Procedural Justice and Voice: Do Individual Differences Moderate the Voice Effect?

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Procedural Justice and Voice: Do Individual Differences Moderate the Voice Effect?

A Thesis
Presented to the
Department of Psychology
and the
Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
University of Nebraska at Omaha

By
Mark N. Van Osdel
July 1994
Procedural Justice and Voice: Do Individual Differences Moderate the Voice Effect?

Acceptance for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Master of Arts, University of Nebraska at Omaha.

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Abstract

Previous researchers (see Lind & Tyler, 1988) have reported that persons allowed an opportunity to express their opinions (voice) typically report a heightened level of perceived fairness--labeled as the voice effect. Instrumental and group-value theories have been proposed as explanations for this effect. The present study examined the voice effect in the context of personality theory to explore individual differences in relation to instrumental and group value theories of voice. This study was designed to test the effect of two individual difference components, Locus of Control and Need for Affiliation, across three conditions of voice (predecision, postdecision, and no-voice). Predecision voice represents the instrumental aspect of influencing the third party's allocation decision; postdecision voice represents the noninstrumental group value aspect of symbolic voice. It was predicted that individuals who score in the internal Locus of Control direction focus mainly on instrumental aspects of voice, whereas individuals who score in the Need for Affiliation direction focus mainly on group-related issues of voice. One hundred twenty-eight undergraduate students were administered personality inventories and experienced one of three voice conditions. Subjects performed a course construction task during the experimental procedure. The results of this study did not support the predicted hypotheses. Three possible explanations for the observed results are presented along with implications for future research.
Chapter I

Introduction

In the broadest sense, justice relates to a group's right for equality of outcome and treatment. The African American civil rights movement demonstrated that a large group can unite to pursue fair and equal treatment. As the focus is narrowed, justice can relate to smaller groups such as employees in a particular industry. The use of collective bargaining allowed laborers to unite and demand reasonable working conditions. Narrowed further, justice relates to the individual, such as a worker's desire for a fair and unbiased performance appraisal. Researchers have reported that justice relates to a wide array of employee attitudes and behaviors (see Sheppard, Lewicki, & Minton, 1993). Employees may focus on instrumental aspects of justice, such as receiving a merit raise for exceptional performance, or they may focus on group-related issues of justice, such as being respected by supervisors. The purpose of this research is to determine if perceptions of justice are influenced by an individual's desire to maximize personal outcomes, to be treated as a respected group member, or both.

The expression of one's opinion to a decision-maker is referred to as voice in justice literature (Folger, 1977). Procedural justice, the subjective reaction to the process of resource distribution, is influenced by the degree of voice allowed. Several authors have found that procedural justice ratings are
enhanced when people are allowed voice (e.g., Bies, 1987; Bies & Shapiro, 1988; Folger, 1977; Lind, Earley, & Kanfer, 1990; Tyler, Rasinski, & Spodick, 1985), labeled the voice effect by Folger (1977). Two explanations have been cited as reasons for this effect. One explanation asserts that people prefer an opportunity to voice their opinion because they believe it will lead to more favorable outcomes (Thibaut & Walker, 1975). The other explanation contends that people prefer voice because the opportunity to express their opinion affirms both group membership status and interactional fairness (Lind and Tyler, 1988; Tyler, 1990). For example, noninstrumental voice may be viewed as fair since being allowed an opportunity to voice even if it will not influence the outcome portrays respect, status, and interactional fairness to the individual voicing his or her opinion. To differentiate between the two explanations of voice, the present study examines the voice effect in relation to individual differences. Specifically, perceptions of procedural justice and fairness are investigated by the study of individual difference characteristics in relation to voice. In the following section, the progression of research from distributive to procedural justice will be described.

Justice

Distributive justice, developed by Homans (1961), is the allocation of resources and the subjective reaction of participants to the equity of the outcome. Adam’s (1965) equity theory was a major contributor to distributive
Equity theory contributed to the notion that distributive justice is a prominent factor in social behavior (for a review, see Greenberg, 1982; and Lind & Tyler, 1988). According to the distributive justice theory, outcomes engender feelings of satisfaction and fairness. Positive outcomes produce heightened levels of perceived fairness, whereas negative outcomes do not (Thibaut & Walker, 1975). Thus, an individual's reaction regarding fairness and satisfaction is influenced by the perceived distribution of resources or outcomes. According to distributive justice, people are driven by the ends of a social relationship rather than the means (Folger, 1986).

**Procedural justice** concerns the process by which limited resources are allocated, and the subjective reaction to the process (for a review, see Lind & Tyler, 1988). In one of the earliest studies conducted on procedural justice, Thibaut and Walker (1975) studied subjective and objective consequences towards differing legal procedures in which the type of third-party intervention was manipulated. The authors reported that procedures, mandated by a third-party, influence reactions towards the decision. These reactions are independent of decision desirability or the degree to which the decision is pleasing to the individual. For example, the researchers studied arbitration methods of a third-party regarding a disagreement between plaintiffs. Results indicated that, regardless of the outcome, the third-party arbitration method influenced the plaintiffs' perception of justice.
Specifically, Thibaut and Walker (1975) manipulated decision control which is the amount of control an individual possesses over the outcomes allocated by a third-party. For example, in a courtroom setting, high decision control allowed disputants to control the outcome of the third-party decision. When individuals are allowed high decision control, they typically report high fairness ratings because decision control is perceived as a way to increase desired outcomes (Thibaut and Walker, 1975). However, these authors report that individuals with high decision control will perceive a situation as fair even when they receive undesirable outcomes. Thus, focusing solely on distributive outcomes is too simplistic to fully explain these results.

Process control is defined as the amount of control that an individual possesses over an allocation procedure. For example, in a courtroom setting, high process control allowed disputants to control the amount and type of information presented. Thibaut and Walker's research focused on assessing the perceived fairness of a procedure with varying levels of personal control in the decision-making process. They found that when individuals were allowed to express their views (high process control), procedural justice ratings were enhanced. This finding was designated the process control effect by Thibaut and Walker (1978) and is one of the most reliable and consistent findings in justice literature (Lind & Tyler, 1988).
A related issue is whether the process control effect occurs regardless of outcome desirability. Although there are discrepancies in the literature (for a review, see Greenberg, 1987), it appears that outcomes of medium to high desirability are perceived as unbiased regardless of the procedure used. Further, outcomes of low desirability are perceived as unbiased only during fair procedures (Greenberg, 1987). It is possible that negative outcomes serve to increase the procedural salience and motivate evaluative reactions.

**Voice**

During procedural justice experiments, subjects are commonly asked to evaluate procedural fairness after receiving positive or negative outcomes. Leventhal (1980) proposed six rules or criteria people may use when evaluating procedures as subjectively fair or unfair. Rule one, consistency, states that decision making procedures should be consistent across persons and time. Rule two, bias-suppression, focuses on two types of biases - "unrestrained self interest" and "devotion to doctrine". This rule asserts that these two biases must be suppressed for a procedure to be perceived as fair. Rule three, accuracy, maintains that the use of inaccurate information will cause procedures to be viewed as unfair. Rule four, correctability, asserts that an opportunity to change an allocative decision must exist at some point in the process. Rule five, representativeness, articulates that the phases of an allocation process must adhere in some degree to the concerns of the parties
involved. Rule six, ethicality, states that subjective reaction to a decision process is based on the relationship between the process and the individual’s moral and ethical values.

The representativeness rule includes process control. One form of process control is voice, and it has been regarded as such in many studies (see Lind & Tyler, 1988). Voice procedures are typically those in which people are given the opportunity to present their opinions, feelings, or beliefs to another who is responsible for making a decision (Bies, 1987). In contrast, no-voice procedures are those in which people are not allowed the opportunity to present their views to the decision maker.

Procedural justice ratings are enhanced when individuals, affected by the decision being made, are allowed an opportunity to express their views. The voice effect directly relates to the fair process effect. When voice is allowed, people report heightened perceptions of procedural fairness regardless of outcome. A number of authors have replicated the voice effect with both positive and neutral outcomes (e.g., Bies, 1987; Folger, 1977; Greenberg & Folger, 1983; Lind et al., 1990; Tyler et al., 1985). Others have reported the voice effect only with negative outcomes (Bies & Shapiro, 1988; Greenberg, 1987; La Tour, 1978). These studies have been conducted in experimental and field settings.
Instrumental Voice

Early explanations of the voice effect concentrated on instrumental reasons (i.e., the attempt to improve outcomes by influencing the decision-maker). Instrumental explanations focus on increasing equitable outcomes (Thibaut & Walker, 1975), increasing favorable outcomes (Leventhal, 1980), or providing control over outcomes (Brett, 1985). As previously stated, voice opportunities increase fairness ratings; this may result because voice is seen as a means of obtaining favorable outcomes. According to the instrumental perspective, persons value voice only to the extent that it will increase desired outcomes, because voice is perceived as a means of increasing the probability of attaining favorable outcomes. Thus, voice propels procedural justice ratings because it promotes distributive justice (Thibaut & Walker, 1975).

Support for instrumental voice arises from research in legal settings. Thibaut and Walker (1975) reported that people have an interest in retaining decision control by minimizing third-party intervention and maximizing process control. However, disputants will relinquish decision control to a third party if doing so is viewed as the best means for fair conflict resolution. Thus, low decision control (i.e., third party intervention) is tolerated if process control (i.e., voice) is granted. This situation is viewed as fair because process control or voice is perceived to be influential in obtaining desired outcomes.
According to this rationale, the voice effect should disappear if expressing one’s opinion is perceived as noninstrumental. Researchers have documented that noninstrumental voice may lead to perceptions of injustice called the frustration effect (Folger, 1977). However, this effect is rare and seems to occur only if the individual perceives the opportunity to voice as a sham, such as when voice is allowed in order to beguile the individual (Lind & Tyler, 1988). It has been established that instrumental voice produces increased fairness rating, yet what effect does noninstrumental voice have on ratings of fairness? In the next section, results from noninstrumental voice studies are presented.

**Symbolic Voice**

Since Thibaut and Walker (1975) reported their instrumental process control results, there has been increasing evidence that noninstrumental voice produces similar results identified as the symbolic voice effect. According to Lind and Tyler (1988), this effect relates to the desire to voice because of the symbolic aspect of expressing one’s opinion to a receptive group member. An opportunity to voice, regardless of instrumentality, increases an individual’s feelings of group identification and membership which is thought to be a very potent aspect of people’s lives. “Humans are by their very nature affiliative creatures, and they devote much of their energy to understanding the functioning of the various groups to which they belong and to participating in
social processes within those groups" (Lind & Tyler, 1988, p. 231). As a result, people seek membership in many work-related and social groups.

Lind and Tyler (1988) proposed the group value model of procedural justice to explain the symbolic voice effect. According to this model, procedures are evaluated in terms of their relationship to group values (Tyler & Lind, 1992). According to the group value model, procedural fairness is viewed as a group norm, and it is desired by group members as a standard rather than as an exception. Perceived fairness results when procedures occur within the boundary of values held by the group and individual members (Lind & Tyler, 1988). When a procedure is viewed as an indication of a group value, such as voice, the procedure is judged as fair. According to Tyler and Lind (1992), people are affiliative and are attracted to the "signs and symbols" that display information concerning group membership status (p. 140).

The basic tenet of this model is that people define their self-identity by their membership in groups, and group members often have a positive regard for other members (Tyler & Lind, 1992). Thus, voice is viewed as fair because it is in accord with fundamental group values, and it reinforces group membership status. Through membership status, the resources of the group are provided to the individual in terms of self-esteem, self identity, and self knowledge (Tajfel & Turner, 1979; Tyler, 1990).
However, after receiving undesirable outcomes, members may evaluate whether they are being exploited by the group. During these times, people resolve negative feelings about the group by evaluating positive group assets (Tyler, 1990), such as the long term advantages of group membership. If these privileges (e.g., status) are affirmed by fair procedural treatment, such as voice, then self-affirmation is augmented and group membership desirability stabilizes (Tyler, 1989).

Furthermore, values are thought to be socialized from an early age; young members learn from the more experienced (Tajfel & Turner, 1979). Yet, the socialization of group values may not be universal, resulting in procedural values that vary between groups. Differential socialization of values may explain reported cross-cultural differences in procedural justice (for a review, see Lind & Tyler, 1988). However, Lind and Tyler (1988) state that there are fundamental group values that are common to all persons. These fundamental values may represent procedural propensities initially learned at an early age and are subsequently more resistant to change.

The following predictions, according to the group value model, are theorized by Lind and Tyler (1988). First, the fundamental aspect of the model deals with the recognition of one’s status as a group member. Allowing individuals the opportunity to express their opinions conveys respect and status because in doing so, they are treated as full-fledged group members. Second,
procedural factors are predicted to have a greater impact when associated with fundamental values. For example, the opportunity to express one’s opinions may have an additive impact because it is related to the fundamental value of group membership status. Third, as a result of the importance of group procedures, procedural justice issues will be regarded more importantly than other models would predict. Fourth, procedural justice will have a profound impact on new group members who are unsure of their group status. Lastly, procedural fairness judgments will have a large influence on people’s attitudes toward the group and its authorities. Group loyalty and commitment will also be seriously affected by procedures.

Applicable Results

Researchers have reported that fairness ratings for symbolic voice are intermediate to fairness ratings for instrumental voice and no-voice conditions (Lind et al., 1990; Tyler et al., 1985). These researchers address the underlying reason for the voice effect (i.e., instrumental and symbolic explanations). First, Tyler et al. (1985) assessed procedural justice with varying levels of both decision and process control. Second, Lind et al. (1990) temporally manipulated the opportunity to voice in relation to an outcome decision.

Tyler et al. (1985) conducted two correlational studies and one scenario study. In the first correlational study, participants were defendants who
appeared in traffic and misdemeanor court, and were interviewed by phone after their courtroom appearance. Process control was assessed by asking subjects how much opportunity they had in presenting evidence, and how much control they had in the way evidence was presented. Decision control was assessed by asking subjects how much control they had over the decision that was made regarding their case. In general, subjects felt they had high process control and low decision control.

In the second study, participants were students who completed a questionnaire assessing decision control, process control, and procedural justice in relation to a college course they had completed. Half of the subjects rated a course they liked most, and the other half rated a course they liked least. Process control was assessed by asking subjects how much opportunity they were given to "demonstrate their knowledge concerning material that was graded." Decision control was measured by asking the subjects to approximate the extent to which they could "influence the grade they received." Generally, the subjects expressed a perception of low process control and high decision control.

In both studies, subjects were placed in one of four groups based on a median split of ratings for the questions on decision and process control. The results of the regression analyses for both studies indicated that heightened levels of process control under conditions of high or low decision control
produced augmented procedural justice ratings (Tyler et al., 1985).

Study three, a scenario study, involved a budget allocation of a leadership counsel. In the experimental scenario, subjects were members of the general public who were asked to rate the level of fairness of the allocation procedure. The independent variables were process control (high/low) and decision control (high/low). In the low decision control situation, the counsel had sole responsibility for the decision, and in the high decision control situation, the counsel recommended a budget for public approval. In the low process control situation, the public was allowed to listen to the debate but not participate, and in the high process control situation, the public could speak to the counsel. The analysis revealed that high process control and high decision control produce heightened procedural justice ratings. Furthermore, in either high or low decision control situations, increasing the amount of process control produced a significant increase in ratings of procedural justice (Tyler et al., 1985).

Tyler et al. (1985) used the results of the three studies to test the instrumental and group value models of procedural justice. According to the instrumental perspective, heightened procedural justice ratings should not occur when subjects experience high process control and low decision control. Yet, according to the results, an increase in process control was responsible for heightened levels of procedural justice and leadership endorsement during both
high and low levels of decision control. Thus, the results support the group value aspect of voice because noninstrumental process control was viewed as procedurally fair. However, as noted by Lind et al. (1990) problems with the interpretation of these results occur due to the correlational nature of studies one and two and the subjectively believed instrumentality of voice in study three. To eliminate these concerns, Lind et al. (1990) designed a true experiment for the test of instrumental and group value theories of voice.

The experimental procedure utilized by Lind et al. (1990) was a goal-setting allocation in which voice was allowed at different times in relation to the goal-setting decision (before, after, or not at all). This study also manipulated task strategy information provided to the subjects. Some subjects received relevant strategy information for goal attainment, while some received irrelevant information, and others did not receive any strategy information. The experimental task for the subjects was the construction of course schedules. The researchers used a 3 (Voice Procedure) X 3 (Strategy Information) design.

Lind et al. (1990) used the three voice conditions to investigate the instrumental and group value explanations of voice. In this study, subjects were allowed to voice prior to a decision (predecision), after the decision (postdecision) or not at all (no-voice). Predecision voice represents the instrumental aspect of influencing the third party's allocation decision. Postdecision voice represents the noninstrumental group value aspect of
symbolic voice. The authors compared the two voice conditions with the no-voice condition to explore the strength of the symbolic aspects of voice. They also compared the predecision voice condition with the postdecision voice condition to investigate the instrumental aspects of voice.

The study analyses revealed that both voice conditions produced higher procedural and distributive fairness ratings than the no-voice condition. Also, the predecision voice condition produced greater procedural and outcome fairness ratings than the postdecision voice condition. These results support both instrumental and group value explanations of voice. Furthermore, all three conditions were significantly different. Ratings of procedural fairness were greatest in the predecision voice condition, intermediate in the postdecision voice condition, and lowest in the no-voice condition. In terms of cell means for the three levels of voice, the authors found slightly larger mean differences between predecision and postdecision voice conditions than between postdecision and no-voice conditions. The authors concluded, "The mean values we observed suggest that the symbolic voice effect is at least as strong as the instrumental voice effect..." (Lind et al., 1990 p. 957).

Lind et al. (1990) also considered the subjects' perceived control over outcomes. They found that subjects in the postdecision voice condition reported feeling greater control over outcomes than subjects in the no-voice condition. The authors conducted a mediational analysis to determine if the
voice effect could be attributed entirely to a perception of control. The results suggest that the ratings of perceived control do not entirely account for the voice effect. The authors used the results of the mediational analysis to discredit the possibility that an "illusion" of control, experienced by the subjects in the postdecision condition, was responsible for the heightened fairness ratings in that condition. However, the subjects in this condition indicated that they perceived control over the allocation decision. As a result, the postdecision voice condition may have been confounded. In other words, subjects in the postdecision voice condition may have responded with inflated procedural ratings due to the perceived instrumentality of voice.

Bies (1987) has stated there is growing evidence that factors beyond voice are influential in ratings of procedural justice. Thus, the presence of moderating variables may influence procedural justice ratings. The investigation of the role moderator variables play during a voicing experience will help to further differentiate the two theories of voice.

Proposal

Researchers have declared that both instrumental and group value considerations are evaluated when people rate procedural fairness (Lind et al., 1990; Tyler et al., 1985). In effect, these researchers have stated that people desire instrumental voice because they hope to maximize outcomes by expressing their opinions. Additionally, symbolic voice is valued because an
opportunity to express opinions augments the individual's group status. Therefore, a voice condition produces greater procedural satisfaction than a condition in which instrumentality and personal respect are absent. However, this explanation is too simplistic to adequately differentiate between instrumental and symbolic voice.

The present proposal incorporates personality theory in order to further differentiate the instrumental and group value theories of voice. It is proposed that an interaction between an individual's personality and the voice situation result in differential evaluations of procedural fairness. It is submitted that individuals vary in terms of their focus on instrumental and group value considerations. Some individuals are oriented towards controlling outcomes while others focus on social affiliation. An individual's orientation is dependent on his or her dominant personality characteristic. Therefore, knowing this personality orientation will facilitate the prediction of the individual's procedural justice reaction.

Presently, two individual difference variables are hypothesized as moderators of the voice effect. First, people differ in respect to the attention they place on control issues related to voice. To differentiate people on the basis of perceived control, Rotter's (1966) Locus of Control Theory will be utilized. Secondly, people differ in respect to their desire for group membership and related aspects such as respect and status. To differentiate people on the
basis of their desire for group membership, Need for Affiliation theory (Murray, 1938) will be used. Additionally, Fiedler's (1967) Least Preferred Coworker scale was administered for exploratory purposes.

Locus of Control

Rotter (1966) developed the concept of Locus of Control along the lines of social learning theory, which states that reinforcement strengthens the expectancy that a particular behavior will produce the same consequence in the future. However, behaviors and expectancies will vary in magnitude, depending on the perceived strength of the performance to reinforcement contingency. Rotter (1966) contends that expectancies generalize from specific to similar conditions.

Rotter's (1966) I-E scale was developed in order to differentiate between people on the basis of their belief in internal versus external contingencies of reinforcement. Reinforcement and social learning theories address the crucial role of behavioral consequences in the acquisition of behaviors. However, Rotter (1966) contends that an individual difference component is responsible for reinforcement being differentially perceived. People vary in the degree to which they believe that a consequence is contingent on their own behavior versus the degree to which they believe a consequence is controlled by outside forces. The varying levels of belief about behavioral consequences fall on a bipolar continuum. This is consistent with Rotter's statement that "a perception
of causal relationship need not be all or none but can vary in degree" (Rotter, 1966, p. 1). One polar side of the continuum is conceptualized as the belief that consequences are contingent on one's actions. The opposite side of the continuum is characterized by the belief that consequences result from powers outside the individual.

Rotter (1966) labels this continuum as Locus of Control and the polar sides as external control and internal control. Individuals who are oriented to an external control position (externals) do not perceive reinforcement following their behavior as dependent on their actions. Instead, externals view reinforcement as the result of chance, luck, or under the control of powerful others. Internal control oriented individuals (internals) perceive reinforcement following an action as contingent on their own behavior or enduring characteristics. "In general, internals tend to believe that they have personal control over rewards and events" (Spector, 1982 p. 493). The critical difference between internals and externals is one of causality - whether or not the person believes a causal path exists between their actions and the following consequences.

A complete review of Rotter's (1966) I-E scale is beyond the scope of this paper. For a thorough review see Spector (1982) and Joe (1971). Rotter's I-E scale has traditionally been the most popular scale to measure Locus of Control. However, the I-E scale has been criticized for a number of reasons, the most serious of which is a strong relationship between the scale and
political and social desirability (Nowicki & Duke, 1973). The Nowicki-Strickland Internal-External control scale for adults (ANS-IE) was developed in order to minimize the shortcomings of Rotter's I-E scale. Nowicki and Duke (1973) provide split-half reliability assessments which range from .74 to .86 and a test-retest reliability assessment of .83 for a six-week period. Discriminant validity is indicated for this measure since scale scores are not related to variables such as intelligence and social desirability. Construct validity has been supported by significant positive correlations between the ANS-IE scale and the I-E scale. Correlations between these scales were established in three separate studies for gender and achievement (Duke & Nowicki, 1973). Finally, convergent validity has been established by significant correlations between the ANS-IE scale and the Adjective Check List scale; the correlations are in the same direction and approximate degree as with correlations of the I-E scale (Duke & Nowicki, 1973).

Need for Affiliation

Jackson (1989) developed most of the scales on the Personality Research Form (PRF) from Murray’s (1938) Need Theory of Personality. Murray’s theory has been extensively researched over the years. The following presentation is limited in scope, focusing solely on the Need for Affiliation scale of the Personality Research Form - version E (PRF-E). Affiliative tendencies are regarded as a person’s stable and typical behavioral response to other people,
groups, or social situations (Mehrabian & Ksionzky, 1974).

Jackson's first step in the creation of the PRF was to operationally define each trait. The trait dimensions that were chosen for the PRF are bipolar. Half of the scale items represent each pole. The Need for Affiliation scale measures two sets of trait behaviors. According to the author, high scores on the affiliation scale indicate the presence of an affiliative trait. Jackson (1989) defines a high affiliative score as one who "Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people" (p. 6). Low scores indicate the presence of a rejection trait, whereas moderate scores represent the presence of both traits to a similar extent. The author does not define low or moderate scores, but encourages test users to define these scoring profiles.

According to the PRF-E test manual (Jackson, 1989), reliability and validity estimates are adequate, although the sample sizes are generally low or not reported. The odd-even split-half reliability of the PRE-E affiliation scale was .86 for a college population (N=84) after Spearman-Brown correction. The reported test-retest reliability for the 40 item PRE-AA affiliation scale ranged from .79 (N=135) to .93 (N=82). The items from this scale were used as the item pool for the development of the PRE-E and are presented for an additional reliability estimate.
The strongest evidence for scale validity is presented in terms of the correlational indices between the PRF-E affiliative scale and Cattell’s High School Personality Questionnaire (HSPQ) (cited in Jackson, 1989). Convergent validity is suggested by the .46 correlation between the affiliation scale on the PRF-E and the agreeableness scale on the HSPQ. Information concerning divergent validity was not reported.

Least Preferred Coworker

The origin of Fiedler’s (1967) Least Preferred Coworker (LPC) score occurred during the development of a measure for therapeutic and diagnostic competence of clinical psychologists. After focusing on leadership effectiveness, Fiedler (1967) developed the LPC scale to differentiate between people who are task motivated versus relationship motivated. According to Fiedler and Garcia (1987), a task motivated individual is someone who completely focuses on the completion of a task at the cost of interpersonal relationships with other workers. In terms of voice, a task oriented individual would focus solely on the instrumental aspects of voice. Additionally, a relationship motivated individual attributes relatively good personality traits to the least preferred coworker because the individual focuses on personal relationships and less on task completion (Fiedler & Garcia, 1987). In terms of voice considerations, a relationship oriented individual would care less about the instrumentality of voice and instead focus on group-related issues. The
psychometric properties of the LPC scale are adequate. Split-half reliability estimates range from .86 to .92, and the mean correlation of test-retest reliability from 23 studies is .64 (Rice, 1978 as reported in Fiedler and Garcia, 1987).

Hypotheses

The purpose of the present proposal is to further advance the understanding and explanation of the voice effect. Two possible explanations for this effect (instrumental and group value theories) have each received empirical support. Lind and Tyler (1988) reported that the two theories are not mutually exclusive. These authors support the acceptance of both models as reasonable explanations of the voice effect. Furthermore, Lind et al. (1990) conclude that the psychological process regarding the voice effect is "...more complex than is suggested by any of the current theories of procedural justice" (p. 957). Presently, the complexity of the voice effect is addressed in terms of personality theory. It is proposed that the voice effect is moderated by Locus of Control and Need for Affiliation.

This proposal was designed to test the effect of two individual difference components, Locus of Control and Need for Affiliation, across three conditions of voice (predecision voice, postdecision voice, and no-voice). It is proposed that individuals who score in the direction of internality focus mainly on the instrumental aspects of voice. These individuals will respond with higher
procedural justice ratings only when they are allowed control in the form of instrumental voice as in the predecision voice condition. In the postdecision voice condition, these individuals will respond by rating procedural justice lower because this condition is perceived as noninstrumental. Presently, Locus of Control orientation will be utilized as a test of the instrumental explanation of the voice effect. Specifically, internally oriented Locus of Control individuals will focus solely on the instrumental voice, whereas, externally oriented persons will not have this same focus. The direction of this effect is a replication of the results of Lind et al. (1990). However, these authors did not investigate the possibility that certain individuals focus mainly on instrumental concerns.

Additionally, it is proposed that individuals who score in the affiliative direction focus on issues that relate to group values such as respect and status. These individuals will respond with higher procedural justice ratings only when they are shown respect and status as in the two voice conditions. For these individuals, procedural justice ratings will decrease in those situations where group value considerations are not present as in the no-voice condition. Presently, Need for Affiliation orientation will be utilized as a test of the group value explanation of the voice effect. Specifically, affiliative individuals will focus solely on the symbolic voice, whereas, nonaffiliative oriented persons will not have this same focus. The direction of this comparison is a partial replication of the Lind et al. (1990) study. These authors, however, did not
investigate individual differences in relation to group value considerations. Individuals who focus on group value affiliation will rate the voice conditions higher and the no-voice condition lower than nonaffiliative persons.

This study proposes three hypotheses. First, after aggregating across all subjects, perceptions of procedural and outcome fairness will range from a high in the predecision voice condition to a low in the no-voice condition with an intermediate postdecision voice condition (Hypothesis 1). The direction of this hypothesized result is a replication of Lind et al. (1990). Secondly, to the extent that subjects score in the direction of internality on the Locus of Control scale (ANS-IE), a larger discrepancy in perceptions of procedural fairness will occur between the predecision and postdecision voice conditions than for subjects that score as externals (Hypothesis 2). This hypothesis will be tested by the interaction of Locus of Control score and a contrast between the predecision voice condition versus the postdecision plus no-voice conditions. Lastly, for subjects that score in the affiliative direction on the Need for Affiliation scale (PRF-E), a larger discrepancy in perceptions of procedural fairness is predicted to occur between the voice conditions (predecision and postdecision) and the no-voice condition than for individuals that score in the non-affiliative direction (Hypothesis 3). This hypothesis will be tested by the interaction of Need for Affiliation score and a contrast between the predecision plus postdecision voice conditions versus the no-voice condition.
Chapter II

Method

Subjects

Students enrolled in an introductory psychology course at a midwestern university participated as volunteers. A total of 138 individuals participated; subjects received extra-credit for their participation. On arrival, each person was randomly assigned to one of the three experimental conditions.

Design and Analysis

The one-way between-subjects experimental design had three conditions (Procedure: predecision voice, postdecision voice, no-voice). Two personality measures were also employed as predictors of subjects' responses to the experimental conditions. Multiple regression analyses were conducted to assess the effect of voice and the interaction of personality types and voice on perceptions of justice.

Measures

Dependent measures. Each dependent variable was measured by two questions (see Appendix A). Responses were recorded on a 6-point Likert-type scale with "1 = Very Low" and "6 = Very High" as endpoints. Procedural justice was measured by asking subjects whether they felt the process used to set the performance goal was fair. Distributive justice (satisfaction with outcome) was measured by assessing the perceived fairness of the assigned
goal. The dependent variables assessed both fairness and satisfaction which is a common practice among justice researchers. Lind & Tyler (1988) reported that many studies have established that both question types load on one factor.

**Personality measures.** Locus of Control, measured by the ANS-AE scale, consists of 40 questions asking respondents to answer how they feel about a particular topic (see Appendix B). Each question was scored dichotomously as either yes or no. For example, two questions from the ANS-AE scale are: (a) Do you believe you can stop yourself from catching a cold? and (b) Do you feel that most of the time parents listen to what their children have to say? According to the scoring procedure, a high score reflects external orientation. Reliability and validity scores for this scale are provided by Nowicki and Duke (1973).

The PRF-E Need for Affiliation scale consists of 16 questions that generally ask how respondents feel about themselves (see Appendix C). Each question was scored dichotomously as either true or false. Two affiliative statements from this scale are: (a) I choose hobbies that I can share with other people and (b) I go out of my way to meet people. According to the scoring procedure, a high score reflects affiliative orientation. Reliability and validity scores for this subscale are provided by Jackson (1989).

Additionally, the Least Preferred Coworker scale was administered for exploratory purposes (see Appendix D). This scale is composed of 18 items,
each consisting of two bipolar adjectives. Responses are recorded on 8-point scales and the bipolar endpoints of favorable and unfavorable adjectives are alternated. Respondents are asked to think of a coworker with whom they worked the least well. This individual serves as the reference point when the 18-item adjective sets are completed. According to the scoring procedure, a low score represents a relationship-motivated leader versus a high score that represents a task-motivated leader. Reliability and validity scores for this subscale are provided by Fiedler and Garcia (1987).

**Manipulation check measures.** Manipulation check questions assessed subjects' perceptions concerning their opportunity to voice, perceived level of control, and group value desirability (see Appendix E). Responses were recorded on a 6-point Likert-type scale with "1 = Very Low" and "6 = Very High" as endpoints. The opportunity to voice manipulation check measured the degree to which subjects believed they had expressed their opinion to the experimenter. Furthermore, subjects' perceived level of control was assessed by questions concerning both process and decision control (see Appendix E). The amount of process control perceived by subjects evaluated the extent to which subjects felt they had control over the goal-setting decision. The amount of decision control perceived by subjects assessed the degree to which subjects felt they had control over the assigned goal. Additionally, subjects' perceived
level of group value desirability was assessed by four exploratory questions concerning the experimenter's actions and decision-making procedure (see Appendix E).

**Procedure**

The procedure enacted for this study mirrored the experimental procedure used by Lind et al. (1990). Although a different procedure could increase generalizability, the use of this well understood method is the practical approach for exploring relatively unknown relationships. In the words of Ashcraft (1989), "occasionally, it pays to use a thoroughly understood 'shovel' when you’re digging for something new" (p. 357).

On arrival, subjects were informed that the purpose of the study was to investigate the role of practice on performance. Subjects were informed that the experiment had two parts, and they were given an overview of the procedure (see Appendix F). Subjects were instructed that they would complete two surveys in part one and then work on the construction of course schedules in part two (see Appendix G). The experimental materials were reviewed, and subjects were given an explanation of the course scheduling task. Afterwards, subjects were seated in separate rooms and instructed to start part one of the experiment.

In part one, subjects completed the ANS-IE scale and the PRF-E Need for Affiliation subscale. On completion of the surveys, the subjects were
instructed to open the door to their room and await the arrival of the experimenter. On average, subjects took approximately 30 minutes to complete the questionnaires. After the personality measures were administered, the experimenter entered the room and asked subjects if they had any questions concerning the course scheduling task. Often times, the experimenter answered questions or further explained the course scheduling process. Subjects were then asked to practice the scheduling task for five minutes and complete as many schedules as possible. The experimenter set a timer and left the room. After the five minute practice trial, the experimenter reentered the room, and the subjects were asked how many schedules they had completed and if they had any questions concerning the scheduling task. In order to "prime" subjects' willingness to express their opinions, they were asked if they thought the scheduling task was easy or difficult, and interesting or boring.

Following the practice trial, subjects were informed of the required number of schedules they would be required to complete in the final stage of the experiment. In the predecision voice condition, subjects were informed that the experimenter was tentatively thinking of requiring them to complete 12 schedules during the 15 minute trial period (see Appendix F). The experimenter stated that before the goal of 12 schedules was assigned he would like to hear the subject's opinion concerning the performance goal. If the subjects were reluctant to express their views, the experimenter asked
additional probing questions and confirmed that he was interested in the subject's opinion. Due to the challenging nature of the goal, subjects expressed a desire to lower the goal. After listening to the subject's view, the experimenter lowered the assigned goal of 10 schedules for the performance trial.

In the postdecision voice condition, the experimenter informed the subjects that they would be required to complete a predetermined goal of 10 schedules for the final 15 minute task period (see Appendix F). Encouragement for the subjects to express their opinions was offered by stating that the experimenter was interested in any views subjects had regarding the goal even though it could not be changed. As in the predecision voice condition, if subjects were reluctant to express their views, they were asked probing questions regarding the assigned goal. After the subjects expressed their views, the experimenter restated the goal of 10 schedules. Subjects in this condition also stated that they would prefer a lower goal. According to Lind et al. (1990), "...any perception of control in the postdecision voice condition would run contrary to both the experimenter's explicit denial of any influence of the subjects' input and his failure to change the goal" (p. 957).

In the no-voice condition, the experimenter assigned subjects a 10 schedule performance goal for the 15 minute task period (see Appendix F). Subjects were not invited to offer their views concerning the performance goal.
After goal assignment, all subjects were instructed to complete the goal of 10 schedules in the allotted time. After the 15 minute interval, the experimenter entered the room and asked the subjects to stop working. Subjects were instructed to replace all experimental materials in their folder and were then handed an additional survey to complete. The survey packet contained manipulation check and dependent variable questions. After completion of the questionnaire, subjects were debriefed as to the purpose of the experiment and issued extra credit vouchers.
Chapter III

Results

Study Variables

An analysis of internal consistency was conducted on each multiple-item scale used in the study. Table 1 presents the number of items and coefficient alpha for each scale. Additionally, the relationships among study variables are presented in the correlation matrix displayed in Table 2.

Score frequencies for the two personality measures, hypothesized as moderator variables, are presented. Figure 1 presents score frequencies of the Locus of Control (ANS-IE) scale and Figure 2 presents score frequencies of the Need for Affiliation (PRF-E) scale. To determine if gender differences occurred on these scales, a one-way analysis of variance was conducted on the Locus of Control and Need for Affiliation scales. The analysis revealed that there was no gender effect on Locus of Control ($F (1, 136) = 1.0$, ns.) nor on Need for Affiliation ($F (1, 136) = 1.4$, ns.). Fiedler and Chemers' Least Preferred Coworker (LPC) Scale (cited in Fiedler & Garcia, 1987) was also administered to subjects for the purpose of exploratory analysis and to aid in the interpretation of hypotheses two and three. Figure 3 presents subject scores for the Least Preferred Coworker Scale.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Number of items</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity to Voice (OV)</td>
<td>2</td>
<td>.58</td>
</tr>
<tr>
<td>Process Control (PC)</td>
<td>2</td>
<td>.69</td>
</tr>
<tr>
<td>Decision Control (DC)</td>
<td>2</td>
<td>.64</td>
</tr>
<tr>
<td>Procedural Fairness (PF)</td>
<td>2</td>
<td>.74</td>
</tr>
<tr>
<td>Distributive Fairness (DF)</td>
<td>2</td>
<td>.64</td>
</tr>
<tr>
<td>Group Value Desirability (GV)</td>
<td>4</td>
<td>.54</td>
</tr>
<tr>
<td>Locus of Control (LOC)</td>
<td>40</td>
<td>.69</td>
</tr>
<tr>
<td>Need for Affiliation (AFF)</td>
<td>16</td>
<td>.73</td>
</tr>
<tr>
<td>Least Preferred Coworker (LPC)</td>
<td>18</td>
<td>.92</td>
</tr>
</tbody>
</table>
Table 2

Correlations Among Study Scales

<table>
<thead>
<tr>
<th></th>
<th>OV</th>
<th>PC</th>
<th>DC</th>
<th>PF</th>
<th>DF</th>
<th>GV</th>
<th>LOC</th>
<th>AFF</th>
<th>LPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>OV</td>
<td>-</td>
<td>.45**</td>
<td>.51**</td>
<td>.28**</td>
<td>.18*</td>
<td>.32**</td>
<td>-.07</td>
<td>-.08</td>
<td>.04</td>
</tr>
<tr>
<td>PC</td>
<td>-</td>
<td>.67**</td>
<td>.47**</td>
<td>.43**</td>
<td>.39**</td>
<td>-.11</td>
<td>-.04</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>-</td>
<td>.38**</td>
<td>.40**</td>
<td>.35**</td>
<td>-.09</td>
<td>-.05</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PF</td>
<td></td>
<td></td>
<td></td>
<td>.72**</td>
<td>.68**</td>
<td>-.06</td>
<td>.09</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>DF</td>
<td>-</td>
<td></td>
<td></td>
<td>.69**</td>
<td>.03</td>
<td>.19*</td>
<td>.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.13</td>
<td>.01</td>
<td></td>
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</tr>
<tr>
<td>LOC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.18*</td>
<td>-.17*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AFF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.19*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LPC</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Note.** Entries are Pearson correlation coefficients (N = 138). OV = Opportunity to Voice; PC = Process Control; DC = Decision Control; PF = Procedural Fairness; DF = Distributive Fairness; GV = Group Value Desirability; LOC = Locus of Control; AFF = Need for Affiliation; LPC = Least Preferred Coworker.

* p < .05, 2-tailed.

** p < .01, 2-tailed.
Figure 1

Subject Scores on the Locus of Control Scale

Note. Higher Scores indicate internal Locus of Control Orientation.
Note. Higher scores indicate affiliative orientation.
Figure 3

Subject Scores on the Least Preferred Coworker Scale

Note: Higher scores indicate positive attributes.
Manipulation Checks

Opportunity to voice was manipulated in the experimental conditions by allowing subjects either predecision voice, postdecision voice, or no voice. Subjects’ perceived opportunity to voice was measured by two questions. Table 3 presents cell means for the composite scale. To gauge the subjects’ perceptions of the experimental conditions, a one-way analysis of variance (ANOVA) was conducted on ratings of the voice manipulation check. The analysis revealed significant main effects for the voice manipulation, $F(2, 135) = 26.66, p < .001$. A Tukey post hoc multiple comparison analysis among the three treatment conditions was conducted. Results indicate subjects felt they had been given a greater opportunity to voice in both conditions allowing voice than in the no-voice condition ($p < .05$). The pattern of results indicate that opportunity to voice was successfully manipulated across the three experimental conditions.

Group Value Desirability

To investigate subjects’ perceptions regarding procedure desirability and the level of trust and respect the experimenter demonstrated, four group-value desirability items were administered for exploratory purposes. The items were combined, and the ratings on the scale were analyzed by experimental condition. Table 3 presents cell means for the four-item composite scale. A one-way analysis of variance (ANOVA) was conducted on subjects’ ratings of
Table 3

**Condition Means of Study Variables**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Predecision</th>
<th>Postdecision</th>
<th>No-Voice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity to Voice</td>
<td>4.70</td>
<td>4.37</td>
<td>2.78</td>
</tr>
<tr>
<td>Group-Value Desirability</td>
<td>4.64</td>
<td>4.72</td>
<td>4.45</td>
</tr>
<tr>
<td>Process Control</td>
<td>3.72</td>
<td>2.64</td>
<td>2.60</td>
</tr>
<tr>
<td>Decision Control</td>
<td>4.19</td>
<td>3.12</td>
<td>2.42</td>
</tr>
<tr>
<td>Procedural Fairness</td>
<td>3.88</td>
<td>3.84</td>
<td>4.01</td>
</tr>
<tr>
<td>Distributive Fairness</td>
<td>4.06</td>
<td>3.99</td>
<td>4.15</td>
</tr>
</tbody>
</table>

**Note.** Entries are cell means on 7-point scales; higher values indicate higher ratings.
group value desirability. The analysis revealed that the test of group value
desirability by experimental condition was not significant ($F (2, 135) = .931, \text{ ns.}$).
Results indicate subjects did not perceive a difference across conditions in
terms of procedure desirability, the extent to which the experimenter was
trusted, or the extent to which subjects felt the experimenter was respectful.

Process Control

To investigate subjects' perceived level of control over the goal-setting
procedure, two process control items were administered. The items were
combined and ratings on the scale were analyzed by experimental condition.
Table 3 presents cell means for the composite scale. A one-way analysis of
variance (ANOVA) was conducted on subjects' ratings of perceived control over
the goal-setting procedure (process control). The analysis revealed a
significant main effect for process control ($F (2, 135) = 7.21, p < .001$). A
Tukey post hoc multiple comparison analysis among the three treatment
conditions was conducted. Results indicate subjects felt they had greater
process control in the predecision voice condition than in either the postdecision
voice condition or the no-voice condition ($p < .05$). These results further
support the conclusion that subjects perceived the experimental conditions in
the intended manner. In the predecision voice condition, subjects experienced
a change in the assigned goal after they voiced their opinion, and they
perceived greater process control as a result.
Decision Control

To investigate subjects' perceived level of control over the assigned goal, two decision control items were administered. The two items were combined and ratings were analyzed by experimental condition. Table 3 presents cell means for the composite scale. A one-way analysis of variance (ANOVA) was conducted on subjects' ratings of perceived control over the assigned goal (decision control). The analysis revealed a significant main effect for decision control \( (F(2,135) = 17.36, p < .001) \). A Tukey post hoc multiple comparison analysis among the three treatment conditions was conducted. Results indicate all three conditions differed significantly in the amount of decision control subjects felt they had over the assigned goal \( (p < .05) \). The predecision voice condition was rated highest in decision control; postdecision voice was rated intermediate, and no-voice was rated the lowest. This suggests that subjects falsely perceived postdecision voice as instrumental in terms of influencing the experimenter's decision. Lind et al. (1990) also reported this "leakage of instrumentality" in their postdecision voice condition.

Procedural Fairness

Hypothesis 1 predicted that perceptions of procedural fairness would range from high to low across the experimental conditions. This hypothesized linear relationship is a replication of Lind et al. (1990). Specifically, it was predicted that subjects' would perceive the level of procedural fairness to be greatest in
the predecision voice condition, moderate in the postdecision voice condition, and least in the no-voice condition. Table 3 presents cell means for the two-item procedural fairness scale. To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted on ratings of procedural fairness. The analysis revealed that the test of procedural fairness by experimental condition was not significant ($F (2, 135) = .16, \text{ns.}$). Hypothesis 1 was not supported; subjects did not perceive a difference in procedural fairness across the experimental conditions.

**Moderator analysis.** Hypothesis 2 predicted an interaction between Locus of Control orientation and experimental condition. Locus of Control orientation was measured by the ANS-IE scale. Specifically, it was hypothesized that subjects scoring in the direction of internality would perceive a larger discrepancy in perceptions of procedural fairness between the predecision voice condition and the postdecision voice plus no-voice conditions than subjects scoring in the external direction.

To test this hypothesis, a three-step multiple regression analysis was conducted with perceptions of procedural justice as the dependent variable (see Table 4). On step 1, the contrast of experimental condition (predecision voice vs. postdecision plus no-voice) was entered. The variance accounted for by this contrast was not significant ($F (1, 136) = .03, \text{ns.}$). On step 2, scores on the Locus of Control scale were entered. The variance accounted for by Locus
Table 4
Regression Analysis of Hypotheses 2 and 3 for Procedural Fairness

<table>
<thead>
<tr>
<th></th>
<th>Hypothesis 2</th>
<th></th>
<th>Hypothesis 3</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>R-square</td>
<td>R-square</td>
<td>R-square</td>
<td>R-square</td>
</tr>
<tr>
<td></td>
<td>Increment</td>
<td>Total</td>
<td>Increment</td>
<td>Total</td>
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<tr>
<td>Step 1</td>
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<td>.000</td>
<td>.002</td>
<td>.002</td>
</tr>
<tr>
<td>(contrast)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>.004</td>
<td>.004</td>
<td>.009</td>
<td>.011</td>
</tr>
<tr>
<td>(personality</td>
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<td>scale)</td>
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<tr>
<td>Step 3</td>
<td>.008</td>
<td>.012</td>
<td>.000</td>
<td>.011</td>
</tr>
<tr>
<td>(interaction)</td>
<td></td>
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</tr>
</tbody>
</table>
of Control was not significant ($F(1, 136) = .52$, $ns.$). On step 3, the cross-product term representing the interaction between Locus of Control and the experimental condition contrast was entered. This step allowed for the test of Hypothesis 2. The variance accounted for by the interaction term was not significant ($F(1, 136) = 1.15$, $ns.$); Hypothesis 2 was not supported. Locus of Control orientation was not related to perceptions of procedural fairness.

Hypothesis 3 predicted an interaction between Need for Affiliation and experimental condition. Affiliative orientation was measured by the PRF-E Need for Affiliation scale. It was hypothesized that subjects scoring in the affiliative direction would perceive a larger discrepancy in perceptions of procedural fairness between the voice conditions (predecision and postdecision) vs. the no-voice condition than subjects scoring in the nonaffiliative direction. To test this hypothesis, a three-step multiple regression analysis was conducted with perceptions of procedural justice as the dependent variable (see Table 4). On step 1, the contrast between the predecision plus postdecision voice conditions and the no-voice condition was entered. The variance accounted for by the contrast of experimental condition was not significant ($F(1, 136) = .31$, $ns.$). On step 2, scores on the Need for Affiliation scale were entered. The variance accounted for on this step was not significant ($F(1, 136) = 1.21$, $ns.$). On step 3, the cross-product term representing the interaction between Need for Affiliation and the experimental condition contrast was entered. This step
allowed for the test of Hypothesis 3. The variance accounted for by the interaction term was not significant ($F (1, 136) = .04, \text{ns.}$); Hypothesis 3 was not supported. Affiliative orientation was not related to perceptions of procedural fairness.

Distributive Fairness

Hypothesis 1 predicted that perceptions of distributive fairness would range from high to low across the experimental conditions. Specifically, it was predicted that subjects would perceive the level of distributive fairness to be greatest in the predecision voice condition, moderate in the postdecision voice condition, and least in the no-voice condition. Table 3 presents cell means for the two-item distributive fairness scale. To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted on ratings of distributive fairness. The analysis revealed that the test of distributive fairness by experimental condition was not significant ($F (2, 135) = .15, \text{ns.}$). Overall, Hypothesis 1 was not supported; subjects did not perceive a difference in either procedural or distributive fairness across the experimental conditions.

Exploratory moderator analysis. Although only differences in procedural fairness were predicted in Hypotheses 2 and 3, for exploratory purposes post-hoc tests of these hypotheses were conducted using distributive fairness as the dependent variable. The three-step multiple regression procedures, used to test Hypotheses 1 and 2 with procedural justice as the dependent variable,
were repeated with distributive fairness as the dependent variable. A multiple regression analysis was conducted with perceptions of distributive justice as the dependent variable for the exploratory analysis of Hypothesis 2 (see Table 5). On step 1, the contrast between experimental condition (predecision voice versus postdecision voice plus no-voice) was entered. The variance accounted for by the contrast of experimental condition was not significant ($F (1, 136) = .00, ns.$). On step 2, scores on the Locus of Control scale were entered. The variance accounted for on this step was not significant ($F (1, 136) = .14, ns.$). On step 3, the cross-product term representing the interaction between Locus of Control and the experimental condition contrast was entered. The variance accounted for by the interaction term was not significant ($F (1, 136) = 2.03, ns.$); the post-hoc analysis of Hypothesis 2 in relation to distributive fairness was not supported. Locus of Control orientation was not related to perceptions of distributive fairness.

A multiple regression analysis was conducted with perceptions of distributive justice as the dependent variable for the exploratory analysis of Hypothesis 3 (see Table 5). On step 1, the contrast between the predecision plus postdecision voice conditions and the no-voice condition was entered. The variance accounted for by the contrast of experimental condition was not significant ($F (1, 136) = .23, ns.$). On step 2, scores on the Need for Affiliation scale (PRF-E) were entered. The variance accounted for on this step was
Table 5

Exploratory Regression Analysis of Hypotheses 2 and 3 for Distributive Fairness

<table>
<thead>
<tr>
<th></th>
<th>Pos-hoc Analysis of Hypothesis 2</th>
<th>Post-hoc Analysis of Hypothesis 3</th>
</tr>
</thead>
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<tr>
<td></td>
<td>R-square Increment</td>
<td>R-square Total</td>
</tr>
<tr>
<td>Step 1 (contrast)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Step 2 (personality scale)</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>Step 3 (interaction)</td>
<td>.015</td>
<td>.016</td>
</tr>
</tbody>
</table>
significant ($F(1, 136) = 5.35, p < .05$). As subjects scored in the affiliative direction on the Need for Affiliation scale they rated distributive justice higher regardless of condition as compared to the subjects who scored in the non-affiliative direction. This is an important result which indicates an individual difference component in relation to distributive justice for Need for Affiliation.

On step 3, the cross-product term representing the interaction between Locus of Control and the experimental condition contrast was entered. The variance accounted for by the interaction term was marginally significant ($F(1, 136) = 3.79, p = .04$). To explore this effect, subjects were divided into two groups based on their scores on the Need for Affiliation scale. Subjects who scored in the upper and lower 40 percent on the Need for Affiliation scale were divided into groups. Subjects in the mid-range of the Need for Affiliation scale were not included because Jackson (1989) states that mid-range scores are not interpretable. Distributive fairness ratings were graphed by experimental contrast for the upper and lower Need for Affiliation groups (see Figure 4).

Overall, subjects who scored in the affiliative direction on the Need for Affiliation scale rated the voice and no-voice conditions as identical in distributive fairness; thus, the direction of this interaction was not in the intended direction.

However, subjects who scored in the non-affiliative direction on the Need for Affiliation scale rated the voice conditions higher in fairness than the no-voice condition. An individual difference in relation to voice for low need for affiliation individuals exists.
Figure 4

Subject Scores on Distributive Fairness as a Function of Experimental Condition and Need for Affiliation Scores.
Chapter IV
Discussion

The present study examined the voice effect using personality theory to explore individual differences in relation to instrumental and group-value theories of voice. Previous researchers (see Lind & Tyler, 1988) have reported that persons who are allowed an opportunity to express their opinions typically report a heightened level of perceived fairness which has been labeled the voice effect. Instrumental and group-value theories have been proposed as explanations for this effect. According to the instrumental perspective, people value voice only to the extent that it will increase desired outcomes (Lind & Tyler, 1988). The group-value explanation contends that people prefer voice because of the symbolic aspect of expressing one's opinion to a receptive group member which affirms group status (Lind & Tyler, 1988; Tyler, 1990). The present study proposed an interaction between personality orientation and voice resulting in differential evaluations of procedural fairness. It has been submitted that persons oriented towards controlling outcomes will perceive instrumental voice as more fair than symbolic or no-voice situations; persons oriented in the affiliative direction will perceive voice, regardless of instrumentality, as more fair than no-voice situations.

Essential to the tests of the proposed hypotheses is whether the experimental conditions were adequately manipulated. Examination of the
manipulation check questions revealed that subjects perceived a greater opportunity to express their opinions in the voice conditions compared to the no-voice condition. This result indicates that the opportunity to voice was successfully manipulated since subjects were asked their opinions only in the voice conditions. Next, the analysis of process control revealed that subjects perceived greater control over the way the goal-setting decision was made in the predecision voice condition than in either the postdecision or no-voice conditions. This result indicates that subjects interpreted predecision voice as instrumental for controlling the method that was used to set their performance goal. Lastly, the analysis of decision control questions revealed that subjects perceived greater control over the goal-setting decision in the predecision voice condition than the postdecision voice condition which further supports the perceived instrumentality of predecision voice. However, subjects also perceived greater decision control in the postdecision voice condition than in the no-voice condition. Recall, the experimental procedure in the postdecision condition entailed assigning a performance goal and informing subjects that the experimenter was interested in their opinions regarding the goal. Subjects in this condition perceived the opportunity to voice as a way of controlling the decision. Lind et al. (1990) reported the same result pattern with a single question assessing how much control subjects had over the goal. Subjects in both studies falsely perceived control over the goal setting decision, referred to
as an "illusion" of control. The present finding further supports the difficulty in separating perceived instrumentality from voice. Evidently, allowing subjects to voice, even after the decision has been made, is perceived as a means of influencing the decision maker's verdict. With the exception of this leakage of instrumentality in the postdecision voice condition, the independent variable was adequately manipulated.

Hypothesis 1 was important to the present study since it was merely a replication of results by Lind et al. (1990). Similar results would have ensured that the experimental procedure was properly enacted. Hypothesis 1 predicted ratings of procedural and distributive fairness to be greatest in the predecision voice condition, moderate in the postdecision voice condition, and least in the no-voice condition. Hypothesis 1 was not supported; subjects did not rate procedural or distributive fairness differently as a result of experimental condition. In fact, the three conditions produced nearly identical group means and standard deviations for both dependent variables. This result is puzzling, especially in light of the main effect for process control and decision control. According to Tyler et al. (1985) procedures that are high in process control tend to produce enhanced ratings of procedural justice. Additionally, Brett (1985) reports that high decision control situations, regardless of the level of process control, will produce enhanced fairness ratings. In either event, a procedure that has high process control and high decision control, such as the predecision
voice condition, should produce enhanced fairness ratings.

Hypotheses 2 and 3 were unique to the present study, predicting an interaction between personality orientation and experimental condition. Specifically, Hypothesis 2 predicted subjects scoring in the direction of internality on the Locus of Control scale would perceive a greater discrepancy in fairness between the instrumental and noninstrumental conditions than subjects scoring in the external direction. Hypothesis 2 was tested using a three-step multiple regression equation. The apriori test of this hypothesis was not supported with procedural fairness as the dependent. Hypothesis 3 predicted that subjects scoring in the affiliative direction on the PRF-E Need for Affiliation subscale would perceive a larger discrepancy in perceptions of fairness between the voice conditions as compared to the no-voice condition than subjects scoring in the non-affiliative direction. Hypothesis 3 was also tested using a three-step multiple regression equation. This hypothesis was not supported with procedural fairness as the dependent variable.

Exploratory analyses of both Hypothesis 2 and 3 with distributive fairness as the dependent variable were conducted. The post-hoc analysis of Hypothesis 2 with distributive fairness as the dependent variable did not produce significance during three step moderated regression analysis. However, the post-hoc analysis of Hypothesis 3 with distributive fairness produced significance at two steps. On step 1, the contrast between the
predecision plus postdecision voice conditions and the no-voice condition was entered and the variance accounted for was not significant. On step 2, scores on the Need for Affiliation scale (PRF-E) were entered; the variance accounted for on this step was significant. As subjects scored in the Affiliative direction on the Need for Affiliation scale they rated distributive justice higher regardless of voice condition. On step 3, the test of Hypothesis 3, the cross-product term representing the interaction between Need for Affiliation and the experimental condition contrast was entered. The variance accounted for by the interaction term was marginally significant, however, the direction of the interaction was not as predicted since subjects scoring in the affiliative direction rated the predecision plus postdecision voice conditions the same as the no-voice condition.

Furthermore, subjects scoring in the nonaffiliative direction tended to rate the voice conditions higher than the no-voice condition, whereas subjects scoring in the affiliative direction tended not to rate the conditions differently. This is a very interesting and surprising result that identifies an individual difference associated with differential ratings of distributive justice. This finding validates the use of Need for Affiliation as a moderator of the voice effect. Presently, a sound theoretical explanation is not available to explain why low Need for Affiliation individuals rated the voice conditions higher than the no-voice condition. Yet, it may be theorized that the lack of procedural fairness in
the no-voice condition was of a greater salience to these individuals since they did not focus on the affiliative aspects of the experiment. If the decision making process were more salient to these nonaffiliative individuals, then situations allowing voice would be perceived as more fair than situations in which input is not permitted, such as the no-voice situation.

Three scenarios are explored as explanations for the nonsignificant results of the predicted hypotheses. First, the study hypotheses may be incorrect, however, it is unlikely that Hypothesis 1 is incorrect since ample evidence for the voice effect has been documented. Hypotheses 2 and 3 may be incorrect as the voice effect may be independent of personality orientation. However, it is difficult to fully reject the feasibility of Hypotheses 2 and 3 since Hypothesis 1 was not replicated in this study. If Hypothesis 1 had been replicated and Hypotheses 2 and 3 not supported, one could reasonably conclude that the moderating effect of personality on voice is questionable. Since this was not the case, one could argue that the experimental manipulation or instrumentation is at fault for the nonsignificant findings. In any event, it is prudent to withhold judgment concerning the feasibility of all three hypotheses until further testing can be performed.

A second explanation for the present findings is that a flawed experimental method may be responsible. The method used in this study, however, was a replication of the one used by Lind et al. (1990), so one can
reasonably conclude that the method is sound. Yet, the postdecision voice condition was not perceived as completely noninstrumental because subjects' opportunity to voice occurred prior to the performance task. A stronger symbolic voice condition would entail a postdecision and postperformance task voice opportunity that would be perceived as clearly noninstrumental by subjects. Yet, the present experiment did not completely mirror the previous authors' methodology since the present study introduced two types of variability that were not present in the Lind et al. (1990) study. First of all, the administration of personality measures before the experimental manipulation may have influenced subjects' ratings of procedural and distributive fairness. Secondly, an intercom system was used for the exchange of information and voice in the Lind et al. (1990) study that was not used in the present study. Instead, subjects personally interacted with the experimenter throughout the experiment, and subjects were treated with courtesy and respect throughout the experiment, and the experimenter was attentive to subjects' questions and comments. The interaction between participants may have influenced subjects' perceptions of voice and confounded the experimental method.

Lastly, the third explanation for the nonsignificant findings of the present study is flawed instrumentation. Yet, the dependent variable questions assessing procedural and distributive fairness have been used in numerous studies (see Lind & Tyler, 1988). Therefore, a reasonable amount of
confidence can be placed in the fidelity of the dependent measures. The dependent variables still may have been influenced by the social interaction that occurred between subjects and the experimenter. If this interaction influenced subjects' ratings of fairness, it could explain why Hypothesis 1 was not replicated in the present study.

Limitations of the present study are concentrated in the methodological domain. One limitation relates to the introduction of additional social interaction between the experimenter and subjects. It is possible that the experimenter corrupted the experimental setting by expressions of gratitude and friendliness to subjects before and during the experiment. The social exchange between the experimenter and subjects may have created a social climate that influenced procedural and distributive fairness ratings. In essence, this conclusion could be used to support the group-value theory since the social interaction between the experimenter and subjects may have augmented fairness ratings.

If the social interaction explanation of this study's results is true, future researchers of the voice effect should thoroughly examine the participant interactions. These researchers should closely examine the nature of the voice effect by focusing on verbal and nonverbal social exchange issues. Researchers may want to examine whether positive interaction influences rating of procedural and distributive fairness, and procedures should then be designed
to minimize the amount of contact between experimenter and subject. For example, Lind et al. (1990) utilized an intercom system for transmitting instructions and voice. Additional personality measures should be explored as possible moderators to the voice effect, as well as the development of a procedural justice sensitivity scale that incorporates instrumental and group-value considerations. Some persons may respond to decision-makers by trying to exercise control or manipulation while others may respond apathetically. A justice sensitivity scale should focus on the amount of attention individuals place on both procedures and outcomes.

Additional areas of future investigations should include studies that focus on group dynamics and voice. These studies could manipulate the size and dynamics of the group for the investigation of the voice effect. Future researchers should focus on Tajfel and Turner’s (1979) work with social conflict and other work such as the use of a super-ordinate goal for conflict resolution. Lastly, the Need for Affiliation scale may be quite useful for future researchers in an attempt to isolate an individual difference component to the voice effect. Under highly social situations the low Need for Affiliation individuals may be the only group that identifies the no-voice situations as unfair, where as high Need for Affiliation persons may focus on the social nature of the setting and not on the decisional justice of the situation.
The investigation of the voice effect continues to be an major emphasis in the justice literature, and the debate over instrumental and group-value considerations of voice remains. Whether or not predictable individual differences moderate the voice effect remains unknown. Although, significant differences in perceptions of distributive fairness were documented by subjects who had high versus low Need for Affiliation scores. An interesting yet puzzling finding which suggest the need for further study of the Need for Affiliation measure as it relates to procedural and distributive justice. Thus, Need for Affiliation regardless of the explanation of the voice effect, researchers have documented that subjective perceptions of procedures and outcomes drive ratings of procedural fairness. Individuals may be deceived by a procedure that appears to be fair, such as voice, though, objectively, the procedure is not. This has led researchers to issue warnings to decision-makers who may portray noninstrumental voice as influential.

In conclusion, the results of the present study do not fully answer the question of whether the voice effect is moderated by individual differences. In terms of the experimental methodology, it appears that the three experimental conditions were successfully implemented. The examination of three possible reasons for lack of significance neither eliminated nor supported any one explanation, although the social interaction which occurred between the
subjects and experimenter may best explain the present results. Furthermore, it was shown that the Need for Affiliation scale may prove quite useful in future research for the study of individual differences and the voice effect. The results of the present study take one step in the right direction of validating a scale for use as a predictor of an individual difference moderator variable.
References


Appendix A

Procedural Fairness Questions

1. How fair was the way your performance goal was set?

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<td>very fair</td>
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2. How satisfied were you with the procedure the experimenter used to set your performance goal?

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Distributive Fairness Questions

3. How fair was the performance goal that was assigned?

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4. How satisfied were you with the number of schedules that you were required to complete?

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Appendix B

Locus of Control Scale

Directions: A series of statements follow. Each statement relates to a different topic, and you need to decide whether you agree or disagree with the statement. After you read a statement, decide whether you agree or disagree and record your answer by marking the appropriate circle on the answer sheet. If you agree with a statement, answer (1) Yes. If you disagree with a statement, answer (2) No. When marking your answers, make sure the number of the statement and the number on the answer sheet match.

Key: (1) Yes
     (2) No

1. Do you believe that most problems will solve themselves if you don't fool with them?

2.* Do you believe that you can stop yourself from catching a cold?

3. Are some people just born lucky?

4.* Most of the time do you feel that getting good grades means a great deal to you?

5. Are you often blamed for things that just aren't your fault?

6.* Do you believe that if somebody studies hard enough, he or she can pass any subject?

7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?

8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
9.* Do you feel that most of the time parents listen to what their children have to say?

10. Do you believe that wishing can make good things happen?

11. When you get criticized, does it usually seem it’s for no good reason at all?

12. Most of the time do you find it hard to change a friend’s (mind) opinion?

13.* Do you think that cheering more than luck helps a team to win?

14. Did you feel that it was nearly impossible to change your parent’s mind about anything?

15.* Do you believe that parents should allow children to make most of their own decisions?

16. Do you feel that when you do something wrong there’s very little you can do to make it right?

17. Do you believe that most people are just born good at sports?

18. Are most of the other people your age and sex stronger than you are?

19.* Do you feel that one of the best ways to handle most problems is just not to think about them?

20.* Do you feel that you have a lot of choice in deciding whom your friends are?

21. If you find a four leaf clover, do you believe that it might bring you good luck?

22.* Did you often feel that whether or not you do your homework has much to do with what kind of grades you get?
23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?

24. Have you ever had a good luck charm?

25.* Do you believe that whether or not people like you depends on how you act?

26.* Did your parents usually help you if you asked them to?

27. Have you felt that when people were angry with you, it was usually for no reason at all?

28.* Most of the time, do you feel that you can change what might happen tomorrow by what you do today?

29. Do you believe that when bad things are going to happen, they just are going to happen no matter what you try to do to stop them?

30.* Do you think that people can get their own way if they just keep trying?

31. Most of the time did you find it's useless to try to get your own way at home?

32.* Do you feel that when good things happen, they happen because of hard work?

33. Do you feel that when somebody your age wants to be your enemy, there's little you can do to change matters?

34.* Do you feel that it's easy to get friends to do what you want them to do?

35. Do you usually feel that you have little to say about what you get to eat at home?
36. Do you feel that when someone doesn't like you there's little you can do about it?

37. Do you usually feel that it was almost useless to try in school because most other students are just plain smarter than you are?

38.* Are you the kind of person who believes that planning ahead makes things turn out better?

39. Most of the time, do you feel that you have little to say about what your family decides to do?

40.* Do you think it's better to be smart than to be lucky?

Note. An asterisk indicates a reverse coded item.
Appendix C

Need for Affiliation Scale

Directions: A series of statements follow that one might use to describe oneself. Read each statement and decide whether or not it describes you. Then indicate your answer by marking the appropriate circle on the green answer sheet. If you agree with a statement or decide that it does describe you, answer (1) True. If you disagree with a statement or feel that it is not descriptive of you, answer (2) False. When marking your answers, make sure the number of the statement and the number on the answer sheet match.

Key: (1) True
     (2) False

1. I choose hobbies that I can share with other people.
2.* I am quite independent of the people I know.
3. I go out of my way to meet people.
4.* I would not be very good at a job which required me to meet people all day long.
5.* I seldom put out extra effort to make friends.
6. People consider me to be quite friendly.
7.* I don't really have fun at large parties.
8.* Often I would rather be alone than with a group of friends.
9.* When I see someone I know from a distance, I don't go out of my way to say hello.
10. My friendships are many.
11. I trust my friends completely.
12.* I don't spend much of my time talking with people I see every day.

13. I try to be in the company of friends as much as possible.


15.* Sometime I have to make a real effort to be sociable.

16. I spend a lot of time visiting friends.

Note. An asterisk indicates a reverse coded item.
Appendix D

Least Preferred Coworker Scale

Directions: Throughout your life you have worked in many groups with a wide variety of different people - on your job, in social clubs, in church organizations, in volunteer groups, on athletic teams, and in many others. You probably found working with most of your coworkers quite easy, but working with others may have been very difficult or all but impossible.

Now think of all the people with whom you have ever worked. Next, think of the one person in your life with whom you could work least well. This individual may or may not be the person you also dislike most. It must be the one person with whom you had the most difficulty getting a job done, the one single individual with whom you would least want to work. This person is called your "Least Preferred Coworker" (LPC).

On the scale below, describe this person by picking the number that best represents the person. The scale consists of pairs of words which are opposite in meaning, such as Very Neat and Very Untidy. Between each pair of words are eight spaces which form the following scale:

Examples:

Very Very
Neat 1 2 3 4 5 6 7 8 Untidy

Think of those eight numbers as steps which range from one extreme to the other. Thus, if you ordinarily think that this least preferred coworker is quite neat you would choose number 2 as your answer and mark the corresponding circle on the answer sheet.
However, if you ordinarily think of this person as being only slightly neat, you would choose number 4 as your answer. If you think of this person as very untidy (not neat), you would choose number 8. After you have decided upon an answer, mark the corresponding circle on the answer sheet.

Before you decide upon a number, look at the words at both ends of the line. There are no right or wrong answers. Work rapidly: your first answer is likely to be the best. Do not omit any items and mark each item only once. Think of the real person in your experience, not an imaginary character. Remember, it is not necessarily the person whom you liked least, but the person with whom it is (or was) most difficult to work. Now use the scale to describe the person with whom you can work least well.

Note. On the following scale, an asterisk indicates a reverse coded item.
### Example

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Appendix E

Manipulation Check Questions

1. How much information did you give the experimenter concerning your feelings about your performance goal?

   1  2  3  4  5  6  7
   none at all  some  very much

2. How much opportunity did you have to express your opinions about your performance goal before the decision was made by the experimenter?

   1  2  3  4  5  6  7
   not at all  somewhat satisfied  very satisfied

Process Control Questions

3. Overall, how much control would you say you had over the way your performance goal was set?

   1  2  3  4  5  6  7
   none at all  some  very much

4. How much control did you have over the method that was used to set your performance goal?

   1  2  3  4  5  6  7
   none at all  some  very much
**Decision Control Questions**

5. How much control did you have over the number of schedules that you were required to complete?

   1  2  3  4  5  6  7
   none at all  some  very much

6. To what extent could you influence the performance goal that was set by the experimenter?

   1  2  3  4  5  6  7
   not at all somewhat very much

**Group Value Desirability Questions**

7. To what extent do you trust the experimenter's decision-making?

   1  2  3  4  5  6  7
   not at all somewhat very much

8. To what extent was the experimenter respectful to you?

   1  2  3  4  5  6  7
   not at all somewhat very much

9. Would you consider being a member of a group that used the same procedure as the experimenter did in order to make a decision?

   1  2  3  4  5  6  7
   not at all somewhat very much

10. If your supervisor/boss used the same goal setting procedure as the experimenter did, how would you rate your standing/status as a member of the work group?

    1  2  3  4  5  6  7
    very low moderate very high
Course Schedule Construction Task

Directions: The purpose of the experimental task is the construction of course schedules. You will need the following: a class grouping sheet, Schedule Sheets, a Fall Class Schedule, dice, and a pencil. If any of these are missing, please contact the experimenter. When you have completed the schedules that were assigned to you, attach a paper clip to the completed SCHEDULE SHEETS and return the other supplies to the folder.

Use the following rules for the construction of all schedules:

1. Each schedule must contain one class from each of the three course groupings for a total of three classes. You will be required to select the three classes for each course schedule by a dice roll. You may only use the classes listed in the three class groupings.

2. Start the construction task by rolling the dice provided. On the course schedule sheet record the following from group one on the Schedule sheet: the number rolled, and the corresponding Course ID number, Course Name, and page number. Repeat this procedure for group two and group three to complete the selection of classes for a single course schedule.

3. After you have recorded the information for each of the three groups by the procedure outlined above, you will need to access individual class times and call numbers from the Fall Schedule Booklet. A Fall 1993 Class Schedule is supplied. DO NOT WRITE IN THE COURSE CATALOG.

4. In order to complete a schedule, you will have to choose individual classes that can be combined to create a course schedule. Therefore, you can not choose class that have conflicting times. Note the weekly limitations that represent a work schedule; you can not choose class times that conflict with these limitations.

5. Under rare circumstances, you will not be able to finish a schedule due to time conflicts. If this occurs, write “Conflict” across the section labeled Start & End Times and move to the next problem.
### Group One

<table>
<thead>
<tr>
<th>Dice #</th>
<th>Course ID</th>
<th>Course Name</th>
<th>Page</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>ANTH 1050</td>
<td>INTRO TO GENERAL ANTH</td>
<td>23</td>
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<tr>
<td>2.</td>
<td>BIOL 1330</td>
<td>ENVIRONMENTAL BIOLOGY</td>
<td>24</td>
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<td>3.</td>
<td>PSYC 3520</td>
<td>CHILD PSYCHOLOGY</td>
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<td>4.</td>
<td>SOC 1010</td>
<td>INTRO TO SOCIOLOGY</td>
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<td>PHIL 1010</td>
<td>INTRO TO PHILOSOPHY</td>
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<td>6.</td>
<td>FREN 1110</td>
<td>ELEMENTARY FRENCH I</td>
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<td>7.</td>
<td>SPAN 1110</td>
<td>ELEMENTARY SPANISH I</td>
<td>32</td>
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<td>8.</td>
<td>CHEM 1180</td>
<td>GEN CHEM &amp; QUAL ANALYSIS</td>
<td>29</td>
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<td>9.</td>
<td>GERM 1110</td>
<td>ELEMENTARY GERMAN I</td>
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<td>10.</td>
<td>MATH 1950</td>
<td>CALCULUS I</td>
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<td>11.</td>
<td>PSCI 1100</td>
<td>INTRO AMERICAN NATL GOVT</td>
<td>42</td>
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<td>12.</td>
<td>MATH 1324</td>
<td>PRECALC ALGEBRA</td>
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### Group Two

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<tbody>
<tr>
<td>1.</td>
<td>GEOG 1020</td>
<td>INTRO TO HUMAN GEOGRAPHY</td>
<td>37</td>
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<td>2.</td>
<td>HIST 1010</td>
<td>WORLD CIV I</td>
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<td>3.</td>
<td>HIST 1010</td>
<td>WORLD CIV II</td>
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<td>4.</td>
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<td>SURVEY OF CRIM JUSTICE</td>
<td>50</td>
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<td>5.</td>
<td>EDUC 2020</td>
<td>EDUCATIONAL FOUNDATIONS</td>
<td>54</td>
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<td>6.</td>
<td>RELI 1010</td>
<td>INTRO TO WORLD RELIGIONS</td>
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<td>PSCI 1000</td>
<td>INTRO TO POL SCI</td>
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<td>8.</td>
<td>SPCH 2410</td>
<td>SMALL GROUP COMM &amp; LEADERSHIP</td>
<td>28</td>
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<td>9.</td>
<td>EDUC 2010</td>
<td>HUMAN GROWTH &amp; LEARNING</td>
<td>54</td>
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<tr>
<td>10.</td>
<td>PE 1800</td>
<td>FITNESS FOR LIVING</td>
<td>57</td>
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<td>11.</td>
<td>EDUC 2020</td>
<td>HUMAN RELATIONS</td>
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<td>12.</td>
<td>CSCI 1500</td>
<td>COMPUTER LITERACY/PROGRAM</td>
<td>32</td>
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<tr>
<td>Dice #</td>
<td>Course ID</td>
<td>Course Name</td>
<td>Page</td>
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<tr>
<td>1.</td>
<td>BLST 1000</td>
<td>INTRO TO BLACK STUDIES</td>
<td>p. 26</td>
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<td>PUBLIC SPEAKING FUNDS</td>
<td>p. 28</td>
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<td>ENGLISH COMPOSITION</td>
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<td>PRIN OF ECONOMICS - MACRO</td>
<td>p. 47</td>
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<td>5.</td>
<td>LAWS 3230</td>
<td>BUSINESS LAW I</td>
<td>p. 49</td>
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<td>ENGL 2300</td>
<td>INTRO TO LITERATURE</td>
<td>p. 36</td>
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<tr>
<td>7.</td>
<td>BRCT 2320</td>
<td>TELEVISION PRODUCTION I</td>
<td>p. 26</td>
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<td>8.</td>
<td>JOUR 2150</td>
<td>NEWS WRITING &amp; REPORTING</td>
<td>p. 27</td>
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<tr>
<td>9.</td>
<td>JOUR 4230</td>
<td>PUBLIC RELATIONS</td>
<td>p. 27</td>
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<td>10.</td>
<td>ACCT 2010</td>
<td>PRIN OF ACCOUNTING I</td>
<td>p. 46</td>
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<td>ISQA 2130</td>
<td>PRIN BUSINESS STATISTICS</td>
<td>p. 49</td>
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<td>12.</td>
<td>MKT 3310</td>
<td>MARKETING</td>
<td>p. 50</td>
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# Course Schedule Recording Sheets

## SCHEDULE SHEET

<table>
<thead>
<tr>
<th>Dice #</th>
<th>ID, Name, Pge</th>
<th>Call Number</th>
<th>Class Days</th>
<th>Start &amp; End Times</th>
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<tbody>
<tr>
<td></td>
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(Work Schedule: 8:00 am - 4:00 pm M-W-F)

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## SCHEDULE SHEET

<table>
<thead>
<tr>
<th>Dice #</th>
<th>ID, Name, Pge</th>
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</table>

(Work Schedule: 8:00 am - 4:00 pm T, R)
Appendix G

**Experimental Script**

My, name is ____. There are two parts to this experiment. In part one, you will be asked to complete three surveys for a total of 76 questions. In part two, you will work on constructing course schedules. You'll be given five minutes for practice and then you will construct course schedules during a 15 minute trial. There is no deception involved with this experiment. If you have any questions at any time feel free to ask.

These folders have all the information that you will need during the experiment. Please remove the page labeled consent form. Read the entire form, please initial page one and sign page two.

[Afterwards]

Does everyone understand the written text in the consent form?

Now, please turn the scan sheet to side one. Look at the lower left corner and locate the area called "Identification Number." You should all have a three digit number recorded in this area. Use a number two pencil to fill in the corresponding circles under the four digit number. **TAKE YOU TIME WHEN MARKING YOUR ANSWERS, AND USE REASONABLE PRESSURE WHEN DARKENING THE CIRCLES. DON'T PRESS TOO HARD.**

[When subjects are finished]

Ok, now look at the right side, notice that the column on the left goes from 1 to 10 and number 11 starts on the next column to the right, and so on...

In each of your folders is a survey question packet, like this, it contains three surveys. Each survey has unique directions, so please read the directions carefully. In a minute, I'll assign you a room where you can get started on the surveys.

However, before I do that, I would like briefly explain the course scheduling task for part two.
You'll roll the dice and chose the corresponding course in group one from the course grouping sheet. Record the dice roll, the course ID number, and the page number. Next, repeat this procedure for group two and three. After you record the course information, you'll need to access class times from the official Course Catalog schedule book to complete a single course schedule. Do not pick class times that conflict with the work schedule or other class times. DO NOT WRITE ON ANYTHING BUT THE RECORD SHEET.

Please note, that the last page of the survey instructs you to read through the course schedule instructions. When you are done come and see me for the dice.

[After subjects have completed surveys]

Do you have any questions regarding the course scheduling task? Ok, I would like you to complete as many schedules as you can in the next five minutes, I'll set the timer, for five minutes. When the bell goes off, please stop working and wait until I return. You may have to wait a minute or two. You will have to work rapidly, so you can get as many schedules completed as possible in the five minutes

[After the practice trail - send subjects to their individual room]

1. Pre-decision voice

Do you have any question? I would like to know what you think of the scheduling task? Do you feel that it is easy or difficult, interesting or boring?

[Voice]

Well, I was thinking of setting the performance goal at 12 schedules, this is the number of course schedules that you will be required to complete in fifteen minutes. However, before doing so, I would like to hear your opinion. What are your feelings about being required to complete 12 course schedules in 15 minutes?

[Voice]
Ok, I will set the performance goal at 10 schedules. So please complete 10 schedules in the next 15 minutes. Please start now, I'll set the timer, and when the bell sounds please stop working. When your time is up, I'll be back.

[After the 15 minute trail]

The 15 minute trail is over, please organize your materials and return them to the folder. I have an additional survey I would like you to complete. Please read the instructions carefully. The first question begins where you ended on the scan sheet. When you're done, gather you materials and come see me.

2. Post-decision Voice

Do you have any questions? How many schedules did you complete? Each schedule does take some time. I would like to know what you think of the scheduling task? How easy or difficult, interesting or boring is the task?

[Voice]

All subjects are required to complete 10 course schedules in 15 minutes, this is your performance goal. Nevertheless, I would like to know what you think about the performance goal of ten schedules.

Probes:

What are your feelings about being required to complete 10 schedules in 15 minutes?

Do you think you can complete 10 schedules in 15 minutes?

How difficult will it be to complete 10 schedules in 15 minutes?

I'm really interested in how you feel about the goal...

[Voice]
Ok, please complete 10 schedules in the next 15 minutes. Please start now, I'll set the timer. When your time is up I'll be back.

[After the 15 minute trail]

The 15 minute trail is over, please organize your materials and return them to the folder. I have an additional survey I would like you to complete. Please read the instructions carefully. The first question begins where you ended on the scan sheet. When you're done, gather your materials and come see me.

3. No-Voice

Do you have any questions? All subjects are required to complete 10 schedules in 15 minutes, this is your performance goal. Please start now, I'll set the timer. When your time is up, I'll be back.

[After the 15 minute trail]

The 15 minute trail is over, please organize your materials and return them to the folder. I have an additional survey I would like you to complete. Please read the instructions carefully. The first question begins where you ended on the scan sheet. When you're done, gather your materials and come see me.