office hours would be.

19. Your instructor decided by himself/herself (without asking the class) how many exams your class would take.

20. Your instructor used the class vote as input to decide what date your class extra credit assignment would be due.

Appendix B
Internal Versus External Control of Reinforcement

Each item below consists of a pair of alternatives lettered 1 or 2. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. This is a measure of personal belief: obviously there are no right or wrong answers. In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Please record your answers by marking the appropriate number on your opscan.

1. 1. Children get into trouble because their parents punish them too much.
   2. The trouble with most children nowadays is that their parents are too easy with them.

2. 1. Many of the unhappy things in people's lives are partly due to bad luck.
   2. People's misfortunes result from the mistakes they make.

3. 1. One of the major reasons why we have wars is because people don't take enough interest in politics.
   2. There will always be wars, no matter how hard people try to prevent them.

4. 1. In the long run people get the respect they deserve in this world.
   2. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5. 1. The idea that teachers are unfair to students is nonsense.
   2. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. 1. Without the right breaks one cannot be an effective leader.
   2. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. 1. No matter how hard you try some people just don't like you.
   2. People who can't get others to like them don't understand how to get along with others.

8. 1. Heredity plays the major role in determining one's personality.
   2. It is one's experiences in life which determine what they're like.

9. 1. I have often found that what is going to happen will happen.
   2. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. 1. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    2. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. 1. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    2. Getting a good job depends mainly on being in the right place at the right time.

12. 1. The average citizen can have an influence in government decisions.
    2. This world is run by the few people in power, and there is not much the little guy can do about it.

13. 1. When I make plans, I am almost certain that I can make them work.
    2. It is not always wise to plan too far ahead because many things turn to be a matter of good and bad fortune anyway.

14. 1. There are certain people who are just no good.
    2. There is some good in everybody.

15. 1. In my case getting what I want has little or nothing to do with luck.
    2. Many times we might just as well decide what to do by flipping a coin.

16. 1. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
    2. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. 1. As far as world affairs are concerned, most of us are victims of forces we can neither understand, nor control.
    2. By taking an active part in political and social affairs the people can control world events.

18. 1. Most people don't realize the extent to which their lives are controlled by accidental happenings.
    2. There really is no such thing as "luck."

19. 1. One should always be willing to admit mistakes.
    2. It is usually best to cover up one's mistakes.

20. 1. It is hard to know whether or not a person really likes you.
    2. How many friends you have depends upon how nice a person you are.

21. 1. In the long run the bad things that happen to us are balanced by the good ones.
    2. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. 1. With enough effort we can wipe out political corruption.
    2. It is difficult for people to have much control over the things politicians do in office.

23. 1. Sometimes I can't understand how teachers arrive at the grades they give.
    2. There is a direct connection between how hard I study and the grades I get.

24. 1. A good leader expects people to decide for themselves what they should do.
    2. A good leader makes it clear to everybody what their jobs are.

25. 1. Many times I feel that I have little influence over the things that happen to me.
    2. It is impossible for me to believe that chance or luck plays an important role in my life.

26. 1. People are lonely because they don't try to be friendly.
    2. There's not much use in trying too hard to please people, if they like you, they like you.

27. 1. There is too much emphasis on athletics in high school.
    2. Team sports are an excellent way to build character.

28. 1. What happens to me is my own doing.
    2. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. 1. Most of the time I can't understand why politicians behave the way they do.
2. In the long run the people are responsible for bad government on a national as well as local level.

Appendix C
The IAR Scale

Please choose the answer that best describes how you feel by marking the appropriate answer on your opscan.

1. If an instructor passes you, would it probably be
   1. because he/she liked you, or
   2. because of the work you did?

2. When you do well on a test in class, is it more likely to be
   1. because you studied for it, or
   2. because the test was especially easy?

3. When you have trouble understanding something in class, is it usually
   1. because the instructor didn't explain it clearly, or
   2. because you didn't listen carefully?

4. When you read a textbook and can't remember much of it, is it usually
   1. because the textbook wasn't well written, or
   2. because you weren't interested in the textbook?

5. Suppose your parents say you are doing well in school. Is this likely to happen
   1. because you class work is good, or
   2. because they are in a good mood?

6. Suppose you did better than usual in a class. Would it probably happen
   1. because you tried harder, or
   2. because someone helped you?

7. When you lose at a game, does it usually happen
   1. because the other player is good at the game, or
   2. because you don't play well?

8. Suppose a person doesn't think you are very smart.
   1. can you make him or her change his or her mind if you try to, or
   2. are there some people who will think you're not very smart no matter what you do?

9. If you solve a puzzle quickly, is it
   1. because it wasn't a very hard puzzle, or
   2. because you worked on it carefully?

10. If someone tells you that you are stupid, is it more likely that they say that
    1. because they are mad at you, or
    2. because what you did really wasn't very smart?

11. Suppose you study to become a teacher, scientist, or doctor and you fail. Do you think this would happen
    1. because you didn't work hard enough, or
    2. because you needed some help, and other people didn't give it to you?

12. When you learn something quickly in class, is it usually
    1. because you paid close attention, or
    2. because the instructor explained it clearly?

13. If an instructor says to you, "Your work is fine," is it
    1. something instructors usually say to encourage students, or
    2. because you did a good job?

14. When you forget something you heard in class, is it
    1. because the instructor didn't explain it well, or
    2. because you didn't try very hard to remember?

15. Suppose you weren't sure about the answer to a question you instructor asked you, but your answer turned out to be right. Is it likely to happen
    1. because he/she wasn't as particular as usual, or
    2. because you gave the best answer you could think of?

16. When you read a textbook and remember most of it, is it usually
    1. because you were interested in the textbook, or
    2. because the textbook was well written?

17. If you parents tell you you're acting silly and not thinking clearly, is it more likely to be
    1. because of something you did, or
    2. because they happen to be in a bad mood?

18. When you don't do well on a test in class, is it
    1. because the test was especially hard, or
    2. because you didn't study for it?

19. When you win at a game, does it happen
    1. because you play well, or
    2. because the other person doesn't play well?

20. If people think you're smart, is it
    1. because they happen to like you, or
    2. because you usually act that way?

21. If an instructor didn't pass you, would it probably be
    1. because he/she "had it in for you," or
    2. because you class work wasn't good enough?

22. Suppose you don't do as well as usual in a class. Would this probably happen
    1. because you weren't as careful as usual, or
    2. because somebody bothered you and kept you from working?

23. If someone tells you that you are bright, is it usually
    1. because you thought of a good idea, or
    2. because they like you?

24. Suppose you became a famous teacher, scientist or doctor. Do you think this would happen
    1. because other people helped you when you needed it, or
    2. because you worked very hard?

25. Suppose your parents say you aren't doing well in school. Is this likely to happen more
    1. because you work isn't very good, or
    2. because they are in a bad mood?

26. Suppose you are showing a friend how to play a game and he/she has trouble with it. Would that happen
    1. because he/she wasn't able to understand how to play, or
    2. because you couldn't explain it well?

27. When you remember something you heard in class, is it usually
    1. because you tried hard to remember, or
    2. because the teacher explained it well?

28. If you can't work a puzzle, is it more likely to happen
    1. because you are not especially good at working puzzles, or
    2. because the instructions weren't written clearly enough?

29. If your parents tell you that you are smart, is it more likely
    1. because they are in a good mood, or
    2. because of something you did?

30. Suppose you are explaining how to play a game to a friend and he/she learns quickly. Would that happen more often
    1. because you explained it well, or
    2. because he/she was able to understand?

31. Suppose you're not sure about the answer to a question your instructor asks you and the answer you give turns out to be wrong. Is it likely to happen
    1. because he/she was more particular than usual, or
    2. because you answered too quickly?

32. If an instructor says to you, "Try to do better," would it be
    1. because this is something he/she might say to get pupils to try harder, or
    2. because you work wasn't as good as usual?

Appendix D
Demographic Information

Please answer the following questions by selecting the best answer and marking the corresponding circle on your opscan.

1. Please indicate your age.
   1. 17 or younger
   2. 18
   3. 19
   4. 20
   5. 21
   6. 22 or older

2. Please indicate your gender.
   1. Female
   2. Male

3. Please indicate your academic year.
   1. Freshman
   2. Sophomore
   3. Junior
   4. Senior
   5. Graduate
   6. Other: please specify _____

Appendix E
The PANAS - Negative Affectivity Subscale

The following 10 adjectives describe different feelings and emotions. Using the 5-point scale below, for each adjective, decide the extent to which you GENERALLY feel this way, that is how you feel on average. Mark the circle with the corresponding number on your opscan.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

1. distressed
2. upset
3. guilty
4. scared
5. hostile
6. irritable
7. ashamed
8. nervous
9 jittery
10. afraid

Appendix F
The Crowne-Marlowe Social-Desirability Scale
Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally, and mark the corresponding circle on your opscan.

1. Before voting I thoroughly investigate the qualifications of all the candidates.
   1. true
   2. false

2. I never hesitate to go out of my way to help someone in trouble.
   1. true
   2. false

3. It is sometimes hard for me to go on with my work if I am not encouraged.
   1. true
   2. false

4. I have never intensely disliked anyone.
   1. true
   2. false

5. On occasion I have had doubts about my ability to succeed in life.
   1. true
   2. false

6. I sometimes feel resentful when I don't get my way.
   1. true
   2. false

7. I am always careful about my manner of dress.
   1. true
   2. false

8. My table manners at home are as good as when I eat out in a restaurant.
   1. true
   2. false

9. If I could get into a movie without paying and be sure I was not seen, I would probably do it.
   1. true
   2. false

10. On a few occasions, I have given up doing something because I thought too little of my ability.
    1. true
    2. false

11. I like to gossip at times.
    1. true
    2. false

12. There have been times when I felt like rebelling against people in authority even though I knew they were right. 1. true
    2. false

13. No matter who I'm talking to, I'm always a good listener.
    1. true
    2. false

14. I can remember "playing sick" to get out of something.
    1. true
    2. false

15. There have been occasions when I took advantage of someone.
    1. true
    2. false

16. I'm always willing to admit it when I make a mistake.
    1. true
    2. false

17. I always try to practice what I preach.
    1. true
    2. false

18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
    1. true
    2. false

19. I sometimes try to get even, rather than forgive and forget.
    1. true
    2. false

20. When I don't know something I don't at all mind admitting it.
    1. true
    2. false

21. I am always courteous, even to people who are disagreeable.
    1. true
    2. false

22. At times I have really insisted in having things my own way.
    1. true
    2. false

23. There have been occasions when I felt like smashing things.
    1. true
    2. false

24. I would never think of letting someone else be punished for my wrongdoings.
    1. true
    2. false

25. I never resent being asked to return a favor.
    1. true
    2. false

26. I have never been irked when people expressed ideas very different from my own.
    1. true
    2. false

27. I never make a long trip without checking the safety of my car.
    1. true
    2. false

28. There have been times when I was quite jealous of the good fortune of others.
    1. true
    2. false

29. I have almost never felt the urge to tell someone off.
    1. true
    2. false

30. I am sometimes irritated by people who ask favors of me.
    1. true
    2. false

31. I have never felt that I was punished without cause.
    1. true
    2. false

32. I sometimes think when people have a misfortune they only got what they deserved.
    1. true
    2. false

33. I have never deliberately said something that hurt someone's feelings.
    1. true
    2. false

Appendix G
Psychological Influence

Please choose the answer that best describes how you feel by marking the appropriate answer on your opscan.

1. Compared with other classes you have had at Virginia Tech, how much influence do you feel you have on what goes on in your class, such as influencing decisions regarding selection of instructor office hours or options to earn extra credit, etc.?
   1. a very great deal of influence
   2. a great deal of influence
   3. quite a bit of influence
   4. some influence
   5. little or no influence

2. Compared with other classes you have had at Virginia Tech, how much influence do you feel you have over the decisions of your instructor regarding things about which you are concerned, such as any decisions regarding the timing, format, or number of exams, etc.?
   1. a very great deal of influence
   2. a great deal of influence
   3. quite a bit of influence
   4. some influence
   5. little or no influence

3. Compared with other classes you have had at Virginia Tech, how much influence does your instructor allow you when a problem comes up that involves your class, such as by asking your opinion?
   1. a very great deal of influence
   2. a great deal of influence
   3. quite a bit of influence
   4. some influence
   5. little or no influence

4. Compared with other classes you have had at Virginia Tech, if you have a suggestion for improving or changing the class in some way, how how much influence do you feel you have over your instructor?
   1. a very great deal of influence
   2. a great deal of influence
   3. quite a bit of influence
   4. some influence
   5. little or no influence

5. Compared with other classes you have had at Virginia Tech, indicate the extent to which you agree with the

following statement, "My instructor is receptive and listens to my ideas and suggestions."

1. strongly agree
2. agree
3. neither agree nor disagree
4. disagree
5. strongly disagree

Appendix H
Procedural Justice

On the following 9-point scale, indicate the extent to which your instructor did each of the following.

1	2	3	4	5	6	7	8	9
Very Large Extent				Moderate Extent				Not At All

1. Was honest and ethical in dealing with you.

2. Gave you an opportunity to express your side.

3. Used consistent standards in evaluating your performance.

4. Considered your views regarding your performance.

5. Gave you feedback that helped you learn how well you were doing.

6. Was completely candid and frank with you.

7. Showed a real interest in trying to be fair.

8. Became thoroughly familiar with your performance.

9. Took into account factors beyond your control.

10. Made clear what was expected of you.

11. Discussed plans or objectives to improve your performance.

12. Obtained accurate information about your performance.

13. Frequently observed your performance.

14. Behaved in a way you thought was not appropriate. (R)

15. Allowed personal motives or biases to influence decisions. (R)

16. Was influenced by things that should not have been considered. (R)

On the following 9-point scale, indicate how much opportunity existed, after exams, for you to do each of the following things.

1	2	3	4	5	6	7	8	9
Great Deal				Moderate Amount				None At All

17. Review, with your instructor, objectives for improvement.

18. Find out why you got the grade you did.

19. Make an appeal about your grade.

20. Express your feelings to your instructor about grade assignments.

21. Discuss, with your instructor, how your performance was evaluated.

22. Develop, with your instructor, an action plan for future performance.

Appendix I
Distributive Justice

Please choose the answer that best describes how you feel by marking the appropriate answer on your opscan.

1. How fair do you consider your grade(s) in this class to be?

1	2	3	4	5	6	7	8	9
Very Much				Moderately				Not At All

2. To what extent did your grade(s) reflect the grade(s) you deserved?

1	2	3	4	5	6	7	8	9
Very Much				Moderately				Not At All

3. To what extent was your grade(s) related to your understanding of the material?

1	2	3	4	5	6	7	8	9
Very Much				Moderately				Not At All

Appendix J
Satisfaction with Outcomes

Using the scale below, decide the extent to which you agree with each of the following statements and mark the corresponding number on your opscan.

1	2	3	4	5	6	7	8	9
Very Much Agree				Moderately Agree				Don't Agree At All

1. All in all, I am satisfied with this class.

2. In general, I am unhappy with this class.

3. I think the overall quality of this class is good.

4. All in all, I am satisfied with my grade(s) in this class.

5. In general, I am unhappy with my grade(s) in this class.

6. In this class, I think the overall level of my grade(s) are good.

7. All in all, I am satisfied with my instructor in this class.

8. In general, I am unhappy with my instructor in this class.

9. In this class, I think the overall quality of my instructor is good.

Table 1

Descriptive Statistics; Intercorrelations, and Internal Consistencies for Measures

	Mean	Std. Dev.	1	2	3	4	5	6	7	8
1. I-E	10.77	4.01	(.73)							
2. IAR	24.29	3.40	-.39**	(.60)						
3. NA	18.70	5.85	.41**	-.23*	(.85)					
4. SD	13.03	5.35	-.18	.17	-.11	(.79)				
5. PI	14.11	3.92	-.12	.03	-.17	-.01	(.81)			
6. PJ	157.17	25.00	-.22*	.21	-.09	.10	.49**	(.93)		
7. DJ	21.37	5.79	-.18	.19	-.22*	-.02	-.02	.45**	(.92)	
8. SAT	65.25	13.76	-.15	.09	-.16	.02	.22*	.60**	.77**	(.90)
9. Grade	84.73	11.67	-.08	-.10	-.15	-.17	-.03	.17	.57**	.60**

Note: Coefficient alpha for each measure appears in parentheses. I-E = Rotter Locus of Control; IAR = Crandall Locus of Control; NA = Negative Affectivity; SD = Social Desirability; PI = Percieved Influence; DJ = Distributive Justice; SAT = Satisfaction; Grade = Average percentage of two test grades.

* $p < .05$

** $p < .01$

Table 2

Percentage of Total for Demographic Characteristics and Mean Class Grade by Manipulated Influence Class

LOW INFLUENCE CLASS (N=42)

Gender		Academic Year	
Female	68.3%	Freshman	4.9%
Male	31.7%	Sophomore	43.9%
		Junior	29.3%
Age		Senior	22.0%
18	9.8%		
19	39.0%	Mean Class	
20	22.0%	Grade	90.2/100%
21	19.5%		
22+	9.8%		

MEDIUM INFLUENCE CLASS (N=26)

Gender		Academic Year	
Female	69.2%	Freshman	0.0%
Male	30.8%	Sophomore	3.8%
		Junior	53.8%
Age		Senior	42.3%
18	0.0%		
19	11.5%	Mean Class	
20	26.9%	Grade	85.3/100%
21	46.2%		
22+	15.4%		

HIGH INFLUENCE CLASS (N=29)

Gender		Academic Year	
Female	69.0%	Freshman	3.6%
Male	31.0%	Sophomore	35.7%
		Junior	42.9%
Age		Senior	17.9%
18	0.0%		
19	34.5%	Mean Class	
20	41.4%	Grade	73.3/100%
21	17.2%		
22+	6.9%		

Table 3

Means and Standard Deviations of Measures by Manipulated Influence Class

	INFLUENCE					
	LOW		MEDIUM		HIGH	
	MEAN	STD. DEV.	MEAN	STD. DEV.	MEAN	STD. DEV.
LOCUS OF CONTROL I-E	11.18	3.90	10.38	3.95	10.57	4.31
LOCUS OF CONTROL IAR	24.08	3.37	24.50	3.11	24.39	3.79
NEGATIVE AFFECTIVITY	18.18	5.70	19.12	5.91	19.07	6.15
SOCIAL DESIRABILITY	13.18	5.57	12.04	5.70	13.70	6.15
PERCEIVED INFLUENCE	13.49	4.23	15.08	3.89	14.11	3.38
PROCEDURAL JUSTICE	153.97	23.94	171.60	20.21	147.96	25.27
DISTRIBUTIVE JUSTICE	23.63	4.47	22.96	3.95	16.57	6.22
SATISFACTION	69.14	8.53	71.40	9.18	53.96	16.62

Table 4

Heirarchical Regressions Analyses Testing the Moderating effect of Locus of Control on the Relationship between Perceived Influence and Procedural Justice

	Step 1		Step 2		Step 3	
	Percieved Influence (PI)		Locus of Control (LOC)		PI X LOC	
	R^2	F	ΔR^2	F	ΔR^2	F
ROTTER LOCUS OF CONTROL (I-E)	.24	26.21**	.02	2.34	.00	0
CRANDALL LOCUS OF CONTROL (IAR)	.24	26.21**	.04	4.51*	.00	0

N = 84

* $p < .05$

** $p < .01$

Table 5

Heirarchical Regressions Analyses Testing the Moderating effect of Locus of Control on the Relationship between Perceived Influence and Satisfaction

	Step 1		Step 2		Step 3	
	Percieved Influence (PI)		Locus of Control (LOC)		PI X LOC	
	R^2	F	ΔR^2	F	ΔR^2	F
ROTTER LOCUS OF CONTROL (I-E)	.05	4.21*	.01	.71	.00	.21
CRANDALL LOCUS OF CONTROL (IAR)	.05	4.21*	.01	.80	.02	1.46

N = 82

* $p < .05$

** $p < .01$

Table 6

Heirarchical Regressions Analyses Testing the Moderating effect of Grades on the Relationship between Procedural Justice and Distributive Justice

	Step 1		Step 2		Step 3	
	Procedural Justice (PJ)		Grade and Standardized Grade (Sgrade)		PJ X Grade and PJ X Sgrade	
	R^2	F	ΔR^2	F	ΔR^2	F
Distributive Justice	.20	12.27*	.31	48.46*	.01	2.03

N = 82

* $p < .01$

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EDUCATION

1989 - present — **M.S. Industrial/Organizational Psychology**
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Blacksburg, Virginia

1984 - 1988 — **B.A. Psychology**
UNIVERSITY OF ROCHESTER
Rochester, New York

PROFESSIONAL AND RESEARCH EXPERIENCE

12/91 - 1/92 — **Bell Atlantic**, Selection Research, Arlington, VA
Selection Test Administrator
- Administered computerized selection battery for concurrent validation study.

1/90 - 4/91 — **Neil Hauenstein**, Blacksburg, VA
Consulting Assistant
- Assisted in development of performance appraisal system and compensation package for life insurance company.
- Assisted in development of merit pay system for hospital employees, including establishing pay structure, performance appraisal system, and feedback system.

6/87 - 5/88 — **University of Rochester**, Center for Community Study, Rochester, NY
Research Assistant
- Coded and analyzed data using SAS.

6/85 - 5/88	**University of Rochester**, International Student Office, Rochester, NY Program Assistant - Maintained computerized data base and produced reports. - Performed orientation and immigration counseling.
6/87 - 8/87	**Sudden Infant Death Center of Western New York**, Rochester, NY Researcher - Surveyed local mental health providers to determine relevant available services. Collected, coded, and analyzed data, and produced written report.
6/86 - 5/87	**University of Rochester**, Department of Psychology, Rochester, NY Research Assistant - Coded facial expressions for human development study.
9/86 - 12/86	**University of Rochester**, Mount Hope Family Treatment Center, Rochester NY Research Assistant - Performed video data collection for child abuse study. - Transcribed video and audio data.

TEACHING EXPERIENCE

8/91 - 12/91	**Virginia Polytechnic Institute and State University** Instructor of Psychological Measurement Laboratory
8/89 - 12/89	**Virginia Polytechnic Institute and State University** Introductory Psychology Discussion Group Leader

RELEVANT COURSE WORK

Content Courses:
Wage and Incentive Systems
Industrial Psychology (I & II)
Organizational Psychology I (Motivation)
Organizational Psychology II (Leadership & Organizational Theory)
Social Psychology
Learning

Research Methods and Statistics:
Research Methods
Quantitative Methods in Industrial/Organizational Psychology
Statistics for Social Science Research (I & II)
Regression

PROFESSIONAL MEMBERSHIP

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