PARTICIPATION AND GOAL SETTING: AN EXAMINATION OF THE COMPONENTS OF PARTICIPATION

DISSERTATION

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ABSTRACT

Research on participation suggests that joint decision-making can be beneficial to employee attitudes. Its effect on motivated behavior, however, is an ongoing topic of controversy. In addition to the general confusion surrounding its operationalization, participation’s effects have been attributed to three general factors: cognitive, social, motivational. Borrowing from the organizational justice literature, participation was operationalized as consisting of process (voice) and decision (choice) controls. Using this operationalization, participation was predicted to affect motivated behavior through three outcome components (moral, social, and cognitive) and further mediated by a set of intervening mechanisms. Analyses of data on 167 participants in a 2 x 2 experimental full factorial design suggest that participation, indeed, consists of both voice and choice components. The data further showed that the two components lead to differential outcomes with voice exerting a positive effect on the social component while choice exerting a positive effect on the moral component. No effect of voice on the cognitive component was found. Additionally, while the effects of Perceived Obligation on Goal Commitment were found to be partially mediated by Attractiveness of Goal Attainment, the mediating effects predicted for the remaining intervening mechanisms were not significant. Implications of these findings are discussed with respect to how participation should be operationalized in future research.
Dedicated to my family
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CHAPTER 1

INTRODUCTION

Participation and participation-based interventions have been enthusiastically adopted by organizations world-wide in the past several decades. By the mid-1990s, it was reported that roughly half of all U.S. firms and some two-thirds of Fortune 1000 companies were engaged in one or more forms of employee participation practices (Benson & Lawler, 2005; Cotton, 1993; Gold, 2003). The general enthusiasm for participative practices can be viewed as being rooted simultaneously in social, economic, political, and philosophical underpinnings and affirms the importance of democratic forms in organizing efforts. Regardless of one’s vantage point the practice of participation has gained considerable momentum, bringing to the forefront the importance of understanding the precise mechanisms responsible for participation’s effects. The present investigation focuses on participation as it applies to the individual. More precisely, this study examines the processes occurring at the individual level that may help clarify how participation translates to motivation and motivated behavior.

Few would argue against the notion that employees, in general, would prefer to have (than not have) control over their own work environment. In line with the general
needs perspective of human motivation (e.g., Maslow, McClelland, Herzberg), Trist and Bamforth (1951, as cited in Sashkin, 1976) stated that workers have three primary need areas: (a) need for control over one’s own job behavior; (b) need for meaningful task closure; and (c) need for good co-worker relations. Sashkin (1984), taking this idea a step further into the realm of ethics and moral duty, claimed that if employee participation is beneficial to workers’ well-being and if it can simultaneously be shown that participation does not lead to harm, then, participation is an ethical or moral imperative.

Participation, indeed, has been a major field of inquiry for theoretical as well as practical reasons over the past seven decades. Its general progress can be traced to key contributors spanning several generations – e.g., beginning with the Hawthorne studies of the 1930s through groundbreaking studies conducted by Lewin and his colleagues; as well as French and his colleagues (1940s and 1950s); and on up through the 1980s with Frohman’s contributions (see Sashkin, 1984). One of the most dramatic demonstrations of the benefits of participative interventions was conducted at a pajama manufacturing plant (Coch & French, 1948). This landmark study, conducted at the Harwood Manufacturing Corporation by Coch and French, began as an investigation into the causes of employees’ resistance to change, absenteeism, turnover and a general lack of morale. In tracing the source of the problem to employee motivation (both at the individual and group levels), the investigators chose to implement a participative intervention in which employees were consulted on the methods used to modified the job. The result was dramatic with marked increases in satisfaction and productivity with simultaneous reductions in absenteeism and turnover (Coch & French, 1948). In contrast
to this early demonstration supporting the utility of participative interventions, the overall results reported by an abundance of studies that followed are not so remarkable.

The burgeoning development and implementation of employee participation interventions belie the extant research supporting such practices, at least, from the production standpoint. Specifically, skepticisms regarding the efficacy of such practices to improve productivity and, thus, to help attain a wide variety of management goals have divided the research community (Benson & Lawler, 2005; Cotton, 1993; Locke & Schweiger, 1979; Miller & Monge, 1986; Schweiger & Leana, 1986; Wagner & Gooding, 1987b).

In one of the first and most comprehensive reviews of the general participation literature, Locke and Schweiger (1979) concluded that while participative interventions appear to add to employee satisfaction, the evidence supporting its positive effects on actual productivity is mixed. More recent reviews, while undoubtedly providing valuable perspectives towards our understanding of participation, also testify to the limited fundamental progress that has been made in participation research (Cotton, 1993; Cotton et al., 1988; Miller & Monge, 1986; Schweiger & Leana, 1986; Wagner & Gooding, 1987b). Specifically, while some argue that participation leads to improvements in attitude (Cotton et al., 1988; Miller & Monge, 1986), motivation (Erez & Arad, 1986; Erez, Earley, & Hulin, 1985), and productivity (Coch & French, 1948; Erez, Earley, & Hulin, 1985), others have argued that its effects on motivation and productivity are either nonexistent (Latham & Yukl, 1976; Latham, Steele, & Saari, 1982) or insignificant at best (Schweiger & Leana, 1986; Wagner & Gooding, 1987b).
The above confusion becomes altogether understandable when one realizes the existence of substantial variation in the meaning, dimension, form, and models linking participation with various outcomes (Cotton et al., 1988; Dachler & Wilpert, 1978; Locke & Schweiger, 1979; Sashkin, 1984). The broad usage of the term “participative management,” for example, can include programs affecting employee incentives (e.g., gainsharing), group behavior (e.g., quality circles), and training (self-directed work teams) (i.e., employee involvement programs) (see Cotton, 1993). Participative management also can describe employee participation in setting goals, making decisions, solving problems, and/or making organizational changes to varying degrees (Benson & Lawler, 2005; Sashkin, 1984). Sashkin (1984) argued that much of the confusion surrounding participative management systems stems from researchers labeling just about every imaginable management fad or technique with the umbrella term “participation;” a sentiment echoed by a large majority of participation scholars (e.g., Benson & Lawler, 2005; Cotton et al., 1988; Cotton, 1993; Glew, O’Leary-Kelly, Griffin, & Van Fleet, 1995; Wagner & Gooding, 1987).

In acknowledging the fact that participation cannot always be viewed dichotomously (i.e., participation or no participation), the present study takes the view that participation is a subjective phenomenon that must be examined at the individual level; from an individual’s perspective. As such, this study operationalizes participation as the perceived degree of voice and choice varying along a continuum afforded to an employee. It is hoped that such an individual level operationalization will not only provide a more accurate assessment of the participation construct but also enable one to investigate its precise impact on the various intervening variables related to motivation.
and motivated behavior. Such separation of the components of participation is believed to be critical for furthering our understanding of the participation as a construct itself and also for separating out its effects on various resulting factors.

Moving beyond the issues related to the precise meaning of participation, past researchers have attributed participation’s effects to one or more of three general factors: cognitive, social, motivational (Erez & Arad, 1986; Latham & Yukl, 1979; Latham, Erez & Locke, 1988; Locke & Schweiger, 1979). Specifically, the beneficial effects of participation on motivated behavior are thought to be mediated, for the most part, by these three general mechanisms. As will be explained below, however, the conceptual and methodological confounding of the three above factors have made it difficult to draw firm conclusions regarding the precise mechanisms through which participation results in various outcomes. To the extent that each of the above factors has been shown to result from participation, it becomes crucial to determine the relative contribution of each by estimating the magnitude of their importance in linking participation with motivation and behavior.

The present investigation stems from the belief that the confusion surrounding the effects of participation can be attributed to several factors including (a) the variations in the definition and operationalization of participation in the past (Dachler & Wilpert, 1978; Wagner & Gooding, 1987a, 1987b); (b) the failure to dissociate or make clear distinctions between the major factors – i.e., cognitive, social, motivational – allegedly resulting from participation as a whole; and (c) a general neglect in explicating the intervening process variables that may further help clarify the link between participation and motivated behavior.
To summarize, the present study was conceived with three objectives in mind. First, by conceptualizing participation as the degree of voice and choice control, it examines the degree to which each component influences perceptions of participation as well as fairness. Second, this study attempts to empirically dissociate the three component – cognitive, social, and motivational – factors thought to result from participation. In so doing, it aims to reconcile the existing confusion surrounding their relative importance in PDM contexts. Finally, the various process variables proposed in this study – i.e., perceived obligation, affect, task understanding, strategy quality, and self-efficacy – were specifically designed to map the processes linking participation with such outcomes as goal commitment and task performance.

The present paper is organized as follows: First, a broad overview of the general participation literature is provided with the conclusion that while participation appears to be effective in improving attitudes, its evidence with respect to productivity is mixed. Second, the precise meaning of participation and the general confusion surrounding its definition is outlined. In addition, using Dachler and Wilpert’s (1978) typology, the parameters of participation under present investigation is clearly delineated. More specifically, participation is operationalized using the process and decision control scheme adopted from the organizational justice literature. To the extent that participation, particularly, subjective participation, often hinges on individual perception, it is believed that viewing the construct as a matter of perceived degree is crucial.

Third, a review of the key findings surrounding the effects of participative goal setting is presented beginning with Latham and Erez’ earlier studies followed by their joint study. In this same section, potential confounds associated with their “joint” study
are presented for further consideration. Fourth, to account for the primary mechanisms through which participation and motivated behavior may be linked, the three main factors – i.e., cognitive, social, and motivational – allegedly resulting from participation are explored in depth. Included in this exploration is a fourth moral factor that may also account for the effects of participation.

Finally, an argument for the significance of operationalizing participation as varying in the degree of voice and choice are presented from an organizational justice perspective. It is believed that such an approach may be more appropriate for teasing out the various factors associated with participation’s effects. Following the above are the theoretical and empirical rationale for the study’s hypothesized relationships.
LITERATURE REVIEW

General Review

Extensive efforts have been put forth by both researchers and practitioners alike in investigating the utility of participative interventions for influencing important organizational outcomes. Despite these efforts, the extant literature is divided with respect to whether participation as a managerial practice is worthwhile and/or whether participation should be limited only to a handful of situations. What seems clear is that participative interventions generally exert a stronger effect on attitudes and affect than on actual behavior.

In one of the first and most comprehensive reviews of the general participation literature, Locke and Schweiger (1979) summarized the participation literature by grouping the studies into four subsections according to methodology: (a) lab studies, (b) correlational field studies, (c) multivariate experimental field studies, and (d) univariate (controlled) experimental field studies (i.e., quasi experiment) with number of studies ranging from 18 to 45 across each category. These groups were examined with respect to two – satisfaction and productivity – outcome variables.

The combined results across the four groups revealed approximately 60% of the studies as demonstrating a positive effect of participation on satisfaction with only 22% showing beneficial effects on productivity. What is interesting is that an equal number of studies (i.e., 22%) showed an adverse (or inferior) effect of participation on productivity. Moreover, given the way in which participation had been operationalized, Locke and Schweiger (1979) remarked that it was impossible to attribute the outcomes in the studies to participation alone in those studies reporting positive effects. Hence, the general
conclusion reached by the authors was that while participative interventions appear to add to employee satisfaction, the evidence supporting positive effects on actual productivity is mixed.

Extending earlier attempts to understand participation (e.g., Dachler & Wilpert, 1978; Locke & Schweiger, 1979; Walker, 1974), more recent reviews have attempted to integrate and summarize the literature on participation (Benson & Lawler, 2005; Cotton, 1993; Cotton et al., 1988; Miller & Monge, 1986; Schweiger & Leana, 1986; Wagner & Gooding, 1987b). Unlike their predecessors, Cotton and his colleagues’ review adopted a multidimensional or multi-form view of participation (Cotton, Vollrath, Froggatt, Lengnick-Hall, & Jennings, 1988). To examine whether different forms of PDM are associated with different outcomes – i.e., satisfaction and productivity – the authors reviewed a total of 91 articles selected from over 400. Among the various forms of participation – i.e., work decisions, consultative, short-term, informal, employee ownership, and representative participation – the authors concluded that informal participation and employee ownership programs are generally effective in improving both employee satisfaction and productivity (Cotton et al., 1988).

A meta-analysis by Guzzo and his colleagues similarly concluded that sociotechnical interventions (in which participation plays an integral part) are effective methods for improving productivity (Guzzo, Jette, & Katzell, 1985). After correcting for sampling errors and averaging d-statistic measures across studies, the authors reported that productivity of those involved in sociotechnical interventions was more than one-half standard deviation (i.e., mean d=.62) greater than the control group (Guzzo et al., 1985). In a meta-analysis of 41 and 25 correlations for participation-satisfaction and
participation-productivity relationships Miller and Monge (1986) reported mean correlations of .34 and .15, respectively, for satisfaction and productivity. Moderator analyses of the satisfaction data further revealed a mean weighted correlation of .38 for satisfaction in nonorganizational respondents (i.e., students). Productivity data were further separated into goal setting and non-goal-setting studies. Average weighted correlation for participation in goal setting studies (based on seven studies) yielded $r = .11$ while studies investigating the effects of participation other than goal setting on productivity yielded a higher ($r = .27$) mean correlation (Miller & Monge, 1986).

The above positive findings notwithstanding, several additional reviews have cast a shadow on the efficacy of participative interventions (Locke, Faren, McCaleb, Shaw, & Denny, 1980; Schweiger & Leana, 1986; Wagner & Gooding, 1987a, 1987b). In aggregating percent-change measures across a set of field studies assessing various productivity-enhancing interventions, Locke and his colleagues, for example, found that participative interventions led to an increase of only a half of a percentage point (Locke et al., 1980). In a meta-analysis of 118 correlation coefficients obtained from 70 studies, Wagner and Gooding (1987a) reported that with the influence of percept-percept research procedures controlled, participation typically had only modest influence on task performance, decision performance, motivation, satisfaction, and acceptance.

To summarize, the above reviews clearly attest to the limited theoretical progress that has been made in the two and a half decades since Dachler’s (1978) and Locke and Schweiger’s (1979) reviews. This appears to be true for both general participation as well as participation in goal setting. Specifically, questions still remain with respect to the precise factors linking participation with motivation and motivated behavior. What
are the major factors that are responsible for its effects? And what, if any, are the mechanisms through which these factors translate the effects of participation to various outcomes? The present study attempts to answer the above questions. To begin, the construct of participation itself is examined.

Definition

Theory development concerning participation has been severely impeded by the sheer number of the ways in which participation can be construed. Wagner and Gooding (1987b), for example, concluded that depending on how participation is defined and operationalized, it can lead to significantly different conclusions. While at the core of participation is an underlying notion of “influence or power sharing” or “joint decision-making” (Mitchell, 1973; Locke and Schweiger, 1979), Bar-Haim (2002) concludes that there is a general lack of consensus regarding what exactly participation is; echoing a remark made by Dachler nearly three decades ago who claimed that, “the major problem underlying participation is that it is nearly impossible to determine what participation entails” (Dachler, 1978, p. 17).

Participation can be defined in various ways. Taking a broad, organizational approach, Bar-Haim (2002) proposed that worker participation must be viewed as a family of themes, including industrial democracy, employee involvement, autonomous work group, and self-management. Viewing participation as a thread of influence across organizational levels, Walker (1974), on the other hand, proposed that participation occurs “when those below the top of an enterprise hierarchy take part in the managerial function of the enterprise” (p. 9). Participation can also be defined as a process in which
“..two or more parties influence each other in making plans, policies or decisions” (French, Israel, and As, 1960, p. 3). This last definition is, in essence, what Locke and Schweiger (1979) referred to as “joint decision making” (p. 274), or more specifically, “shared influence” between a supervisor and a subordinate (Mitchell, 1973). While this definition does not exclude decision making by a group of subordinates, the present study limits participation to the sharing of influence between one supervisor and one subordinate.

Dimensions

In addition to its basic definition, participation can vary in form, content, dimensions, and levels (Cotton, 1993; Cotton, Vollrath, Froggatt, Lengnick-Hall, & Jennings, 1988; Dachler & Wilpert, 1984; Locke & Schweiger, 1979; Vroom & Yetton, 1973). In their discussion of the structural characteristics of participation – values and assumptions, contextual boundaries, properties of participation, and outcomes – Dachler and Wilpert (1978) identified five dimensions (i.e., structures and processes) along which different kinds of participation schemes can vary. These include (a) formal-informal; (b) direct-indirect; (c) the degree of influence or participation; (d) decision content; and (e) decision scope. The construct may also differ with respect to objective versus subjective participation (Jackson, 1983; Vroom, 1959) and genuine versus pseudo participation (Singer, 1974) in which pseudo participation reflects employee input that is given after the decision has already been made.
Participation in the Present Study

The present study concerns itself primarily with the *mechanisms* associated with participation. While Dachler and Wilpert’s (1978) discussion of the *properties* of participation provides a valuable framework for investigating participation as an abstract network of relationships among various dimensions, the dimensions themselves cannot explain the *mechanisms* through which participation affects motivation and motivated behavior. Hence, the present investigation focuses on “how” participation works from an individual’s perspective. In order to formulate specific hypotheses that can be applied at the individual level of analysis, however, parameters within which predictions can be made must be specified.

Participative goal setting or PGS implies several things. First, it implies the involvement of at least two individuals in a goal setting context – e.g., an employee and his/her supervisor. Second, it implies that there is something that is shared between the two individuals – e.g., influence over goal decision. Third, PGS as used in this study is a direct form of participation in which employees are given direct influence over their performance goal rather than through a representative (see Dachler & Wilpert, 1978; Locke & Schweiger, 1979). Most importantly, rather than a dichotomy, this direct influence is explicitly acknowledged as varying on a continuum from no influence to high influence. Locke and Latham (1990) view PGS as one form of goal setting. Before elaborating on the PGS literature, it may thus be useful to review the main tenets of goal setting theory. The following sections present what is currently known about PGS.
Participation and Goal Setting Theory

Goal Setting Theory  A goal is what a person is trying to accomplish (Locke et al., 1981). According to Locke and Latham (1990), goals represent an end state towards which individuals strive, thus, serving as regulators of action. At the heart of goal setting theory is the notion that, when accepted, specific and difficult goals lead to higher performance than vague, moderately difficult, “do your best” goals, or no goals. Numerous quantitative reviews relating goal setting interventions to task performance have boasted average effect sizes ranging from .42 to .80 (Locke & Latham, 1990; Mento, Steel, & Karren, 1987). A central theme of the present investigation is whether participatively-set goals hold additional utility for improving performance beyond assigned goals; and if so, how?

Advocates of PGS contend that including employees in the setting of their own work-related goals (e.g., productivity) can (a) help clarify expectancy information (Wooten & Burroughs, 1991); (b) encourage the adoption of a more difficult goal (Latham & Yukl, 1975); (c) provide a means of disseminating useful job-related information (Latham, Winters, & Locke, 1994; Locke & Schweiger, 1979); (d) enhance perceptions of supervisor support (Likert, 1967); and (d) result in greater goal commitment (Coch & French, 1948; Erez & Kanfer, 1983; Lewin, 1947). Notwithstanding the above, the precise role played by each of the theorized factors has remained elusive. A substantive contribution of the present investigation lies in its efforts to identify and elaborate on the precise factors involved in participation’s effects. An outline of the contradictory findings reported in the PGS literature is presented next.
Latham and Colleagues  Latham, in the 1970s, was guided by the belief that participation would enhance performance above and beyond that could be achieved by assigned or “do your best” goals. Indeed, in one of his first of a series of studies on PGS, Latham obtained a modest degree of success in employing PGS as a strategy to improve task performance (Latham & Yukl, 1975). Specifically, two field experiments were conducted on two sets of logging crews differing in levels of education. Productivity comparison between the two groups revealed that the educationally disadvantaged group performed better when allowed to participate in setting their work goals. No differences were found, on the other hand, for the educated group with respect to assigned and participative conditions. The authors speculated that the higher performance observed in the participation condition may have been due to the setting of higher goals, thereby, prompting a greater level of commitment to those goals. However, goal commitment was not measured.

In a field setting, engineers either participated or were assigned specific behavioral goals during their performance appraisal (Latham, Mitchell, & Dossett, 1978). Similar to the above study, PGS led to the setting of more difficult goals than when goals were assigned. However, no differences were found in the level of goal acceptance, perceived goal difficulty, nor the likelihood of goal attainment (Latham et al., 1978). In a series of studies that followed, Latham concluded that while participation may affect one’s level of goal chosen, it does not necessarily lead to higher performance. In other words, when goal difficulty is held constant, PGS is no better than goal assignment (Dossett, Latham, & Mitchell, 1979; Latham & Saari, 1979a; Latham & Marshall, 1982; Latham, Steele, & Saari, 1982; Locke, Shaw, Saari, & Latham, 1981).
One study that ran counter to his ultimate conclusion crossed goal setting with supervisor supportiveness condition while holding goal difficulty constant (Latham & Saari, 1979b). While no differences were found between the goal setting conditions with respect to goal difficulty perceptions and goal acceptance, those in the participation performed significantly better than those in the assigned or “do best” conditions. Perceptions of support also led to setting of higher goals but did not affect actual performance. The positive effect of participation on task performance was, in part, attributed to cognitive factors – i.e., increased of information exchange via clarification of task requirements (Latham & Saari, 1979b).

_Erez and Colleagues_ Armed with Lewin, Coch, and French’s earlier works (Coch & French, 1948; Lewin, 1947; Lewin, Lippitt, & White, 1939), another set of researchers, arrived at a different conclusion. In their study of leadership with young boys, for example, Lewin and his colleagues sided with democratic supervision as a superior form of leadership linked to work motivation (Lewin et al., 1939). Erez, Kanfer, and their colleagues similarly adopted the view that participation in goal setting may be critical to goal commitment and, in turn, for task performance (Erez & Kanfer, 1983; Erez, Earley, & Hulin, 1985). Erez and Kanfer (1983) suggested that maximizing goal acceptance/commitment involves a combination of strategies that vary along an internal-external continuum of locus of control. The authors proposed that majority of the studies on participation up to that time had compared assigned versus participatively-set goals under conditions of both high goal acceptance and high information (i.e., cognitive benefits). Hence, the real benefit of participation lies in conditions where initial acceptance/commitment is low (Erez & Kanfer, 1983). Indeed, a series of studies
conducted by Erez and her colleagues (Earley & Kanfer, 1985; Erez & Arad, 1986; Earley, 1985; Erez, Earley, & Hulin, 1985) show that participatively-set goals are more likely to be accepted than assigned goals (i.e., externally imposed goals).

In a study of the participation-performance relationship, Erez and her colleagues utilized a two-stage (laboratory to field) method in an attempt to enhance generalizability of their findings (Erez, Earley, & Hulin, 1985). The authors hypothesized that the observed performance variability between goal setting conditions (participative versus assigned) would be contingent on the subjects’ level of goal acceptance. As predicted, laboratory results indicated that the explanatory power of goal setting conditions increased as goal acceptance increased (Erez, Earley, & Hulin, 1985). Similar results were reported in a field study conducted with animal caretakers; under conditions of adequate variability in goal acceptance, performance was significantly higher for those who participated in setting their goals (Erez et al., 1985). This point is critical to participation’s effects to the extent that without adequate variability in goal commitment, goal difficulty is thought to directly impact performance (see Klein, Wesson, Hollenbeck, & Alge, 1999). More will be said on this in the following sections.

A key assertion by the above authors is that participation is useful to the extent that it leads to a higher level of acceptance/commitment to a given goal. Additional studies by the same authors further confirm this notion – i.e., that a goal is more likely to be accepted when it is not perceived as externally imposed (Earley, 1985; Earley & Kanfer, 1985; Erez, 1986; Erez & Arad, 1986).

Joint Investigation In order to identify the source(s) of the conflicting results reported by the two groups of researchers, Latham, Erez and Locke jointly conducted a
series of four experiments in what was referred to as “crucial experiments conducted by
the antagonists” (Latham, Erez, & Locke, 1988, p. 753). Through face-to-face
discussions and telephone conversations, the authors identified five possible explanations
for their discrepant findings including (a) task importance, (b) group discussion, (c) the
way in which instructions were given, (d) the setting of self-set goals prior to
manipulation, and (e) variance in the outcome due to differences in cultural values.
These explanations were based on the different characteristics of Latham and Erez’
studies thought to have contributed to the discrepant findings. With respect to his
assigned goal conditions, Latham, for example, stressed the importance of the task and
provided a rationale for why it was important (i.e., tell and sell), and was generally
friendly and supportive towards the subjects. In contrast, Erez did not stress the
importance of the task and was generally cold and distant towards her subjects in the
assigned conditions. Moreover, for those in participation conditions, subjects always set
their goals as a group rather than in supervisor-subordinate dyads.

Using a relatively simple task (i.e., brainstorming on uses for absorbent towels
and wood in any form), the first two experiments reported in the authors’ monograph
showed no significant performance differences stemming from task importance or group
participation (Latham et al., 1988). The third and fourth experiments were conducted
with a substantially more difficult task (class scheduling). These latter experiments
revealed that, the way in which instructions are given to the subjects can significantly
influence performance. Specifically, when difficult assigned goals were accompanied by
an explanation for why the goal was difficult, it resulted in equally high performance as
the participation group. It should be noted here, however, that their “tell and sell”
condition in Experiment 3 included self-efficacy enhancing instructions – i.e., “people improve on this task with practice and also get momentum when working continuously.” (p. 760). When this issue was addressed in Experiment 4, both goal commitment and self-efficacy were found to mediate the effects of participation on performance. Attributing this latter finding to instructions to “reject” goals, however, the authors concluded that specific and difficult assigned goals are just as effective as participatively-set goals when accompanied by a rationale (i.e., the tell and sell approach).

One can legitimately note that self-efficacy enhancement is an important part of “selling” subordinates on the assigned performance goal. However, it should also be noted that self-efficacy may be indirectly enhanced via participative interventions (Latham et al., 1994). If participation does indeed lead to enhanced efficacy judgments for a given task, it becomes necessary to control for this variable if we are to further our understanding of participation’s effects. To the extent that self-efficacy is a well-known and powerful determinant of performance (Bandura, 1997), efforts aimed at furthering our understanding of participation’s effects will inevitably be thwarted if the effects of self-efficacy are not made distinct from participation’s effects. In addition, the argument that “tell and sell” intervention will always be as effective as participative interventions falsely assumes that all supervisors or managers are competent, have all information relevant to the task to provide accurate and proper guidance, and are fully trusted by their subordinates. For these reasons, it becomes important to examine the effects of participation in the absence of efficacy enhancing procedures.
To summarize their conclusion, Latham et al. (1988) concluded that the motivational effects of assigned goals are just as powerful as those set participatively in engendering high levels of commitment and performance when (a) goal difficulty is held constant; (b) when instructions to reject unrealistic goals are eliminated; and (c) the instructions given subjects are not too brief or seen as curt. Moreover, based on the findings of their experiments 1, 3, and 4 – i.e., commitment and performance levels being significantly higher when assigned goals are combined with a rationale – the overarching conclusion proposed by the authors was that when assigned goals are accompanied by a rationale (i.e., tell and sell), subjects’ commitment and, in turn, their task performance is just as high as that can be had through PGS.

A Re-Examination

While the series of studies just described has had a significant impact on participation research, there are, nonetheless, unanswered questions. These questions stem from the potential confounding of several factors. To illustrate, a key argument made against PGS by the above authors is that assigned goals are just as effective as PGS when they are accompanied by a rationale (i.e., tell and sell) (Latham et al., 1988). This conclusion is largely based on a minor difference in the way the two conditions – “tell and sell” condition and participation condition – were operationalized. To simplify, their logic is as follows: (a) No differences were found in performance levels (Experiments 1 and 2) between the assigned and participatively-set goal (PGS) conditions when goals were assigned using Latham’s usual “tell and sell” method; (b) significant differences in commitment and performance were found between the “tell only” and the PGS conditions.
(Experiment 4); (c) the “tell and sell” condition did not differ significantly from the PGS condition in either goal commitment or performance (Experiment 3); therefore, (d) the “tell and sell” condition is just as effective as PGS (Latham, Erez, & Locke, 1988).

Limitations Despite their rigorous attempts to ferret out the source(s) of the conflict between the two groups of researchers, the above conclusion may be premature; one that deserves another look. Specifically, before one can safely conclude that the “tell and sell” approach to goal setting is as effective as participation, one must carefully examine the precise difference(s) between the two conditions on which the conclusion is based. A closer examination of the two conditions reveals that they differed only with respect to one component – subjects in the PGS conditions were allowed to discuss the goal to be set in a small group for five minutes (as was previously done by Erez and her colleagues).

In addition to the importance of excluding self-efficacy instructions in participation research as addressed above, the question here is whether or not the group goal setting procedure used in the PGS condition was sufficient in instilling a true sense of participation in the subjects. If participation truly is “joint influence,” it becomes difficult to assume that their group decision making procedure sufficiently imparted a feeling of participation. In other words, such a weak treatment of the participation manipulation makes it difficult to justify taking a strong stand against participation’s effects.

Finally, the demonstration of a causal relationship between participation and commitment to goals is contingent on the existence of sufficient variability in the two measures. While it may be argued that participation is unnecessary under conditions of
high commitment (i.e., when a goal is fully accepted), the value of participation may lie in situations where high levels of goal acceptance/commitment may not always be had and/or can be expected. If participation is viewed as a means of gaining commitment, then its utility must inevitably diminish in situations where high levels of commitment are already present (e.g., in student experiments). A case in point: Relatively high levels of commitment were observed in Latham et al.’s two (1 and 3) experiments indicated by their relatively high means and small deviations. As such, no differences were reported between the assigned (tell and sell) and PGS conditions in these two studies. It is believed that the above insignificant findings can be attributed, in part, to trivial differences between the assigned and PGS operationalizations and the high initial commitment levels (i.e., limited variance) often observed in student subjects.

Continuing with the above reasoning, participation’s utility is expected to be evident in situations characterized by low to moderate levels of initial commitment. It is in such situations that participation is expected to facilitate goal commitment as indirectly evidenced by increased variability in levels of commitment. Indeed, in Experiment 4 of the above study where adequate variability in goal commitment was observed (i.e., 4.03 to 5.92; the largest of the four experiments) both self-efficacy and goal commitment mediated the effects of participation on task performance (Latham et al., 1988, Experiment 4).

To summarize, several issues related to the four experiments just described need to be resolved before a firm conclusion can be made. First, if participation is viewed as the degree of “joint influence” or “joint decision making,” it is difficult to argue that group decision making procedures as used in the above study can sufficiently impart
feelings of “influence” to justify labeling the condition as participation. One could potentially argue that such a procedure may actually decrease "real" or "true" commitment via diffusion of responsibility and/or loafing (Karau & Williams, 1993).

Second, the importance of taking into consideration the initial level of commitment was demonstrated in Experiment 4. It was only when adequate variability in commitment was allowed to manifest that goal commitment and self-efficacy mediated the participation-performance relationship. The range of goal commitment levels reported in Experiment 4 was 4.03 to 5.92, significantly higher than the remaining conditions – i.e., Experiment 3 (4.81 to 5.74); Experiment 2 (4.00 to 5.81); and Experiment 1 (5.17 to 5.44) (A possible reason for why Experiment 2 did not yield a similarly significant effect of participation on performance is described in the next section on task complexity). Simply put, participation makes little or no difference in performance when all workers are committed to their goals. On the other hand, it is in work situations where workers are uncommitted or minimally committed to the goals set by their supervisor or organization that participation may hold maximum utility as was observed in Coch and French’s study.

Finally, it is conceivable that the tell and sell condition manipulation (Experiment 3) may have inadvertently communicated supportiveness to the subjects via the provision of an explanation for why the goal was difficult. An explanation given for an unfavorable outcome (e.g., a difficult goal) is a form of procedural justice referred to as interactional (Bies & Moag, 1986) or informational (Colquitt, 2001) justice, which can be construed by its recipient as communicating support and respect. If these factors are indeed associated with traditional goal setting procedures, it would be helpful to
understand why and how. The present study, in part, considers these factors as potential outcomes of PGS; thus, is designed to further our understanding of the key resulting components of PGS.

Task Complexity and Goal Commitment  Along with the tasks used in the first two experiments above, a substantial number of the experiments conducted by Latham and his colleagues involved subjects performing tasks of only modest complexity – e.g., brainstorming uses of common objects, toy assembly, typing, and so on. The first two of Latham's studies, for example, used a "brainstorming" task (i.e., coming up with uses for wood in any form). To the extent that participative interventions foster commitment, the beneficial effect of participation should be less pronounced for simple tasks when compared to more complex tasks.

Among the numerous factors theorized to affect goal commitment are trust and legitimate authority (Locke, Latham, & Erez, 1988). Regarding the experimenter-subject relationship, Locke and his colleagues commented that when an experimenter assigns a goal, “overwhelmingly, people try to do what was asked of them” (Latham & Lee, 1986, as cited in Locke et al., 1988). Thus, commitment associated with assigned goals may be a mere reflection of a form of compliance associated with legitimate authority. Commitment related to joint-decision making (i.e., participation), on the other hand, should differ to the extent that it is an internally-driven form not unlike the process of internalizing the goal of one’s supervisor (Becker, Billings, Eveleth, & Gilbert, 1996).

In instances where the given task is relatively complex, the initial level of commitment (as it is partly driven by self-efficacy) is predicted to vary to a greater extent. A meta-analysis by Klein and his colleagues, indeed, shows a strong negative
correlation between commitment and task complexity (Klein, Wesson, Hollenbeck, & Alge, 1999). Miller and Monge’s (1986) meta-analysis of the participation literature also concluded that participation is particularly effective for complex tasks. As such, participation may be critical in situations where the nature of the task (e.g., complexity) creates variability in that initial level of commitment beyond that stemming from compliance alone. In using a relatively complex but high-fidelity task, the current study attempts to create sufficient variability in initial levels of goal commitment in order to demonstrate the importance of participation in influencing performance via commitment. Moreover, by viewing participation in goal setting as varying on a continuum, it hopes to create a genuine sense of subjective participation in the subjects.

In summary, the general criticism leveled against the utility of PDM is that assigning a specific and difficult goal can be just as effective as participation in predicting performance when the assigned goal is accompanied by a rationale. This conclusion, however, is largely based on the observed difference between two conditions that varied little with respect to treatment, namely, group discussion.

In addition to the above, it is important to note that supplemental conditions may be critical for participative interventions to be effective. These include among others expectation of participation, task importance, and task knowledge. First, participation is unlikely to yield beneficial effects when a subordinate neither desires nor cares to participate in the decision making process. Thus, it is believed that an expectation and/or desire must first precede a given participative intervention in order for it to lead to beneficial outcomes. Second, related to one’s desire to participate, it is believed that the task itself must be viewed as sufficiently meaningful in order for participative
interventions to be effective. Participative interventions that center on tasks that hold little or no value – e.g., monetary, egoistic or status affirming – are unlikely to be effective. In other words, the task itself should be sufficiently valenced (either positive or negative) in order for participation to yield positive results.

Finally, specific to the cognitive value of participation, participative interventions are expected to be successful to the extent that the participants themselves (i.e., supervisor and subordinate) possess requisite knowledge with respect to the task. Knowledge acquisition in the context of participation may occur through multiple means including discussion or provision of the task and/or task-related strategies. While the latter (i.e., provision of strategy information) has been shown to be effective (see Latham et al., 1994; Erez & Arad, 1986), the present study investigates the effects of the former (i.e., discussion of task itself and related performance goal) on various theorized outcomes. That is, it may be possible to enhance one’s understanding of a given task through participation without the provision of explicit strategy information. More on this is said in the next chapter.

Following from the above, to the extent that several factors have been shown to be inherent in participation’s effects, it is believed that each of these factors need to be distinguished and their separate influences on outcome variables isolated. In the following paragraphs, four main factors are predicted to mediate the link between participation and task performance.
Factors Related to Participation

Three primary factors have been used by PGS researchers to explain the effects of PGS on performance: cognitive, social, and motivational (Campbell & Gingrich, 1986; Erez & Arad, 1986; Latham, Winters, & Locke, 1994; Locke & Schweiger, 1979). Locke and his colleagues previously suggested and more recently demonstrated the cognitive benefits by showing that participation facilitates the discovery and dissemination of task-relevant information/knowledge (see Latham, Winters & Locke, 1994; Locke & Schweiger, 1979). Such social factors as support/pressure from supervisors and/or peers have also been theorized and demonstrated (Coch & French, 1948; Erez & Arad, 1986; Latham & Saari, 1979). In addition, using such concepts labeled as “involvement,” participation has been linked with motivational factors – i.e., goal acceptance/commitment – leading to enhanced task performance (Erez, Earley & Hulin, 1985; Erez & Arad, 1986). Above categorization notwithstanding, it is still unclear whether or how these factors link participation with behavior. It is believed that the problem, at least in part, lies in the way in which these factors have been operationalized.

The utility of each of the above factors notwithstanding, researchers have often inferred social, cognitive and motivational factors related to participation using a common label (Earley, 1985; Erez & Arad, 1986; Latham & Yukl, 1976; Latham & Saari, 1979; Latham & Steele, 1983). The “involvement” factor, for example, has been operationalized as either a dyadic consultation between supervisor/experimenter and worker/subject (Earley, 1985; Latham & Yukl, 1976; Latham & Saari, 1979; Latham & Steele, 1983), a group discussion on the goal to be set (Locke, Winters & Latham, 1994), or a group discussion on task-relevant or task-irrelevant information (Erez & Arad,
The operationalizations of “involvement” may, in fact, reflect each of the cognitive, social, and motivational factors to varying degree. Such confounding of the various resultant factors has clouded the precise benefits of participation on performance.

The above rationale provides a potent argument for isolating the cognitive, social, and motivational factors linked to participation. This is viewed as a critical first step in extending our understanding of participative effects on motivated behavior. Towards this end, this study makes clear distinctions between each of the three major factors theorized to link participation with behavior. Along with these three factors, this study also considers perceptions of fairness as an additional factor that may account for participation’s effects. To the extent that most, if not all, social relationships and social interactions can be construed as a social exchange phenomenon, PGS may elicit thoughts of fairness (Earley & Kanfer, 1985; Shapiro, 1993; Tyler & Blader, 2002). This logic is further explained in the next section. Below is an overview of each of the mechanisms that has been theorized and shown to result from participation.

Cognitive Factor One general mechanism proposed to explain the observed relationships between participation and outcomes in the literature is the cognitive factor (Locke & Schweiger, 1979). This cognitive or information processing approach to participation proposes that participation may serve to facilitate the discovery and dissemination of task-related information to individuals. From this perspective, participation may be especially important in situations where task performance is heavily dependent on the exchange of task-relevant information, (Latham et al., 1994; Locke &
Schweiger, 1979). More relevant to this study, participation may facilitate task understanding in employees through the exchange of critical task-related information (Vroom, 1969).

**Task Understanding** Locke and Schweiger (1979) hypothesized that participation should result in greater understanding of the task through such factors as greater goal clarity and the exchange of task-related information (see also Latham and Saari, 1979b; Mitchell, 1973). Latham & Saari (1979b), for example, noted that subjects in the participation condition asked more questions than those in the assigned condition. The notion that allowing individuals to verbalize their thoughts regarding the task should enhance their understanding of the task is consistent with the cognitive elaboration perspective or the levels of processing framework (e.g., Lockhart & Craik, 1990).

Lockhart and Craik suggest that as individuals become more engrossed in the processing of information (e.g., related to a given task) and as the information comes to be better conceptualized by individuals, the more efficient the organization of the task structure and the easier the retrieval of task-related information (Lockhart & Craik, 1990). In other words, when individuals are provided with the opportunity to engage in deeper analysis of a given stimulus, the encoded information is more likely to pervade their semantic network and, thus, become more durable – i.e., more easily retrieved in the future (Lockhart & Craik, 1990).

Verbalization of the task via the voice component of participation should similarly facilitate both the conceptualization and organization of task-relevant information. As employees are given an opportunity to participate in decision making, it is likely that information regarding the task – e.g., its characteristics, realistic
performance expectations, and relevant contextual factors – will be made increasingly salient. From this perspective, task understanding may play a critical cognitive role in linking participation with motivated behavior. While the importance of strategy information has been studied, no study has examined the influence of participation on task understanding. In this study, task understanding is viewed as a critical antecedent to strategy quality. This study, thus, provides at least one set of intervening mechanisms that may explain the link between participation and goal commitment; namely through task understanding and strategy quality.

**Strategy Quality**  Gollwitzer (1996) claimed that planning can help individuals overcome intellectual and volitional problems associated with goal attainment (as cited in Diefendorff & Lord, 2003). In addition to volitional benefits, he proposed that planning has intellectual benefits involving the development of high quality strategies to achieve a goal. In the context of PGS, this notion parallels claims made by goal setting researchers. Locke and Latham (1990) suggested that task strategies are conscious or deliberate action plans motivated by goals. Locke and Schweiger (1979) additionally listed the fuller grasp of the *methods/means* (i.e., strategies) necessary for accomplishing task goals as one potential benefit of participation (see also Wagner et al., 1987; Latham et al., 1981; Latham, Winters, & Locke, 1994; Latham & Steele, 1983). Thus, the development and use of high quality task-related strategy are viewed as an additional benefit of participation.

The development of high quality strategy is said to occur through both the explicit exchange of information among those involved in the participative process (Latham & Saari, 1979a; Locke & Schweiger, 1979; Locke et al., 1981) as well as through self-
generated strategies (Gollwitzer, 1996). While benefits associated with the explicit provision of task-related strategy information to employees via participation is intuitive, no study has tested the hypothesis related to implicit strategy formulation via participation in the absence of explicit instructions to do so (see Latham et al., 1988). In other words, it may be possible for participation to facilitate high quality strategy formulation when task characteristics are made more salient via the participants’ input. As such the term “Strategy Quality” is used in this study to refer to the development and use of high quality strategies. Given the above, this study is the first to investigate the possibility of participation leading to the development of self-generated strategies (via task understanding). While predictions linking participation with the cognitive aspect is intuitive, the social aspect of participation has led to substantial confusion.

**Social Factor** Social factors such as support/pressure from supervisors and/or peers have been theorized and demonstrated (Coch & French, 1948; Erez & Arad, 1986; Latham & Saari, 1979b; Latham et al., 1988, Experiments 1 and 4; Likert, 1967). Erez and Arad (1986), for example, reported positive effects of social influences – operationalized as a *group discussion* on the goal to be set – on goal commitment and performance. It is unclear, however, how *group participation* as operationalized by the above authors led to the increase in both commitment and performance. While a number of social influences tied to group processes (via group participation) may affect task performance by impacting individuals’ commitment to goals (Coch & French, 1948; Erez & Arad, 1986; Lewin, 1951), a number of alternative explanations can also be used to explain such effects – e.g., via ambient and discretionary stimuli transference among group members (Hackman, 1992). Hence, the present investigation limits any potential
social influences associated with participation to one that is likely to be evoked in supervisor-subordinate dyadic relationships; namely, perceived supervisor support (Latham & Saari, 1979b; Likert, 1967).

Supervisor Support The inclusion of subordinates in decision making can potentially impart feelings of respect, trust, and support. These social aspects of participation may, in turn, elicit increased goal commitment on the part of the subordinates (Shapiro, 1993; Tyler & Blader, 2002). Several lines of thought converge on the participation and perceived support link (Lind & Tyler, 1988; Tyler, 1987; Yukl, 1998). From the group-value perspective of organizational justice, procedures that enhance perceived fairness – e.g., participation via allowing voice and/or choice over decisions – are likely to satisfy fundamental psychological motives such as the desire for self-identity and the need for self-esteem (Lind & Tyler, 1988). Fair treatment, thus, communicates to the recipient that they are a valued and respected member of the group. This perspective is further supported by the fairness heuristic theory proposed by Lind and his colleagues (Lind, 1995; Lind, Kulik, Ambrose, & De Vera, 1993).

Fairness heuristic theory (FHT) proposed by Lind and his colleagues (e.g., Lind, 1995; Lind et al., 1993) also resonates with the group-value perspective and supports the notion that process and decision control components of participative procedures may enhance perceptions of trust and support. Specifically, FHT provides one explanation for why fairness is important to people. It proposes that fair treatment is often used by individuals as an informational cue when faced with an uncertain situation. As a result, fairness issues become especially important under conditions of uncertainty in what Lind (1995) described as the fundamental social dilemma. This dilemma is characterized by
situations of heightened concern regarding whether one can trust another (e.g., supervisor) not to exploit or exclude one from important relationships and groups (Lind, 1995). In other words, because ceding authority to another may raise the possibility of exploitation and exclusion, people frequently feel uneasy about their relationships with authorities and about the potential outcome that they may or may not receive. In such situations, process and decision controls may play a critical role as they are likely to enhance perceptions of trust and support. The increased trust and support, in turn, are expected to help allay subordinates’ anxieties of being exploited (Lind, 1995). Hence, the provision of both voice and choice should lead recipients of those procedures to feel that they are supported.

Finally, the importance of support or consideration for subordinates’ well-being – via communication of respect, participation, and concern – can be seen in prominent theories of leadership (Likert, 1967; Yukl, 1998; Yukl & Van Fleet, 1992). Indeed, the notion of consideration as a fundamental leader characteristic is evidenced in its inclusion in all major theories of leadership (see Yukl, 1998 for a review). In one of the most influential studies on leader behaviors conducted at The Ohio State University, Stodgill (1963) factor-analyzed 1,800 critical incidents (representing very good or very bad leader behaviors) and derived two general factors: consideration and initiation of structure. Initiation of structure refers to the degree to which a leader defines and structures his/her own role and the roles of his/her subordinates. More importantly, consideration refers to the degree to which a leader acts in a friendly and supportive manner, shows concern for subordinates, and looks out for his/her subordinate’s welfare (Stodgill, 1963, as cited in Yukl, 1998). Supportiveness, in turn, may be communicated
through multiple means by a supervisor, one of which is the consideration of his/her subordinates’ perspective – e.g., thoughts and concerns.

The above perspectives collectively point to the general notion that support can be communicated to subordinates in a number of ways including (a) the consideration of their views and concerns; (b) the sharing influence in decision making; and (c) a general concern for subordinates’ well-being. Participation, operationalized as granting subordinates process and decision controls to varying degrees is believed, in turn, to communicate the above subordinate-centered information, thereby, elevating their perceived level of supervisor support.

**Motivational Factor**  In their review of the general participation literature, Locke and Schweiger (1979) proposed likely motivation-related factors that may lead to increased productivity as a result of participation – i.e., minimizing resistance to change, increasing trust, and enhancing feelings of control. In addition to these, the authors speculated that an indirect benefit of participation might be the increased acceptance and commitment to goals. Goal commitment, in this sense, is viewed to be a potential outcome of participation that may act as a vehicle for increasing production. While goal commitment is seen in this study as a key motivational outcome factor of participation, past research in PGS has used various operationalizations of this motivational factor.

As mentioned earlier, Erez and Arad (1986) considered both *involvement in goal setting* and *involvement in group discussion* as the same key motivational factor leading to acceptance/commitment. Within this framework, involvement is viewed both as an integral component of participation as well as a motivational mechanism leading to goal commitment (Erez & Arad, 1986).
It is argued here that, involvement, by itself, is not a motivational factor stemming from participation; rather, involvement refers to one’s engagement in an activity. One’s involvement in a given activity, in turn, may be associated with a number of outcomes including the intensification of one’s task-related expectancy (e.g., Vroom, 1964). In other words, by taking part in participative activities, an individual is more likely to better clarify his/her chances of achieving a particular level of performance with respect to a given task, thereby, leading to increased motivation via commitment. As such, the key motivational factor examined in this study – i.e., goal commitment – is viewed as an outcome of participation providing an explanatory link between participation, the various outcome factors associated with participation (i.e., moral, social, cognitive), and performance. The construct of goal commitment and its role in the PGS framework is further described next.

Goal Commitment Goal commitment, defined as one’s determination to reach a goal and the unwillingness to lower or abandon that goal (Hollenbeck & Klein, 1987), is critical to goal theory in that without goal commitment, a goal can have no motivational effect (Locke & Latham, 1990). That is, individuals must first “accept” a goal (i.e., committed to its achievement) in order for the goal to have a motivational impact on performance (Locke et al., 1981; Lock & Latham, 1990). Using the above framework, the proposed benefits of PGS on productivity can be explained, in part, by the belief that self-set goals (i.e., internally-driven) are intrinsically more motivating (Deci, 1971).

The notion of internally-driven goal can also be compared with the concept of volition. Hollenbeck and Klein (1987) asserted that an important aspect of volition is the knowledge that an individual is free to engage in a given behavior. As such, the act of
freely choosing a goal psychologically binds individuals to their goals. This, in turn, is expected to engender a higher degree of commitment than assigned (i.e., externally-driven) goals (see Erez & Kanfer, 1993). Goal commitment, thus, is thought to be a critical motivational outcome of PGS. In addition to goal commitment, self-efficacy is predicted to a key motivating mechanism through which participation affects performance.

**Task-Specific Self-Efficacy** Self-efficacy, or more specifically, task-specific self-efficacy (TSSE), is a construct derived from social cognitive theory. Bandura (1977, 1997) has argued that self-efficacy, in relation to a specific domain, is a powerful predictor of motivated behavior. Wood and Bandura (1989, p. 408) stated that “self-efficacy refers to beliefs in one’s capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands.” Bandura (1997) also emphasized the fact that TSSE is concerned not with the skills one possesses but with the judgment of what one can do with whatever one possesses. Bandura (1997) believed that these expectancy judgments are powerful determinants of change or action in general. This idea is based largely on the notion that TSSE expectancies govern the initial decision to perform a behavior, the effort expended, and the decision to persist when faced with obstacles.

Task-specific self-efficacy has consistently been linked to performance in numerous settings: learning and achievement (Campbell & Hackett, 1986; Wood & Locke, 1987); clinical pathologies such as snake phobia (Bandura & Adams, 1977) and agoraphobia (Bandura, Adams, Hardy, & Howells, 1980); career choice (Betz & Hackett, 1983; Betz, Harmon, & Borgen, 1996); life insurance sales performance (Barling &
Beattie, 1983); and even tennis performance (Barling & Abel, 1983). Largely due to its ability to predict work performance TSSE has been incorporated into numerous organizational research areas including goal setting (Locke & Latham, 1990), control theory (Klein, 1989), and other motivation and cognition literatures (Kanfer & Ackerman, 1989). More relevant to this study, TSSE has been shown to influence both goal level and goal commitment (Locke et al., 1984), as well as goal choice (Lent et al., 1987), hence, is viewed in this study as a key antecedent to goal commitment.

**Goal Level** A goal is what a person is trying to achieve (Locke & Latham, 1990). Goal level refers to the content attribute of goal theory consisting of two aspects – specificity and difficulty. Both goal specificity and difficulty have been studied extensively in relation to task performance. The consistent research finding is that given sufficient ability and high commitment to a goal, specific and difficult goals lead to higher performance than less specific goals, less challenging goals, “do your best” goals, or no goals (see for reviews Locke & Latham, 1990). One reason for the superiority of specific, hard goals is the fact that vague goals are compatible with a wide range of performance outcomes. That is, with vague goals such as “do your best,” individuals are satisfied with a greater range of performance outcomes than they are with specific and difficult goals (Mento, Locke & Klein, 1992).

A substantial body of evidence exists in support of the view that specificity and difficulty of the goal can influence the effects of goal setting on task performance. A meta-analysis of some 393 research findings on the relationship between goal difficulty, specificity, and performance found that over 90% of those studies provide support or partial support for the above relationship. Thus, empirical evidence strongly point to the
conclusion that when accepted, specific, difficult goals lead to higher performance than vague, moderately difficult, “do your best” goals, or no goals (Locke & Latham, 1990).

Regardless of specificity and difficulty, however, goals cannot lead to higher performance without commitment (i.e., intensity attribute of goals) to a given goal (Klein et al., 1999; Locke & Latham, 1990). Goal difficulty and commitment, thus, are intimately related. Klein and his colleagues have revealed that commitment to a goal is enhanced when people believe that achieving the goal is possible, and is important (Klein et al., 1999). For self-set goals, this means that commitment is high to the degree that individuals perceive the goal to be important and within the boundaries of their ability. More importantly for the present study are the moderating effects of goal commitment. Extant theoretical and empirical evidence support the view that with adequate variability in goal difficulty and commitment, goal commitment moderates the goal level-performance relationship (Klein et al., 1999). This study similarly anticipates that goal level will interact with goal commitment to influence task performance.

In addition to the aforementioned three general factors – i.e., cognitive, social and motivational – that have been shown to be associated with participation, this study proposes that fairness perceptions, or a moral factor, may be an important outcome of PGS.

Moral Factor While researchers have long debated the moral implications of PDM (Cotton, 1993; Earley & Kanfer, 1985; Locke & Schweiger, 1979; Sashkin, 1984), only a handful of studies have examined PGS from a justice perspective (Lind, Kanfer, & Earley, 1990; Li & Butler, 2004; Renn, 1998; Roberson, Moye, & Locke, 1999). Earley and Kanfer (1985), for example, theorized that the opportunity for input may provide
individuals with perceived mastery or control over the situation, thereby, enhancing perceptions of fairness. This is particularly true if the outcome or potential outcome is construed by the individual as threatening or disadvantageous. Similarly, if a goal assigned by a supervisor is viewed as unrealistic within the means provided to a subordinate it is conceivable that the subordinate may view the goal and the goal setting process as unjust. This is more likely if important rewards are contingent on the subordinate’s successful achievement of that goal. In such contexts perceptions of procedural justice are likely to play a crucial role in the subordinate’s motivation and behavior.

Perceived Procedural Justice  Research on organizational justice has demonstrated that individuals are not only concerned with the outcomes per se but also with the procedures used to make those outcome decisions, the manner in which they are communicated, and the adequacy of the information given (for reviews see Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Cropanzano, 2001). These justice dimensions, in turn, have been found to exert independent main effects on important organizational outcomes including turnover intentions (Konovsky & Cropanzano, 1991), job satisfaction (Alexander & Ruderman, 1987; Konovsky & Cropanzano, 1991), organizational commitment (McFarlin & Sweeney, 1992), employee theft (Greenberg, 1990), organizational citizenship behavior (Aquino, 1995), evaluation of authority (Alexander & Ruderman, 1987; Konovsky & Cropanzano, 1991), and job performance (for reviews see Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt & Greenberg, 2003; Cropanzano, 2001; Gilliland & Chan, 2001).
Generally speaking, organizational justice research has focused on two broad domains: Distributive and procedural justice. Distributive justice pertains to fairness related to various organizational outcomes – e.g., pay raises, bonuses, and promotions. Adam’s (1965) equity theory, the theory most closely associated with distributive justice, asserts that people determine whether they have been treated fairly by examining the ratio of their inputs (e.g., time, effort, cognitive resources) to their outcomes (e.g., pay, promotions) and by comparing this ratio to that of a referent. Procedural justice, on the other hand, refers to the fairness of the means by which an allocation decision is made (Cropanzano & Ambrose, 2001; Lind & Tyler, 1988; Thibaut & Walker, 1975). The significance of the procedure in determining outcome reactions stems from Thibaut and Walker’s (1975) comparative research on the perceived fairness of Anglo-American Adversarial legal system and European Inquisitorial System. The authors revealed that the former system – which gave its disputants voice or process control – was viewed by the majority as more fair than the latter system. Leventhal (1980) subsequently introduced a guideline specifying six components – consistency, bias-free, accuracy, correctability, representativeness, and ethicality – designed to ensure adequate fairness in decision making processes.

A number of studies spanning over the past two decades have shown that variations in procedural fairness (both structure and procedure) often influence peoples’ subsequent willingness to accept negative outcomes (Folger, Rosenfield, Grove & Corkran, 1979). In other words, individuals who are given voice or in other ways made to view the given procedure as adequate not only perceive the procedure to be fair but are also more likely to judge the outcome as more fair than those who are not given such
opportunities (Cropanzano et al., 2001). Viewed from this perspective, the relevance of procedural justice perceptions for the present investigation lies in the degree of perceived fairness associated with the procedure used to set performance goals. In line with this rationale, allowing subordinates to participate in decision making is predicted to lead to higher perceptions of fairness than when goals are unilaterally assigned. The enhanced perception of fairness, in turn, is predicted to lead to various positive outcomes including positive affect as well as a sense of obligation to meet the jointly agreed upon goal.

*Job-related affect is defined conceptually as individuals’ emotional reactions to their job and to the events that happen on their jobs (Weiss & Cropanzano, 1996). According to Weiss and Cropanzano’s (1996) affective events theory (AET), job-related affect is distinct from job-related attitude and its associated behaviors. Specifically, AET hypothesizes links between job-related events and spontaneous, short-term behaviors rather than more rational and premeditated long-term behaviors. The two resulting types of behaviors are referred to as affect- and judgment-driven behaviors, respectively. Hence, the two can be distinguished temporally with job attitudes reflecting stable features of one’s job and job-related affect reflecting moment-to-moment fluctuations in one’s emotional state. More importantly, job-related affect is important to the extent that such moment-to-moment emotional states – e.g., anger, frustration, happiness, elation – have been theorized to lead to behavioral outcomes both directly and indirectly via motivational mechanisms (Seo, Barrett, & Bartunek, 2004).

The relevance of job-related affect to the present study pertains to its influence on cognition and self-regulatory processes. Specifically, a considerable body of research exists to suggest that people’s affective states at the time of goal setting strongly
influences information processing, retrieval, and expectancy judgments (Seo et al., 2004; see also Forgas, 1995 for a review). One explanation for the influence of affect on cognition stems from research on the mood-congruence hypothesis (Bower, 1981). Many accounts linking affective states with cognitive processes emphasize the role of affect as a cue for the retrieval of similarly valenced information stored in memory (Bower, 1981; Isen & Daubman, 1984). According to this hypothesis the effective retrieval of information depends, in part, on whether the information was encoded under broad, affectively-valenced categories. Put differently, the presence of a positive or negative mood makes similar information easier to recall (Aspinwall, 1998; Bower, 1981). In addition to information retrieval, mood-congruence theory predicts that affective states can influence one’s expectancy or efficacy-related judgments.

With respect to efficacy-related judgments, theories of mood-congruent processing predict that, in general, there is a bidirectional relationship between affective states and affect-related cognitions – i.e., positive affective states lead to more favorable judgments and vise-versa. As such, when in positive mood states, people tend to underestimate the occurrence of negative events such as accidents, illnesses, or failure and vice-versa (Johnson & Tversky, 1983). From this perspective, one may predict that employees in a positive affective state are more likely to view a given goal as more attractive and feel more confident in his/her judgment associated with the likelihood of goal attainment. In line with this notion, one’s affective state is viewed as an intervening variable linking participation with behavior.

Research in organizational justice has consistently demonstrated the negative and positive consequences of unfair and fair procedures on subordinates’ reactions,
respectively (for reviews see Brockner & Wiesenfeld, 1996; Brockner et al., 2004). If fair procedures indicate to subordinates their value or worth to the supervisor as well as the organization (Lind & Tyler, 1988), then, it is likely that fair and unfair procedures will similarly elicit positive and negative emotions in social exchange events, respectively. Applied to the present investigation, participation in setting one’s own goal should elicit positive (as opposed to negative emotional responses) from subordinates. Conversely, the absence of participation in setting one’s own performance goal should elicit thoughts of unfairness, and thus, calling forth negative emotions. Thus, positive affect (PA) and negative affect (NA) are predicted to play a critical role in linking participation with motivated behavior.

Perceived Obligation Gouldner (1960, as cited in Eisenberger, Armeli, Rexwinkel, Lynch, & Rhodes, 2001) asserted that when one is treated well, s/he is likely to feel an obligation to return in kind. Gouldner’s idea of norms of social exchange or norm of reciprocity provide additional insight into which variables might mediate the relationship between participation, procedural fairness, and task performance. Social exchange relationships are somewhat different from those based purely on economic exchange. That is, obligations owed to one another in social exchange relationships are often unclear and difficulty to quantify. Those specific benefits rendered in social relationships, for example, are not limited to material objects but can include services, information, or socio-emotional resources such as approval, love, and liking (Blau, 1964, as cited in Eisenberger et al., 2001).

In the context of organizations a newly-hired employee who receives help from an experienced coworker in performing a given task for the first time might be more willing
to go out of his/her way to return the favor when the opportunity arises. A subordinate who receives a promotion based on his/her supervisor’s recommendation might similarly feel an increased sense of commitment to the supervisor and the organization. This enhanced commitment may further manifest itself in the form of internalization of the supervisor’s values and goals (Becker et al., 1996).

It is with this notion of *reciprocity* that this study integrates perceptions of obligation into a PGS context. As such, allowing subordinates to participate in setting their performance goals is predicted to elicit feelings of gratitude upon receipt of an unanticipated fair treatment. This may be particularly true if participation is viewed as a privilege. The subordinate, having received something of value (e.g., fair treatment, show of respect) may be more likely to develop a sense of obligation to reciprocate.

While there are a number of ways in which subordinates can return the *favor*, this study predicts that one method of reciprocation might be a heightened desire to actually achieve the jointly-set performance goal. A key assumption made here is that a given subordinate’s satisfaction with his/her performance might be, in part, contingent on the supervisor’s satisfaction with the final performance. Hence, a subordinate’s willingness to achieve a jointly-set goal is predicted to be dependent, at least in part, on his/her degree of perceived obligation.

*Attractiveness of Goal Attainment* Attractiveness of goal attainment is generally viewed as an individual’s anticipated satisfaction with goal attainment (Dachler & Mobley, 1973; Garland, 1985, as cited in Klein, 1991). In Vroom’s (1964) expectancy theory, attractiveness refers to the sum of the products of valences attached to all second level outcomes and instrumentalities (i.e., the probability of attainment of the second
level outcome) for the attainment of those other outcomes (Vroom, 1964, as cited in Klein, 1991). As such, Attractiveness of Goal Attainment is viewed as one of the strongest predictors of goal commitment and goal level (Klein, 1991; Klein et al., 1999). Attractiveness of Goal Attainment is important to the present investigation as a conceptual link between the key outcomes of procedural fairness – e.g., affect and perceived obligation – and goal commitment as well as goal level.

Based on the notion that emotion constitutes an important source of influence on thought and behavior, Seo and his colleagues elaborated on the role of emotion in motivational processes (Seo et al., 2004). Specifically, taking Russell’s (2003) concept of core affect, the authors provided a theoretical model linking affect with (a) expectancy judgments, (b) attractiveness judgments, (c) goal level, and (d) goal commitment, among other mechanisms leading to behavioral outcomes – i.e., direction, intensity, and persistence. With respect to goal attractiveness judgments the authors posit that positive affect creates a tendency in people to focus on positive aspects of events both in terms of expectancy and utility. Simply put, people in positive emotional states (as opposed to negative) are more likely to be optimistic in their choice judgments. Applied to goal setting contexts, affective states are predicted to similarly influence one’s anticipated satisfaction with goal attainment (Seo et al., 2004). As such, this study integrates the perspective put forth by Weiss and Cropanzano and that by Seo and his colleagues to view affect as an additional intervening mechanism that may link participation with motivated behavior.

Armed with evidence in support of the link between PGS and the aforementioned factors as well as those intervening variables, this study strives to be the first of its kind to
empirically partial out the unique contributions made by each to motivation and motivated behavior. Towards this end, the meaning of participation itself is conceptualized using theories from the organizational justice domain.

**Participation as Process and Decision Controls**

The participation literature and the procedural justice literature have in common the notion of influence. While influence is considered as an outcome of participation, it is viewed as a critical input to procedural justice. This study, thus, makes a conceptual link between participation and procedural justice through their common influence factor. In this sense, participation in decision-making, when viewed from the organizational justice perspective can take two related but separate forms of influence: voice or process control and choice or decision control (Folger & Martin, 1986; Thibaut & Walker, 1975).

*Process control* (voice) in decision making refers to what information gets heard or expressed while *decision control* (choice) refers to the actual control exercised over the decision outcome.

Process control, or what Folger (1977) referred to as the voice effect, has been shown to enhance judgments of fairness, job satisfaction, organizational commitment, and performance, among others (although the precise nature of its link to performance is unclear) (see Brockner & Wiesenfeld, 1996; Colquitt et al., 2001; Lind & Tyler, 1988 for reviews). Indeed, Lind and his colleagues believe that the opportunity to provide input into the decision making process is likely one of the “best-documented phenomenon” in organizational justice research (Lind, Kanfer, & Earley, 1990, p. 952).
Notwithstanding its central role in enhancing fairness perceptions, the
participation literature is unclear with respect to the precise roles played by voice and
choice. For example, it is conceivable that a given participative intervention can allow
employees the opportunities for input into a decision process, yet, exclude them, partly or
entirely, from actual influence. In such a case, it would be difficult to argue that the
employees truly participated. On the other hand, one may also envision a situation
whereby voice, in and of itself, is able to impart a sense of fairness and participation. The
mechanisms through which voice, in and of itself, leads to perceived fairness may be
entirely different from the traditional economic motives as proposed by instrumental
theorists (Thibaut & Walker, 1975). Broadly speaking, however, the importance of voice
and choice can be viewed from two related but distinct perspectives.

_value-expressive theory_ Theoretical rationale for the link between voice and
fairness comes from Tyler and his colleagues (Tyler, Rasinsky, & Spodick, 1985; Tyler,
1987, as cited in Shapiro, 1993). According to Tyler’s _value-expressive model_ of
procedural justice, voice is important in and of itself because people value “having the
chance to state their case irrespective of whether their statement influences the decision
of the authorities” (Tyler, 1987, p 333, see also Colquitt, 2001; Korsgaard & Roberson,
1995). In other words, voice is valued as an end in itself rather than as a means of
personal control or gain (see Tyler et al., 1999).

Tyler and his colleagues suggest that process control has value-expressive aspects
that are not linked directly or indirectly to decision control (Tyler, Rasinski, & Spodick,
1985). The distinction between voice and decision controls stem from studies in which
the effects of voice on procedural fairness were examined apart from the effects of
decision control (Houlden, LaTour, Lind, Lissak, & Conlon, 1983; Kanfer, Sawyer, Earley, & Lind, 1987; Walker, & Thibaut, 1978). Lind and his colleagues, for example, showed that increased process control heighten judgments of procedural fairness at low levels of decision control (Lind, Kanfer, & Earley, 1990). This moderating effect of process control (i.e., voice) on the relationship between decision control (i.e., choice) and fairness perception led these authors to conclude that procedural justice may contain an independent value-expressive component. Taking this a step further, this study examines the potential for voice to independently influence fairness perceptions in the context of PGS. If voice is important, in and of itself, it may further help to clarify the concept of participation itself as well as clarifying the link between participation and its theorized outcome factors.

In addition to voice, workers can be given choice or decision control (Folger & Martin, 1986; Thibaut & Walker, 1975). Those given a choice over the final decision are given the opportunity to choose a specific course of action – e.g., a goal that one wishes to achieve. Hence, the choice condition in the context of goal setting would represent the degree to which the participant actually influenced the final decision. This distinction between voice and choice is an important one in that evidence exists to suggest that the two forms of control are additive (see Earley & Lind, 1987; Earley, 1995). Theoretical rationale for why choice matters to people can be traced back to the instrumental theory of justice (Thibaut & Walker, 1975).

**Instrumental Theory** The notion of influence implies some degree of control in a decision making process (Mitchell, 1973). Theoretical rationale for why people desire decision control comes from the instrumental perspective of procedural justice (for
reviews see Brockner & Wiesenfeld, 1996; Magner, Welker, & Johnson, 1996; Thibaut & Walker, 1975). According to the instrumental perspective, people seek influence as a means of securing a more beneficial outcome for themselves (Thibaut & Walker, 1975; Magner et al., 1996). Magner and his colleagues claimed that “influence in decision making is a key concept in explaining why participation works to assuage the negative attitudes created by unfavorable outcomes” (Magner, Rahman, & Welker, 1996, p. 826). Hence, from this perspective, the desire for decision control goes beyond the desire to express oneself as described in the preceding section.

Given the two perspectives above, the present study makes a clear distinction between voice as a means of expressing one’s views with respect to a decision making process, and choice, as an actual influence in the decision outcome. More specifically, the voice condition in this study is likened to allowing participants to discuss an appropriate task goal as well as concerns related to the task. The choice condition, on the other hand, is tied to allowing participants the freedom to choose their own performance goals. As such, this study operationalizes participation as consisting of both voice and choice varying on a perceptual continuum.

Summary

The present investigation refines the generally accepted distinction between non-participation (i.e., delegation) and participation (i.e., join decision-making) by viewing participation as varying in the perceived degree of process and decision influence. Participation in goal setting, when operationalized as the degree of voice and choice control, is expected to positively influence one’s choice of performance (goal) level,
commitment to that goal and one’s subsequent task performance. It is anticipated that the above effects will further be mediated by cognitive, social, and moral factors manifested as and/or leading to a heightened state of positive affect, a better grasp of the task, an increase in one’s willingness to uphold a jointly agreed-upon goal, increased development and use of task-related strategies, and finally, an enhanced confidence with respect to one’s task-related abilities.
CHAPTER 2

THEORIZING RELATIONSHIPS

The hypothesized relationships depicted in Figure 2.1 below illustrate predicted patterns of relationships among those theoretically relevant variables included in the study. While the illustrated directional links were determined using existing theory and empirical evidence, given the near-simultaneous occurrence of the cognitive, social, moral, and motivational processes during a decision-making event (i.e., PGS), the causal relationships implied among intervening variables should be interpreted as one of many ways in which participation may be linked to behavior.

**Hypothesis 1** The first set of hypotheses link PGS – operationalized as process and decision controls – with perceptions of justice. Participation in goal setting and the two types of control are believed to both reflect some degree of joint influence (Folger, 1977). Earliest studies of procedural justice have shown that judgments of fairness are enhanced when individuals are given an opportunity to present their case. These studies suggest that voice effect enhances perceptions of procedural fairness even if the person making the fairness judgment has no direct control over the outcome (Folger, 1977; Lind, Kurtz, Musante, Walker, & Thibaut, 1980; Tyler, 1987).
Figure 2.1 Theorized Relationships: Cognitive, Social, Affective, and Moral Components of the Participation-Commitment Relationship
While Thibaut and Walker (1975) attribute this effect to the utility for voice to lead to valued outcomes (e.g., instrumental), others view voice in and of itself as having value (Folger, 1977; Tyler, 1987; Lind, Kanfer, & Earley, 1990). As mentioned, Tyler’s value-expressive model of procedural justice asserts that voice is important in and of itself because people value “having the chance to state their case irrespective of whether their statement influences the decision of the authorities” (Tyler, 1987, p 333; see also Shapiro, 1993).

Consistent with the above, Earley (1985) found that the opportunity to express one’s preferences before and after setting a performance goal enhanced perceptions of fairness of the goal-setting procedure. In his study, performance on a class scheduling task was also significantly higher for those subjects who were given voice prior to task performance (Earley, 1985). Others have reported similar results with respect to participation (Lind, Kanfer, & Earley, 1990; Shapiro & Brett, 1993; Tyler, 1987) and goal setting (Li & Butler, 2004; Renn, 1998). Using undergraduate students, Lind and his colleagues examined the relative importance of instrumental (i.e., the provision of task-relevant information) versus noninstrumental participation (i.e., voice related to goal choice) on perceptions of procedural and outcome fairness (Lind, Kanfer, & Earley, 1990). In a goal setting procedure, subjects were given pre-goal voice, post-goal voice, or no voice. Specifically, those in the pre-goal voice condition were asked what goal would be appropriate for the upcoming class-scheduling task. Those in the post-goal voice condition were asked the same question after the experimenter had already assigned a specific and difficult goal. In the last (no voice) condition, subjects were simply given a specific and difficult goal without voice (Lind et al., 1990).
Results of the above study revealed that both pre- and post-goal voice conditions lead to higher procedural and outcome fairness judgments than the no voice condition. Not surprisingly, perceived fairness (both procedural and outcome) was also higher for those in the pre-goal voice condition – i.e., where subjects had an opportunity for voice prior to the goal being set (Lind, Kanfer, & Earley, 1990). More important to the current hypothesis and as demonstrated by those in the post-goal voice condition, subjects felt enhanced levels of procedural fairness even when told that their opinion could not influence the experimenter’s decision (Lind, Kanfer, & Earley, 1990).

In another study involving 80 6th-grade boys, Folger (1977) examined the students’ fairness reactions after varying both outcome fairness (equal versus unequal pay after a card sorting task) and procedural fairness (e.g., voice regarding how much should be paid versus no-voice). On subsequent measures of outcome fairness, voice workers expressed more satisfaction and fairness with the allocation process than did the mute workers. The above findings suggest that people tend to view as more fair those procedures that afford them the opportunity to provide input even when there is uncertainty regarding whether one’s voice will lead to actual influence.

Finally, Douthitt and Aiello (2001) examined the effects of voice (and choice) on fairness perceptions, satisfaction, and performance in the context of computer monitoring. Operationalizing voice as the “degree to which individual viewpoints are considered” (p. 868), the authors crossed two conditions of participation via voice (high voice vs. low voice) with three conditions of computer monitoring approach (monitoring, control over monitoring, and no monitoring). High voice participation was manipulated by asking subjects their input (a) on how their performance should be evaluated; (b) how
they wanted their results to be communicated; and (c) which two screen colors they preferred for the exercise. One hundred and forty eight undergraduate students were assigned to one of six conditions described above and asked to perform a compensation task in which subjects chose proper payment strategies for fictitious employees. Comparisons of voice effects between those in the force-monitoring conditions revealed a significantly higher level of satisfaction for those who were given voice. More importantly, those in the high voice condition were more likely to perceive the procedure as fair compared to those in the low voice condition (Douthitt & Aiello, 2001).

Consistent with the above evidence, participation in goal setting, as investigated in the present study, is predicted to be perceived as more fair to the extent that people are given the chance to express their views regarding the task and the proposed performance goal. The following prediction is in line with the notion that voice may be important, in and of itself, for enhancing fairness perceptions.

**Hyp 1a.** *The Voice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.*

Instrumental theories of procedural justice assert that people care about control only to the extent that it yields some form of benefit to oneself (Thibaut & Walker, 1975). Hence, the degree to which one perceives he/she has *actually influenced* the outcome (i.e., choice) through the goal setting process is also suggested to be related to fairness perceptions (Lind & Tyler, 1988). This logic can be traced to the earliest studies linking participation with satisfaction (Coch & French, 1948).

In their classic study on participation, Coch and French were able to significantly enhance levels of satisfaction with the job and management by affording factory workers
some degree of control over, among others, (a) the way in which their jobs would be
rotated – i.e., to minimize reduction in perceived status; and (b) the procedures used to
perform a particular job – e.g., to minimize strain and difficulty (Coch & French, 1948).
While satisfaction does not equal fairness, it is likely that those who were given direct
decision control over how their work was going to be performed perceived the process as
more fair than not. More direct evidence in support of the importance of choice in
enhancing fairness perceptions can also be found (Aryee, Chen, Budhwar, 2004; Lind et
al., 1990). In a study by Lind and his colleagues, for example, perceptions of control was
found to partially mediate the effects of voice on both procedural and outcome fairness.
Although choice was not directly manipulated, their finding nonetheless attests to the
importance of perceived influence in enhancing fairness perceptions (see Lind et al.,
1990).

A study examining the antecedents of procedural fairness at the organizational
level further supports the above view (Aryee, Chen, & Budhwar, 2004). Surveys were
distributed to 260 subordinates and 65 supervisors in both manufacturing and newspaper
firms in northern India. Supervisors received separate surveys containing questions
related to task and contextual performance while subordinates received surveys
containing questions related to perceived organizational politics, the degree of
centralization (i.e., participation in decision making and authority hierarchy), and
procedural justice. With respect to the degree of participation and procedural justice, the
authors hypothesized and found higher levels of participation to be positively related to
procedural justice perceptions (zero-order correlation = .18, p<.05).
Finally, in a study on the perceived fairness of electronic performance monitoring and control systems (EPMCSs), Alge (2001) hypothesized that allowing employees to provide their input over the design and implementation of EPMCSs would mitigate negative feelings associated with invasion of privacy by enhancing perceptions of fairness. Using a between-subjects factorial design the author collected data on 206 students. For the high participation condition the author provided the subjects with an opportunity to provide their input on how the information should be collected via the EPMCS and how they should be used. Those in the low participation condition did not receive such opportunity for influence. Results confirmed that participation affects procedural justice perceptions both directly and indirectly through invasion of privacy. In other words, the notion of having had control over the process affected the fairness of the EPMCS usage. In addition, perceived influence also mitigated the felt injustice resulting from invasion of privacy (Alge, 2001). Given the above this study predicts the following:

**Hyp 1b.** The Choice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.

**Hypothesis 2** The next set of hypotheses examines the social impact of participation. Locke and his colleagues theorized that participation itself may enhance perceived support (Locke, Shaw, Saari, & Latham, 1981). Participation, as used in this study, implies a form of empowerment in which subordinates are given some degree of autonomy with respect to the goal they would like to shoot for as well as the opportunity to voice their concerns regarding the task. Empowerment, in turn, is viewed as a potent vehicle for enhancing subordinates’ sense of self-worth and for communicating support
(Hall, 1996; Nielson, 1986). Accordingly, Hall (1996) characterizes supportive leadership as a democratic supervision style in which subordinates are given significant influence over decisions.

Indirect evidence for the above comes from a study on employee empowerment. In their field study, Keller and Dansereau (1995) proposed that the provision of negotiating latitude would empower subordinates via perceptions of control and fairness. Surveys were distributed to 20 managers, 30 professionals, and 42 hourly workers throughout the measurement division of a Midwestern test-scoring company. Measures included, among others, perceived control (i.e., the degree of supervisor-initiated latitude), subordinate investments (i.e., the degree of subordinate reciprocation toward supervisor) and supervisory fairness.

Data from 92 superior-subordinate dyads showed that superiors who invest in subordinates through the provision of negotiating latitude are viewed as more fair than those who do not make such provisions. Additionally, results indicated a positive relationship between levels of perceived control and satisfaction with supervisor. More precisely, supervisors who extend negotiating latitude were viewed as more supportive as measured by the Satisfaction With My Supervisor Scale (SWMSS: Scarpello & Vandenberg, 1987). These results are consistent with a stronger link found between PGS and perceived experimenter supportiveness compared with the tell and sell or assigned conditions (Latham et al., 1988). The above findings jointly suggest that choice in PGS should enhance perceptions of supportiveness. As such, the provision of choice is expected to enhance perceptions of supervisor support.

Hyp 2a. The Choice component of Participation in Goal Setting will be positively related to Perceived Support.
The voice component of participation in goal setting is similarly expected to enhance levels of perceived support. As mentioned, various theories of procedural justice – group-value, value-expressive, and fairness heuristic theory – propose that the allowance of decision input communicates respect and consideration (Lind, 1995; Lind & Tyler, 1988; Shapiro, 1993; Tyler, 1987).

Providing indirect support for the above, Tyler and his colleagues (1985) explored judgments of fairness under conditions in which subjects were given the opportunity to express their opinion (process control) or exert actual influence over the decisions made (decision control). In their first in a series of studies, one hundred and twenty-one traffic and misdemeanor defendants were contacted by phone two to four days following their court appearance. These defendants were inquired about their opportunity to present evidence and their control over the way in which the evidence was presented. Findings of this first study revealed that the majority of the defendants felt that they had some or great deal of process control but little or no decision control. More importantly, the same defendants overall reported substantial endorsement of the judges who presided over their cases. In the two subsequent studies assessing the separate impact of process and decision controls, the authors similarly revealed that increases in process control in the form of voice heightens both perceptions of procedural fairness as well as the tendency to endorse those who had presided over their cases. While support per se was not directly measured it can be that perceptions of fairness and endorsement of a given outcome are likely to be consequences of felt support, at least from the procedural justice perspective (Brockner & Wiesenfeld, 1996; Lind & Tyler, 1988).
Additionally, Alexander and Ruderman (1987) studied the relationships between fairness judgments and various organizational attitudes in a survey of more than 2000 federal employees. Factor analysis of the procedural justice items revealed three procedural justice factors including (a) participation, (b) performance appraisal fairness, and (c) appeals procedure fairness (e.g., voice). Among the dependent variables included in the study were job satisfaction, trust in management, and evaluation of supervisor. Results revealed that procedural fairness explained significant incremental variance in job satisfaction ($R^2 = .105, p < .001$), trust in management ($R^2 = .114, p < .001$), and evaluation of supervisor ($R^2 = .212, p < .001$) with the appeal procedural fairness significantly accounting for each of these outcomes. Again, while perceived support was not directly measured it is viewed as a likely antecedent to job satisfaction, trust in management, and evaluations of supervisor. Given the above indirect supports for the importance of voice in enhancing fairness perceptions and the existing theoretical rational for the importance of voice (Shapiro, 1993; Tyler & Lind, 1988), process control in the form of voice, independent of decision control, is expected to communicate support and respect, thus, leading to a heightened sense of support.

**Hyp 2b.** The Voice component of Participation in Goal Setting will be positively related to Perceived Support.

**Hypothesis 3** Hypothesis 3a anticipates that participation via voice will enhance task understanding. Locke and Schweiger (1979) listed the fuller grasp of the methods/means necessary for accomplishing task goals as one potential benefit of participation (see also Latham, Winters, & Locke, 1994; Latham & Steele, 1983; Wagner et al., 1987). While participation can entail a direct exchange of task-related information
(e.g., Earley, 1985; Erez & Arad, 1986) task-related information can also be made more salient through participation, thus enhancing the level of processing associated with task-related information (Lockhart & Craik, 1990). Hence, the hypothesized benefit of voice, in this sense, is separate from that responsible for enhancing fairness perceptions.

Voice as used in the present goal setting context serves two purposes. First, participants are given an opportunity to provide their input regarding what they believe is appropriate in terms of a performance goal. In addition, participants will be given an opportunity (i.e., prompted) to discuss the characteristics of the task – e.g., task characteristics and obstacles to efficient task performance. This latter component of voice is predicted to facilitate a conscious and effortful processing of task-related information. Combining this deeper processing of information related to the task, in turn, is expected to enhance employees’ understanding of the task as well as improving informational retrieval capability of the employees. Evidence for this logic can be seen in studies linking discussion and conscious processing of information with memory retrieval (Campbell & Gingrich, 1986; Nelson, 1977; Woodward, Bjork, & Jongeward, 1973).

In their attempt to demonstrate the cognitive implications of PGS, Campbell and Gingrich conducted a field study with 40 computer programmers asked to write either a simple (i.e., programs requiring 40 hours of less work) or a complex (those requiring greater than 40 hours) computer program. Using a 2 x 2 ANOVA design, the sample was divided such that half of the participants actively discussed the project with their supervisors (participation) and the other half did not (nonparticipation). Results showed that computer programmers who discussed complex programs with their supervisors were
able to complete their task faster than those who were not given such an opportunity (Campbell & Gingrich, 1986); presumably through enhanced understanding of the task. Related to task understanding, conscious discussion of a given task may simultaneously enhance information retrieval capability.

Nelson (1977) demonstrated in a series of three studies that when subjects are forced to process information multiple times (i.e., whether presented in groups or distributed over several minutes), their recall of that information is far superior to those who undergo a single presentation. From this observation, Nelson concluded that the depth of information processing can be facilitated simply by extending the salience of that particular information through multiple exposures to the stimuli. This effect was found to be consistent regardless of whether the repetitions were massed or distributed and irrespective of whether the subject was asked to recall the information with a cue, without a cue, or given a simple recognition task. A similar conclusion was reached Woodward and his colleagues (Woodward et al., 1973).

In three separate recall experiments with a total of 108 students, Woodward and his colleagues presented subjects with four lists of words along with a cue to remember or to forget. In short, when a blank period was provided just prior to the presentation of the lists (i.e., forcing the subjects to hold the information in memory for a brief period), recall performance was significantly higher (Woodward et al., 1973). Together, the above evidence provide a foundation for the prediction that allowing participants to voice their thoughts and concerns regarding their goals should enhance task understanding.

**Hyp 3a. The Voice component of Participation in Goal Setting will be positively related to Task Understanding.**
Task understanding in turn is similarly anticipated to encourage the development of quality strategies. As mentioned, Locke and Schweiger (1979) listed the fuller grasp of the methods/means necessary for accomplishing task goals as one potential benefit of participation (see also Latham, Winters, & Locke, 1994; Latham & Steele, 1983; Wagner et al., 1987). Task-related strategies, however, cannot occur without at least a minimal understanding of the general parameters – e.g., rules and objectives – of a given task. That is, task-related understanding must necessarily precede the development of high quality strategies. Evidence in support of this logic comes from studies linking provision of task-relevant information with task performance (Earley, 1985; Erez & Arad, 1986; Kanfer et al., 1984).

In a study linking task information, task complexity, and choice, Earley (1985) predicted that information about a goal and/or task, choice in setting a strategy to achieve a goal, and task complexity should interact to influence goal acceptance, personal goals, and performance. To test his hypothesis, Earley manipulated information, choice, and task complexity with 96 undergraduate students. Results indicated that choice in goal-setting and the provision of task information interact to influence performance such that both choice and information lead to superior performance. Task information further interacted with task complexity such that information was beneficial only when the task was complex (Earley, 1985).

In the above study, it was concluded that access to task-related information is critical in facilitating the generation of task-related strategies, leading to improved performance. In line with this notion and using a performance appraisal simulation, Kanfer and her colleagues showed that those allowed to participate in decision making
and those who were provided with task-related information outperformed those who were not allowed to participate. The authors, thus, concluded that both choice and task-relevant information are critical in enhancing performance (Kanfer, Sawyer, Earley, & Lind, 1987). Findings by a separate study further suggest a link between task-relevant information and the development of task-related strategies (Latham et al., 1994).

In an experimental examination of the cognitive benefits of participation, Latham and his colleagues assigned 53 subjects into one of four conditions that included participative strategy formulation. The authors reported that participation – in which information regarding the task was shared – led to an increase in strategy formulation which in turn led to better performance. While the same authors failed to directly examine the precise role of task understanding as it relates to strategy development, it is suggested in this study that participation alone may increase one’s understanding of a given task. Task understanding, in turn, is expected to encourage the development of task-related strategies (Latham et al., 1994).

Finally, in the aforementioned study by Campbell and Gingrich (1986), the authors showed that computer programmers who discussed complex programs with their supervisors were able to complete their programming tasks faster than those who were not given the same opportunity (Campbell & Gingrich, 1986). Here again, the improved performance is presumed to have been attained through the programmers’ enhanced understanding of the task at hand. Though not measured, this enhanced understanding, in turn, is believed to have led to the development of quality strategies that could ultimately be utilized by the programmers to obtain higher performance.

**Hyp 3b.** Task Understanding will be positively related to Strategy Quality.
Hypothesis 4 For the next hypothesis, perceived support is expected to moderate the effects of the choice component of participation on procedural justice perceptions. Specifically, the positive effect of choice on procedural justice perceptions is anticipated to be stronger when accompanied by perceptions of support. This prediction is indirectly supported by the demonstrated interaction between interactional justice – i.e., the degree to which people are treated with dignity, respect, and consideration – and procedural justice (Skarlicki & Folger, 1997).

In a study of the relationship between organizational justice and organizational retaliation behavior (i.e., adverse reactions to perceived unfairness by disgruntled employees toward their employer), Skarlicki and Folger (1997) distributed surveys to 240 first-line employees in a large manufacturing firm. Three primary measures of justice dimensions (distributive, procedural, and interactional) were obtained along with data on retaliatory behavior (based on critical incident technique). More importantly, interactional justice items were assessed using a nine-item scale containing such items as “Does your supervisor consider your viewpoint when making decisions?” and “Does your supervisor listen to your personal concerns?” (Skarlicki & Folger, 1997, p. 437). It is important to note the similarity in these items to the procedural fairness measure – e.g., “Does your company have procedures that allow employees the chance to have their say and express concerns regarding company business?”

Results from the above study showed that procedural, distributive, and interactional justice perceptions interact in such a way that only when both procedural and interactional justice perceptions are low, does low distributive justice lead to organizational retaliatory behavior. More precisely, the interaction of distributive and
procedural justice was observed only at low levels of interactional justice, and the interaction of distributive and interactional justice was observed only at low levels of procedural justice (Skarlicki & Folger, 1997). Their findings attest to the importance of considering the interactional justice dimension when assessing the linkage between participation and procedural justice perceptions.

It is important to note here that while this study draws parallels between perceived supervisor support and interactional justice, the two constructs are not the same. Interactional justice contains two specific facets of interpersonal treatment (i.e., interpersonal and informational) (Greenberg, 1990) which is predicted to overlap with the perceived support construct as measured in this study. The decision to assess support rather than interactional justice was based on three reasons. First, despite their distinctiveness, interactional justice and procedural justice have been shown to be highly correlated (see Colquitt et al., 2001). Second, this study is concerned primarily with participation, per se, and its potential influence on perceived support. In other words, the effects of participation are separated from the effects of interpersonal treatment and the fairness of the information provided to employees. Finally, because it is conceivable that procedural justice (i.e., stemming from participation) and interactional justice can both impact perceived supportiveness of the supervisor, the decision was made to isolate that supportiveness component stemming from procedural justice in order to investigate whether perceived support can further clarify the link between participation and behavior.

The distinction between interactional justice and procedural justice dimensions is further supported by direct empirical evidence (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). In a meta-analysis of 183 justice studies using a diverse set of justice constructs,
Colquitt and his colleagues examined various outcomes related to each construct as well as their interrelationships. Briefly, informational and interpersonal justice dimensions were found to be distinct, not just from each other, but from the traditional procedural justice dimension with respect to various outcome variables. While high correlations were observed between the three dimensions of justice, the procedural justice dimension was more strongly related to outcome satisfaction. Interpersonal and informational justice dimensions on the other hand were more strongly related to agent-referenced outcomes (e.g., evaluation of authority) (Colquitt et al., 2001).

Given the similarities and differences between the three justice dimensions as well as the reported interaction between interactional and procedural justice dimensions, it is likely that perceived support stemming from participation will interact to affect procedural justice perceptions. As such, the choice participation-procedural justice relationship is predicted to be stronger when individuals perceive a greater degree of support from authority figures and weaker when individuals perceive a lesser degree of support.

4. **Perceived Support will moderate the effects of the Choice component of Participation in Goal Setting on Procedural Justice such that the strength of the positive relationship between Choice and Procedural Justice will increase as Perceived Support increases in an uncrossed interaction.**

**Hypothesis 5** The following set of hypotheses highlight the mediating role of procedural justice in linking participation with affect and perceived obligation. Specifically, hypotheses 5a and 5b predict that perceived procedural fairness resulting from voice and choice will lead to positive affect. From the value-expressive perspective, those who are afforded the opportunity to express their views on a given task should view
the procedure as more fair than those from whom such opportunity is withheld (see hypothesis 1a). Similarly, viewed from the instrumental perspective, those who are given some degree of control over a decision outcome should view the procedure as more fair than for those on the receiving end of a unilateral decision (see hypothesis 1b). In contrast to felt injustice, enhanced fairness perceptions, in turn, is expected to result in positive affect. Evidence from the justice literature, indeed, shows this to be the case (Alexander & Ruderman, 1987; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Konovsky & Cropanzano, 1991; Roberson, Moye, & Locke, 1999).

Roberson and his colleagues hypothesized that procedural justice perceptions may mediate the link between participation and satisfaction, similar to the mediating role played by knowledge in linking participation with performance (Roberson et al., 1999). To test their prediction, Roberson and his colleagues had 235 undergraduate students participate in three separate trials of a class scheduling task. Performance goals were set using one of three conditions: Assigned, self-set, and participative.

A comparison of the hypothesized model (e.g., participation → procedural justice → satisfaction) with an alternative model (in which procedural justice was predicted to partially mediate the participation-satisfaction relationship) revealed both to be significant. However, on the basis of a sequential chi-square difference test, the authors determined that the hypothesized model provided a more suitable explanation of the relationships among the data (Roberson et al., 1999). Thus, the authors concluded that procedural justice completely mediates the relationship between participation and
satisfaction (Roberson et al., 1999). Additional support for the above assertion comes from a study of perceived fairness in drug testing procedures (Konovsky & Cropanzano, 1991).

Given the increasing need for drug testing in organizations, Konovsky and Cropanzano (1991) explored possible ways to minimize negative reactions using a procedural justice framework. Survey data collected from 179 employees in a field setting included, among others, questions related to (a) procedures used for drug testing, (b) the manner in which the obtained data is used, (c) job satisfaction, and (d) affective commitment to the organization. Procedural justice was operationalized using Leventhal’s (1980) six criteria which include a *voice* component – i.e., opportunities for appeal. While voice was not examined separately, results indicated significant correlations among procedural justice perceptions and (a) job satisfaction ($r = .33$); and (b) affective commitment ($r = .44$). Hence, the authors concluded that procedural justice is a critical factor influencing satisfaction and organizational commitment.

Further evidence can be inferred from the above-mentioned study by Keller and Dansereau (1995) in which negotiating latitude was linked to fairness perceptions (see hypothesis 2a). While correlational in nature, *negotiating latitude* afforded to subordinates by their superiors in their study implies both process as well as decision controls. That is, the notion of negotiation involves both the opportunity to express one’s point of view as well as some degree of control over the actual decision outcome. Hence, it may be reasonable to posit that fairness perceptions will mediate the relationship between participation (via voice and choice) and affect.
In a meta-analysis on the correlates of the three dimensions of justice (i.e., distributive, procedural, and interactional), Cohen-Charash and Spector (2001) further provides an indirect link between voice and supervisor support. Their analysis of data on 190 studies samples totaling 64,757 participants show a weighted mean correlation of .52 between procedural justice and supervisor satisfaction (i.e., affect). More relevant to the present study, the procedural justice dimension as conceptualized in the above meta-analysis contains a voice component (i.e., opportunity to express or appeal).

Together, the above evidence in support of the mediating role of procedural justice echo findings reported in a recent meta-analysis by Colquitt and his colleagues (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). In their review of 183 justice studies spanning a quarter of a century the authors report corrected population correlations for various factors related to procedural justice including outcome satisfaction (.45), organizational commitment (.27), evaluation of authority (.50), and organizational citizenship behaviors (.21) (Colquitt et al., 2001). Consistent with hypotheses 5a and 5b, each of the above outcomes can be said to contain an affective component or viewed as a direct consequence of an affective event (e.g., Weiss & Cropanzano, 1996).

The above studies collectively demonstrate that fair procedures, whether achieved through process or decision controls, are positively linked to affect or affect-laden outcome constructs. As such, perceived procedural justice is predicted to partially mediate the relationship between voice/choice and affect. Partial mediation, rather than full mediation, is predicted here and for the remaining mediation hypotheses for one main reason. Specifically, the model shown in Figure 2.1 is an exploratory model that may or may not hold true. While founded in theory, it is unlikely that the selected intervening
variables are the only variables through which the antecedent variables will affect each of the corresponding predicted variables. As such, partial mediation predictions are expected to more readily allow for the possibility of additional (partially mediating) intervening variables to play a role in future research. In order to enhance visual clarity the direct effects – i.e., due to the prediction of partial mediations – were excluded from Figure 2.1.

5a. Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Affect.

5b. Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Affect.

Building on the rationale and the empirical evidence in support of hypotheses 1a and 1b, procedural fairness perceptions stemming from participation is expected to lead to a sense of obligation or an enhanced desire to follow through with what was agreed upon. This idea stems from the notion that those who feel that they have been treated fairly in social exchange events should be more willing to return in kind. As noted, exchange theories (Adams, 1965; Homans, 1961; Kelley & Thibaut, 1978) assert that social exchange relationships are built, in part, on the belief that people exhibit a general tendency to give back commensurately with what they perceive as having received or failed to receive from others.

In the present context one just deed is likely to be reciprocated with another manifested as a desire to uphold a jointly-agreed-upon agreement. More importantly, it is not simply the provision of voice or choice, but one’s overall evaluation of whether the provision of that voice/choice is appropriate and just. In other words, the felt obligation to reciprocate is believed to occur only when one believes that s/he has been treated
fairly. This is in line with evidence linking fair treatment with such productive behaviors (as opposed to counter-productive) as organizational citizenship (OCB: Moorman, 1991, 1993; Colquitt et al., 2001; Organ & Ryan, 1995).

Organizational citizenship behaviors (OCBs) or extra-role behaviors are those discretionary behaviors not explicitly related to the formal reward system of organizations but, nonetheless, can be conducive to its effective functioning (see Borman & Motowidlo, 1997; Organ & Ryan, 1995). Understandably, OCBs are more likely to be demonstrated by those who (a) are committed to their supervisors and/or their organizations (see Becker & Billings, 1993; Organ & Ryan, 1995), (b) feel that they are supported by their organization (Eisenberger et al., 2001), and (c) feel that they have been treated fairly by their supervisors/organizations (Moorman, 1991; Niehoff & Moorman, 1993). There exist multiple explanations for why some employees are willing to go well beyond their call of duty to care about their organization. However, with respect to the fairness-OCB relationship, one explanation provided in this study relates to the felt need to reciprocate what one perceives as having received from his/her supervisor and/or organization. An indirect line of evidence for this assertion comes from a study linking fairness perceptions with OCBs (Deluga, 1994; Moorman, 1991; Niehoff & Moorman, 1993).

In his publication entitled, *Do fairness perceptions influence employee citizenship?* Moorman (1991) focuses on the relationship between procedural justice perceptions and extra-role behaviors. A sample drawn from two separate organizations was used to test the hypothesis that procedural fairness at the organizational level would be positively related to OCB. Structural equations analysis results supported a
causal relationship between procedural justice perceptions and OCB with the former affecting the latter (Moorman, 1991). Similar findings were reported by other researchers (e.g., Fahr, Podsakoff, & Organ, 1990; Moorman, Niehoff, & Organ, 1993) suggesting that employee perceptions of fair procedures positively influence OCBs or extra-role behaviors. In addition to fair organizational procedures, however, fair treatment by supervisors has also been linked with increased tendency to perform extra-role behaviors (Deluga, 1994).

In a field investigation of Leader-Member Exchange (LMX) involving 86 supervisor-subordinate dyads across multiple organizations, Deluga (1994) found that subordinates’ organizational citizenship behavior was most closely associated with the perceived fairness of their supervisors. A critical argument made here is that high quality LMX relationships are characterized by the existence of significant bidirectional decision making influence (Dienesch & Liden, 1986).

The above studies mirror the afore-stated meta-analysis findings by Colquitt and his colleagues (Colquitt et al., 2001). The authors reported corrected population correlations linking procedural fairness perceptions with organizational commitment (.27), evaluation of authority (.50), and organizational citizenship behaviors (.21) (Colquitt et al., 2001). Again, while the above factors do not directly tie procedural justice perceptions with felt obligation, this study views each of the above outcome as manifestations, reflections, or willingness, on the part of the subordinate to bestow valued resources – i.e., themselves – to the foci of their felt obligation (i.e., supervisor, organization). Simply put, the above evidence indicate that when employees receive fair treatment by their supervisors or their organizations, they are more likely to reciprocate
by performing behaviors intended to benefit their supervisors or organizations. In line with these rationale and empirical evidence, perceived procedural justice is predicted to mediate the effects of voice and choice on perceived obligation.

5c. Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Perceived Obligation.

5d. Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Perceived Obligation.

Hypothesis 6 The next hypothesis predicts a mediating role for task understanding. Hypothesis 3a predicts a main effect of voice on task understanding. Task-related information (e.g., characteristics, potential obstacles, overall objectives) should become increasingly salient for those who are prompted to express their thoughts regarding the task and his/her performance goal. The following hypothesis predicts that enhanced task understanding, in turn, should further encourage the development of high quality strategies.

Locke (2000) asserted that task-related knowledge can be activated and perpetuated automatically once a decision to achieve a particular level of performance is made. If so, it is likely that one’s heightened understanding of the task (via voice) will lead to the development of high quality strategies as strategies inherently play a vital role in goal pursuits (Gollwitzer, 1996). Combining this rationale with empirical evidence presented in support of Hypothesis 3b (e.g., Campbell & Gingrich, 1986; Earley 1985; Locke et al., 1994), it may be reasonable to hypothesize that a deeper understanding of a given task (gained through voice) will lead to increased development and utilization of task-related strategies.

6. Task Understanding will partially mediate the effects of the Voice component of Participation in Goal Setting on Strategy Quality.
**Hypothesis 7**  Hypotheses 5c and 5d predict that affording individuals voice and choice via PDM will enhance fairness perceptions, thus, leading to an enhanced desire to reciprocate (i.e., perceived obligation) (Homans, 1961). Again, it is not the simple provision of voice or choice that is expected to elicit a desire to reciprocate; there may be times when employees may not care whether such opportunities are provided. Thus, it is only when employees believe that the provision of such opportunity is *fair* that they are expected to reciprocate through one or more means. This study asserts that one way in which employees may choose to reciprocate is through the achievement of the jointly agreed-upon goal. An individual’s desire to uphold a jointly-agreed-upon agreement in turn may manifest as an enhanced attraction to goal attainment. As such, the desire to reciprocate is expected to enhance the valence or the value attached to the attainment of a given goal.

Indirect evidence for the above come from studies linking perceived organizational/supervisor fairness and support with various positive outcomes such as job satisfaction, organizational commitment, and OCB (see 5c and 5d). In a meta-analysis on the correlates of the three dimensions of justice (distributive, procedural, and interactional) Cohen-Charash and Spector (2001) demonstrated the links between fairness in organizations and the above outcomes. As alluded to earlier, their analysis of data on 190 study samples totaling 64,757 participants showed significant weighted mean correlations between procedural justice and various behavioral and attitudinal outcomes including performance (.45 in field studies, .11 in laboratory studies), OCB (.23), supervisor satisfaction (.52), and counterproductive work behavior (-.27).
The above evidence collectively suggests that when employees are treated fairly, whether at the supervisor or the organizational level, they are more likely to be satisfied. More importantly, fairly-treated employees are more likely to develop positive attitudes and engage in behaviors conducive to effective organizational functioning. Combining this rationale with (a) evidence linking supervisor fairness with OCBs (Deluga, 1994), (b) evidence linking fairness with the desire to act in accordance with supervisory preferences (Keller & Dansereau, 1995), and (c) the theorized relationship between organizational commitment and Attractiveness of Goal Attainment (Hollenbeck & Klein, 1987), it may be reasonable to expect perceived obligation to mediate the link between procedural fairness and Attractiveness of Goal Attainment. Workers who feel that they have been treated fairly by their supervisor are more likely to develop thoughts and feelings related to reciprocation. Applied to a dyadic goal setting context one salient path leading to reciprocation might be through an increased desire or attractiveness of attaining a goal that has been jointly set. The following prediction is consistent with this assertion.

7a. *Perceived Obligation will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment.*

The next hypothesis predicts that affect will partially mediate the relationship between procedural justice perceptions and Attractiveness of Goal Attainment. Hypotheses 5a and 5b foresee the provision of voice and choice as leading individuals to experience PA (i.e., positive affect) when they perceive voice and choice to be integral to procedural fairness. Positive affect, in turn, has been causally linked with various cognitive, attitudinal, and behavioral outcomes (Aspinwall, 1998; Weiss & Cropanzano,
Existing research on emotional processes indicate that positive feeling states influence the cognitive and self-regulatory processes leading to task performance in a variety of ways. For example, studies have shown that both naturally occurring and induced affective states can influence cognitive or self-regulatory processes associated with a given task – e.g., effectiveness in problem solving, decision making, and flexibility (Erez & Isen, 2002; Forgas, 1993; Isen, 1993, 1999; Staw & Barsade, 1993; Taylor & Aspinwall, 1996;).

In a study involving undergraduate students in three affective states (i.e., happy, sad, or neutral), Forgas (1993) asked subjects to choose a research partner from eight potential candidates. Each candidate (i.e., research partner) was described via information in a personnel file containing facts on the candidates’ interpersonal and task skills. Results showed that (a) mood influences decision outcomes, with sad subjects preferring rewarding choices more than happy or control subjects; (b) sad subjects give more weight to interpersonal information; and (c) decisions made by subjects in the happy mood condition are faster and more efficient. The above cumulative evidence echoes a large body of research evidence demonstrating that emotional states can, in fact, influence cognitive processes (Aspinwall, 1998; Erez & Isen, 2002; Staw & Barsade, 1993; Taylor & Aspinwall, 1996).

Additionally, consistent with the mood-congruent processing theory of emotion (Forgas, 1995; Johnson & Tversky, 1983), Erez and Isen predicted that an induction of a mildly positive affective state (via candy distribution) would enhance motivation through components of VIE theory (i.e., valence, expectancy, instrumentality – Vroom, 1964). The authors predicted PA to enhance overall motivation and, thus, performance through
its effects on valence, instrumentality, and expectancy. In two studies involving an
anagram solving task and the Wonderlic cognitive ability test, the authors found support
for their predictions. Subjects in the positive affective state significantly outperformed
those in the neutral mood state. More importantly for the present hypothesis, subjects in
the PA conditions in both studies made stronger associations between effort and
performance levels (i.e., expectancy) and were more attracted to the second level
outcome (i.e., valence). Significant differences in instrumentality (i.e., perceived linkage
between varying performance levels and their associated reward) coefficients were also
found between PA and neutral conditions with those in a positive mood reporting a
stronger connection between performance levels and their expected rewards (Erez & Isen,
2002, Study 2). In consideration of the above evidence along with meta-analysis results
reporting a sample-weighted correlation of .20 between affect and goal commitment (for
which Attractiveness of Goal Attainment is a key predictor, see Klein et al., 1999), the
following prediction is made:

7b. Affect will partially mediate the effects of Procedural Justice on
Attractiveness of Goal Attainment.

Hypotheses 5a and 5b proposed that when the provision of voice and choice is
viewed as fair, they would lead to a positive affective state. Extensions of the theoretical
and empirical evidence provided for hypothesis 7b further suggest that individuals in
positive affective states are more likely to overestimate their capabilities (Bandura, 1986;
Forgas, 1995). Bandura (1986), for example, noted that positive moods can activate or
encourage thoughts of accomplishment, thereby, enhancing perceived self-efficacy.
Citing the considerable in support of the linkage between PA and expectancy judgments
(see Forgas, 1995, 2001 for reviews), Seo and his colleagues similarly proposed a model linking core affective experience (i.e., pleasantness and activation) with goal level and motivation via expectancy judgments (Seo, Barrett, & Bartunek, 2004). Expectancy judgments, while narrower in scope than self-efficacy beliefs (Locke & Latham, 1990), are treated as conceptually equivalent to self-efficacy in the present investigation. For example, expectancy refers to the strength of an action-outcome belief while self-efficacy generally refers to the belief regarding one’s capability to produce effects. In addition to expectancy judgments, more direct evidence can be found that links affect with self-efficacy beliefs (Kavanagh & Bower, 1985; Lee & Bobko, 1994; Wright & Mischel, 1982).

In a study by Wright and Mischel (1982), subjects were induced contrasting emotional states (happy and sad) through a recall exercise involving real-life experiences. Subjects then performed a complex perceptual task (identifying whether two rotating, geometric figures are the same). The mood conditions were crossed with a feedback procedure varying at two levels (positive or negative). As predicted, the feedback manipulations produced the expected effects with positive feedback leading to a higher perceived efficacy and negative feedback leading to a lower perceived efficacy perceptions for future tasks. More interestingly, incongruence in mood condition and feedback sign led to distorted expectancy judgments. Specifically, subjects in the happy plus negative feedback condition overestimated their future performance (i.e., higher self-efficacy) while efficacy judgments for those in the sad plus positive feedback conditions were significantly lowered from previous trials. Hence, affective state appears to play a critical role in influencing efficacy perceptions for future tasks.
Similar to the Erez and Isen study described in the section preceding hypothesis 7b, Kavanagh and Bower (1985) powerfully demonstrated the mood-congruence effect on efficacy judgments. Using an unusual method of affect-induction, Kavanagh and Bower placed their subjects in a mild hypnotic trance state for the duration of the experiment. In a within-subjects procedure, the subjects were then asked to recall successively, successful, unsuccessful, and neutral experiences related to romantic encounters. Efficacy judgments were then obtained for a variety of activities including other romantic (as well as nonromantic) activities. Results revealed a near-linear relationship between affective conditions and self-efficacy judgments with those in the sad condition exhibiting the lowest efficacy judgment (46.3/100), followed by those in the neutral condition (57.0/100), and happy condition (64.3/100). Thus, the different emotional states induced via hypnosis greatly influenced judgments of self-efficacy.

Combining the above evidence with Lee and Bobko’s (1994) reported average correlation of .22 between positive affect (measured using Watson et al., 1988 measure) and an assortment of self-efficacy measures, affect is predicted to partially mediate the effects of procedural justice on task-specific efficacy.

7c.  Affect will partially mediate the effects of Procedural Justice on Task-Specific Self-Efficacy.

**Hypothesis 8** Building on hypotheses 2a and 2b, hypotheses 8a and 8b link participation with TSSE via perceived supervisor support. According to Bandura (1982, 1997) one’s perceived capability for success on a given task can develop in several ways including performance accomplishments, vicarious experiences (modeling), physiological
arousal (i.e., reduced signs of anxiety), and most relevant to the current set of hypotheses, verbal/social persuasion – e.g., encouragement, reassurance, and/or support. As noted by Bandura (1982), verbal persuasion is a powerful technique that can be used to enhance individuals’ perceptions of their own capabilities for performing a given task. Several lines of evidence support this assertion.

Tuckman and Sexton (1991) for example tested the prediction that encouragement would help enhance perceived efficacy levels in undergraduate students. Sixty four participants volunteered to write test items for a course in return for bonus points. Once the test items were submitted, half of the students received an encouraging note praising the quality of their items while the other half received no such praise. Results showed that students receiving encouragement scored significantly higher on their final measure of self-efficacy and subsequently earned more points than those who did not receive encouraging notes (Tuckman & Sexton, 1991).

Similar findings were reported by Jackson (2002) who communicated self-efficacy-enhancing information to his undergraduate students. After assigning his subjects into one of three ability groups (above average, average, and below average) based on their first mid-term performance, the author invited all students to send him an email as a way of receiving bonus points. The author then randomly selected half of the students to send efficacy-enhancing instructions (based on Bandura’s four developmental factors) while the remaining students were sent neutral replies. As expected, results indicated significant improvements in self-efficacy and subsequent exam performance only for those in the efficacy-enhancing condition.
Hagen, Gutkin, Wilson, and Oats (1998) similarly investigated whether self-efficacy perceptions related to working with difficult-to-teach children could be enhanced via modeling and verbal persuasion. The authors had the experimental group view a videotape of teachers demonstrating effective behavior-management procedures (i.e., modeling) including support testimonials by the teachers themselves (i.e., social persuasion). Results indicated a significant improvement in self-efficacy levels in the experimental group as compared with the control. Finally, Luzzo and Taylor (1994) examined the effects of verbal persuasion on career-decision making self-efficacy (CDMSE: Taylor & Betz, 1983) of 88 college students and reported that the treatment group scored significantly higher in their career-decision making self-efficacy.

The next two hypotheses can be viewed as an extension of Bies and Moag’s (1986) concept of interpersonal/interactional justice in which fair treatment – in the form of choice and voice – can be construed by its recipient as communication of support and respect (see Bies & Moag, 1986). Social support, in turn, is viewed as a key source of information from which individuals derive a sense of self-efficacy (Bandura, 1997; Betz, 2004).

8a. Perceived Support will partially mediate the Choice component of Participation in Goal Setting on Task-Specific Self-Efficacy.

8b. Perceived Support will partially mediate the Voice component of Participation in Goal Setting on Task-Specific Self-Efficacy.

Hypothesis 6 predicts that task understanding will partially mediate the effects of voice on strategy quality. As alluded to earlier, holding constant all other factors, the development of high quality strategies cannot occur without an understanding of the
parameters or boundary conditions of a given task. While difficult to argue that task understanding, by itself, will lead to high quality strategy development, a greater understanding of a task gained through a joint discussion with one’s supervisor, is expected to lead to the development of quality strategies. Thus, the next hypothesis asserts that strategy quality will mediate the effects of task understanding on TSSE.

Those able to develop successful strategies are more likely to feel that they possess the necessary motivation and resources to meet demands required by a given situation – i.e., self-efficacy (Bandura, 1997). Indirect support for this notion comes from a study on the cognitive benefits of participation (Latham et al., 1994). In their lab study, Latham and his colleagues predicted that participation in developing task strategies would result in better performance than no participation. It was further predicted that participation in strategy development would further enhance task-related self-efficacy (Latham et al., 1994).

To test their predictions, undergraduate business students were randomly assigned to one of four conditions in a 2 (participative strategy formulation versus individual strategy formulation) and 2 (participative goal setting versus assigned goal setting). Results showed that those in the participative strategy formulation condition outperformed those in the individual strategy formulation condition. More importantly, self-efficacy, measured prior to each of the three 15-minute trial periods, partially mediated the effects of both participation in goal setting and participation in strategy formulation on performance (Latham et al., 1994).

Viewing task strategy from Gollwitzer’s (1996) planning perspective, it can also be seen that a discussion on an upcoming task is likely to engage employees in
spontaneous planning (Gollwitzer, 1996, 1999). Planning, conceptualized as the process of generating a sequence of behaviors used to translate an individual’s resources into actions (Austin & Vancouver, 1996), can be viewed as logically leading to strategy development. More importantly, as individuals equip themselves with what they view as appropriate strategies for dealing with a given task or situation, their beliefs regarding their capabilities regarding the task is expected to simultaneously improve. This is precisely what was found in a study investigating the effectiveness of a self-efficacy based intervention (Betz & Schifano, 2000).

Based on earlier work showing substantially lower levels of confidence in women for Holland’s (1997) Realistic endeavors (e.g., building, tool usage, assembling) (see Betz, Borgen, & Harmon, 1996), Betz and Schifano (2000) developed and evaluated a efficacy-based intervention to raise confidence and interest levels in fifty-four college women. Focusing specifically on women possessing moderate levels of interest but low levels of Realistic confidence (i.e., self-efficacy), participants either underwent a seven-hour Realistic intervention or were assigned to a control group. More importantly, the intervention included, among others, a significant knowledge component in which participants in the experimental condition were provided with various information regarding architectural design, construction techniques, classification and use of hardware as well as the design and purposes of various hand tools. Analysis of pre- and post-intervention assessments indicated a significant increase in levels of self-efficacy for the experimental group; three times that of the control group (Betz & Schifano, 2000). Given the practical nature of efficacy judgments, it is likely that participants in the
experimental condition were able to develop additional (both explicit and implicit) strategies that they themselves viewed as employing in similar situations.

Schunk and Gunn (1985) similarly examined the influence of modeling on self-efficacy beliefs. Specifically, the authors demonstrated the importance of task strategy use and positive achievement beliefs on self-efficacy and skill acquisition with 40 students who were deficient in division skills. The manipulations were imparted through a training program that included instruction and practice opportunities. During instruction, subjects observed a model demonstrate division solution strategies with emphasis placed on various aspects of strategy use – e.g., importance of strategy use and having achievement beliefs. Results revealed that emphasis on both task strategy use and achievement beliefs yielded the highest self-efficacy (Schunk & Gunn, 1985).

Finally, in an examination of the mediating effects of a memory strategy on second-graders’ self-efficacy and performance, Gaskill and Murphy (2004) taught subjects a memory strategy that could be used to group words into semantic categories. Subjects’ self-efficacy levels were assessed by asking how many words they would subsequently be able to remember on the upcoming memory task. Results showed that subjects in the experimental group were able to recall more words than the control group. More importantly, when asked about their confidence in future performance (i.e., self-efficacy), the experimental group predicted higher levels of future performance than the control group, indicating that their efficacy for the task had increased significantly (Gaskill & Murphy, 2004). The present study, similar to the above, predicts that the development of high quality strategies resulting from a deeper understanding of the task will strengthen participants’ self-efficacy for the task.
8c. *Strategy Quality will partially mediate the effects of Task Understanding on Task-Specific Self-Efficacy.*

**Hypothesis 9** Building on hypotheses 7a and 7b the next hypothesis predicts that Attractiveness of Goal Attainment will partially mediate the effects of perceived obligation, and affect on *goal commitment*. Hypotheses 7a and 7b predict that perceived obligation and affect will mediate the effects of procedural justice on Attractiveness of Goal Attainment. The following hypothesis predicts that Attractiveness of Goal Attainment will mediate the combined effects of perceived obligation and affect on goal commitment. Simply put, individuals who feel good and feel obligated to achieve a given goal should be more likely to persist towards the accomplishment of that goal (Klein, 1991).

Attractiveness of Goal Attainment is viewed as an individual’s anticipated satisfaction with goal attainment (Klein, 1991). Accordingly, the more attractive an employee finds his/her performance goal, the more s/he is likely to persist in pursuit of that goal. While different operationalizations of the Attractiveness of Goal Attainment construct has been shown to moderate the strength of the relationship (Klein, 1991), Attractiveness of Goal Attainment has generally been shown to be a strong predictor of goal commitment (Klein, 1991; Klein et al., 1999; Locke & Shaw, 1984; Locke & Latham, 1990; Mento et al., 1980; Yukl & Latham, 1978).

Various studies examining the relationship between Attractiveness of Goal Attainment and goal commitment have reported correlations ranging from .28 (Yukl & Latham, 1978) to .46 (Locke & Shaw, 1984). Consistent with Hollenbeck and Klein’s (1987) model of the antecedents of goal commitment, Klein and his colleagues’ meta-
analysis revealed a mean sample-weighted correlation of .26 between Attractiveness of Goal Attainment and goal commitment (Klein et al., 1999). Combining the above with theory and empirical evidence in support of hypotheses 7a and 7b this study views Attractiveness of Goal Attainment as a key construct linking a set of intervening variables associated with the three factors of participation (e.g., cognitive, social, moral) with goal commitment. The following hypothesis reflects this view:

9a. *Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation, and Affect on Goal Commitment.*

Attractiveness of goal attainment is similarly expected to partially mediate the effects of perceived obligation and affect on goal level. Hypothesis 7a and 7b predict that perceived obligation and affect will partially mediate the effects of procedural justice on Attractiveness of Goal Attainment, respectively. In other words, individuals in a positive affective state and who possess a desire to reciprocate via goal attainment are expected to find pleasure in or value task achievement and excellence. Given that higher goals can be thought of as a direct index of higher performance standards, these individuals are further expected to set higher task goals (Dachler & Mobley, 1973; Locke & Latham, 1990; Mento, Locke & Klein, 1992).

Among the various factors shown to influence one’s goal choice (e.g., ability, expectancy/self-efficacy, role modeling, competition, and so on) are valence or value of achievement (i.e., attractiveness) and mood (Hom & Arbuckle, 1988). Indeed, achievement valence or one’s anticipated satisfaction with varying goal levels has been shown to be strongly related to personal goal level ($r = .64, p<.001$, Mento et al., 1992). In an investigation of whether goal setting varies with happy/sad mood states, Hom and Arbuckle (1988) induced either happy or sad mood states in 31 preschool children. The
children were subsequently asked to set their own goals on a Digit Substitution Task (i.e., substituting letters for numbers). Their results showed that happy mood states produce a significantly higher goal and superior performance than sad mood states (Hom & Arbuckle, 1988). Consistent with the above, the following prediction is made:

9b. **Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation and Affect on Goal Level.**

**Hypothesis 10** Hypotheses 7c predicts that PA resulting from fairness perceptions will enhance individuals’ sense of competency (i.e., self-efficacy). Hypothesis 8c further predicts that increased tendency for the development of task-related strategies (linked to a deeper understanding of the task) will enhance beliefs regarding one’s capability with respect to the task. The following set of hypotheses predicts a mediating role for TSSE on goal commitment and goal level. Those who believe themselves to be capable of mobilizing the resources necessary to meet given situational demands are more likely to persist in the face of obstacles, setbacks, and/or failures (Bandura, 1997). Thus, other things being equal, TSSE is predicted to strengthen commitment to a chosen behavioral domain, in general (Bandura, 1997; Betz & Hackett, 1997; Betz, 2000), and more specifically to a chosen goal (Klein et al., 1999; Hollenbeck & Klein, 1987; Locke & Latham, 1990; Locke et al., 1981). Expectancy for goal attainment, a construct deemed conceptually similar to self-efficacy, was used to provide indirect evidence in support of hypothesis 7c. For the next hypothesis, expectancy judgments will similarly be used to support the TSSE-goal commitment link.

In summarizing the relationship between goal setting and expectancy theories, Klein (1991) showed that different treatments of expectancy theory ratings can lead to
differences in the significance and direction of findings. Specifically, in a meta-analysis of past studies integrating various operationalizations of the expectancy construct, Klein revealed that expectancies, when operationalized as the sum of several possible outcomes, relate positively to goal commitment \( (r = .36) \), goal level and performance. Similar results were reported by another meta-analysis on the antecedents to goal commitment by Wofford et al. (1992). In their analysis of 78 goal setting studies, the authors examined various antecedents to goal commitment including assigned goal level, personal goal level, self-efficacy, and expectancy of goal attainment. Results revealed that self-efficacy, expectancy of goal attainment, and task difficulty obtained 95% credibility intervals that did not include zero, thus, concluding each as significant predictors of goal commitment (Wofford, Goodwin, & Premack, 1992).

Finally, the previously mentioned meta-analysis by Klein and his colleagues revealed a mean sample-weighted correlation of .32 between expectancy and goal commitment (Klein et al., 1999). Given the robust evidence described above in support of the positive effects of expectancy/self-efficacy on goal commitment, the following partial mediation prediction is made:

10a. Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Commitment.

In addition to persistence (i.e., goal commitment) high TSSE also affects people’s choice in deciding on a course of action (i.e., direction) (Bandura, 1977, 1997; Betz & Hackett, 1981, 1997). In the context of goal setting, those who feel that they possess the requisite knowledge, skills and who are motivated to do well on a given task should choose goal levels commensurate with such attributes. Expectation of success in a given
situation, thus, should lead to the setting of higher rather than the lower goals (Locke & Latham, 1990; Mento et al., 1980, 1992). A substantial number of studies have, in fact, reported strong positive relationships between self-efficacy and goal choice/level (Bandura, 1997; Locke & Latham, 1990; Locke et al., 1984; Phillips & Gully, 1997; Wofford, Goodwin, & Premack, 1992;).

In their integration of individual difference constructs into goal setting, Phillips and Gully (1997) examined, among others, the effects of self-efficacy on self-set goal level and task performance. Four-hundred and five undergraduate students set performance goals for their respective classes 12 days prior to a midterm exam. A path analysis of the obtained data revealed a strong effect of self-efficacy (.52, p<.01) on self-set goal level. In a study that manipulated self-efficacy and task strategies in the training of 209 undergraduates, Locke and his colleagues similarly showed that ability, past performance, and self-efficacy were the major predictors of goal choice (Locke, Frederick, Lee, & Bobko, 1984). Specifically, through five separate performance trials, the authors showed that subjects who possess adequate strategies to deal with the task exhibit higher levels of self-efficacy. The higher levels of self-efficacy, in turn, positively predicted goal choice/difficulty (Locke et al., 1984).

Finally, Locke and Latham (1990) reviewed 17 studies that examined the relationship between self-efficacy and goal choice with majority of the measures reflecting a significant positive relationship between the two (i.e., 14 or 17). The self-efficacy measures examined were predominately those combined measures in which individuals are asked to rate his/her confidence in being able to attain each of a varying
levels of performance. The mean correlation reported by the authors was .38 between self-efficacy and goal choice. Combining the above with Klein’s (1991) correlation of .50 between summated measures of expectancy and goal level, this study predicts that TSSE will partially mediate the relationship between its predicted antecedents and goal level.

10b. Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Level.

Hypothesis 11 Hypothesis 9a predicts that perceived obligation and affect will exert positive effects on goal commitment through their effects on Attractiveness of Goal Attainment. Those who show an enthusiasm for goal attainment are more likely to persist until their desired goal is reached (Hollenbeck & Klein, 1987). Hence, Attractiveness of Goal Attainment is expected to exert a positive influence on task performance indirectly through its effects on goal commitment (Locke et al., 1981; Locke & Latham, 1990; Klein et al., 1999).

Holding other factors constant, the higher one’s determination to reach a task goal, the higher his/her task performance is expected to be (Locke & Latham, 1990). Locke and Latham (1990) claimed that a goal that a person is “not really trying for is not really a goal and therefore cannot have much effect on subsequent action” (p. 124). In a dramatic demonstration of the importance of goal commitment in a laboratory setting, Erez and Zidon (1984, phase 2) showed that as objective goal difficulty gradually increased from Trial 1 to Trial 7, performance increased to a point but decreased dramatically as goal acceptance dropped due to goal rejection.
While its effect is often weak due to limited variability (Klein et al., 1999), the significance of the effects of goal commitment on performance can be seen when adequate variability exist in both goal commitment and goal difficulty (Earley, 1985; Earley & Kanfer, 1985; Erez & Arad, 1986; Klein, 1988; Latham, Erez & Locke, 1988; Locke, Frederick, Buckner & Bobko, 1984). Klein and his colleagues clarified the long-standing confusion over the specific role of commitment in the difficulty-performance relationship through their meta-analysis. The authors revealed that, given enough variance in both goal difficulty and commitment, goal commitment moderates the difficulty-performance relationship in an uncrossed interaction pattern as described by Stone and Hollenbeck (1984). In other words, the goal difficulty-performance relationship should be strong only when there is high goal commitment and vice-versa (Klein, Wesson, Hollenbeck & Alge, 1999). This relationship is predicted to increase gradually until it reaches the ceiling for impossible goals.

In terms of the general magnitude of the relationship, Klein and his colleagues, in a meta-analysis of the role of goal commitment in the goal setting process, reported a mean corrected effect size of .23 between goal commitment and performance across studies/settings using primarily objective measures of performance (Klein et al., 1999). Combining the above findings on goal commitment and performance with empirical evidence linking Attractiveness of Goal Attainment with commitment (see supporting evidence for hypothesis 9a), a mediating role for goal commitment is predicted.

11a. **Goal Commitment will partially mediate the effects of Attractiveness of Goal Attainment on Task Performance.**
Extending the previous hypothesis, the following hypothesis predicts that goal commitment should mediate the effects of TSSE on performance. While objective difficulty of a given goal can be detrimental to commitment (as shown by Erez & Zidon, 1984), these factors are presumed to operate through expectancy judgments or self-efficacy beliefs (Locke & Latham, 1990). Given that self-efficacy is a judgment of how well one can “execute courses of action required to meet a given situational demand” (Bandura, 1986, p. 122), people with a stronger sense of efficacy should not only set higher goals (Earley & Lituchy, 1991; Locke & Latham, 1990) but remain more committed to achieving them (Locke et al., 1984). Those with higher self-efficacy are, thus, ultimately more likely to realize the goal they set out to achieve.

The logic for the following hypothesis is as follows: Those possessing high levels of TSSE should exhibit a higher degree of commitment to difficult goals than those possessing moderate or low levels of TSSE. Said it differently, those who believe themselves capable of achieving a given performance goal are more likely to persist, despite set-backs and failures until they have met their goal. This has been demonstrated in numerous studies (Bandura, 1986; Bandura & Cervone, 1986; Earley, 1985; Locke et al., 1984). Collectively, these studies show that TSSE plays a key role in keeping people committed to a course of action even in the face of failures (Bandura, 1988), and other negative feedback (Bandura & Cervone, 1986). Klein and his colleagues reported a mean weighted correlation between expectancy of goal attainment and goal commitment to be .36; thus, further substantiating the above linkages. Hence, the following mediation hypothesis is proposed with respect to goal commitment:

11b. Goal Commitment will partially mediate the effects of Task-Specific Self-Efficacy on Task Performance.
The final hypothesis in this set predicts that, given adequate variance in both, goal commitment will moderate the effects of goal difficulty on task performance. As described in the previous section (see support for hypothesis 11a), assuming adequate variance in both goal commitment and goal level, commitment is expected to moderate the goal level-performance relationship such that the strength of the relationship between goal level and performance is expected to increase as goal commitment increases (Erez & Zidon, 1984; Hollenbeck & Klein, 1987; Klein et al., 1999; Locke & Latham, 1990; Locke et al., 1981; Tubbs, 1993). In the aforementioned meta-analysis by Klein and his colleagues, the mean corrected correlation between goal commitment and performance was reported to be significantly higher for difficult goals ($r_c = .35$) than for moderate ($r_c = .20$) or easy ($r_c = .18$) goals, thus, supporting the notion that goal commitment moderates the effects of goal difficulty or level on task performance.

11c. Goal commitment will moderate the effects of goal level on Performance such that Goal Level and Performance will be unrelated when there is no commitment and the strength of the relationship between Goal Level and performance will increase as Goal Commitment increases.

Hypothesis 12 The final set of hypotheses predicts that goal level will partially mediate the effects of Attractiveness of Goal Attainment and self-efficacy on task performance (see Klein, 1991). Hypothesis 9b predicts both main and mediating effects of attractiveness on goal level. Hypotheses 10b, in turn, predicts a mediating role of self-efficacy on goal level. Those who anticipate a greater satisfaction from goal attainment as well as those who exhibit a high level of confidence for goal attainment are expected to set goals commensurate with such attitudes/beliefs. The effects of goal level or goal difficulty on performance, in turn, is the centerpiece of goal setting theory and one of the
most replicated findings in goal setting research (Locke & Latham, 1990). Numerous quantitative reviews linking goal difficulty with task performance have boasted average effect sizes ranging from .42 to .80 (Locke & Latham, 1990; Locke et al., 1981; Mento, Steel, & Karren, 1987; Mento et al., 1992; Tubbs, 1993; Wood et al., 1987). The next two hypotheses are consistent with both theory and the substantial empirical evidence in support of the goal level-task performance relationship.

12a. Goal Level will partially mediate the effects of Attractiveness of Goal Attainment on Performance.

12b. Goal Level will partially mediate the effects of Task-Specific Self-Efficacy on Performance.
CHAPTER 3

METHODS

Design

This study employed a 2 x 2 full factorial design by crossing two voice conditions (no voice vs. voice) with two choice conditions (no choice/assign vs. choice). Voice is operationalized as the degree to which one has the chance to provide input leading up to a decision while choice is operationalized as the extent to which one is involved in actually setting the performance goal. All subjects performed two trials (Practice and Main) of the same task with the experimental manipulation occurring between the two trials. The manipulations were designed to isolate the cognitive, motivational, moral, and social aspects of participation, thus, enabling a more precise assessment of their individual and combined effects on motivated behavior.

Two separate pilot studies were carried out in order to refine the main study’s measures and procedures as well as to develop a comprehensive set of task-related strategies that can be used to assess strategy quality. The latter involved a two-stage validation process in which strategies reported by subjects in the first pilot (i.e., Pilot A) were empirically tested in a criterion-related validation procedure. In other words, the
quality of the strategies – obtained from those who are familiar with the task (via Pilot A) – were assessed using task performance as a criterion in Pilot Study B.

**Participants**

The sample for this study consisted solely of students enrolled in Introduction to Psychology at the Ohio State University. A total of 234 subjects across three separate samples (Pilot A, N=28; Pilot B, N=31; Main Study, N=175) participated in the study. As mentioned, two pilot studies were conducted to refine the measures and procedures to be used in the main study.

Pilot A consisted of twenty-eight subjects (9 males, 19 females) recruited on a voluntary basis from the Research Experience Program (REP). Four subjects were randomly assigned to each of the seven conditions to test the experimental procedures. The experimental procedure was identical to that of the main study with one exception: Pilot Study A included an additional measure given after the main trial asking what strategies he/she think might be helpful to use on the next trial (which the participant believed would occur). Similar to the main study this second main trial was not performed by the participants.

Permission was obtained from the dissertation committee members to conduct the first pilot study prior to the proposal meeting. A modified 3 (No Voice, Low Voice, High Voice) x 3 (No Choice, Low Choice, High Choice) partial factorial design was initially used in Pilot A. More specifically the three levels of the voice factor – No, Low, High – were characterized by goal assignment (i.e., No voice), two questions (i.e., Low voice), and six questions (i.e., High voice), respectively. Similar to the main study (described
below) the questions in the two latter conditions were used to elicit thoughts regarding the goal (see Procedures section below for questions used). The three levels of the choice factor – No, Low, High – were represented by goal assignment (i.e., No choice), a five-goal range of option (i.e., Low choice), and an eleven-goal range of option (i.e., High choice), respectively. The modification refers to the omission of two conditions (No-voice + Lo-choice; No-voice + Hi-choice) which are unlikely to occur in organizations. The remaining seven conditions utilized in Pilot A reflected varying treatment levels of the two factors.

The above design reflecting three levels of the voice and choice factors was reduced to a 2x2 design for the Main Study. This decision was largely based on evaluation of the cost (i.e., reduction in power) and benefit (i.e., the additional information) associated with the modified 3 x 3 design. A consensus was reached among committee members that the power gain (i.e., reduction of Type II error) associated with the 2 x 2 design would significantly outweigh the potential loss of information. Hence, the decision was made to implement a 2 (No Voice, High Voice) x 2 (No Choice, High Choice) design for the main portion of the study.

Pilot B, consisting of 31 subjects (32 total, 1 unusable), was made up of 14 males and 17 females. The participants for Pilot B were recruited through the same method as described above for Pilot A and was conducted primarily to assess the quality of those strategies identified via Pilot A. The procedures used to carry out Pilot B are described below after the description of the task and the procedures used for Pilot A and Main Study.
All students were recruited on a voluntary basis in exchange for a 2-hour REP credit to participate in the experiment. Recruitment was carried out via the Department of Psychology Research Experience Program (REP) Website with directions for study registration provided to the students by their respective Psychology-100 instructors. The Website lists all of the studies available for participation during a given academic quarter. A recruitment script was posted on the REP website (see Appendix A for recruitment script) using an REP-assigned username and password. Using their username and password students were allowed to read through an assortment of recruitment scripts and to choose one or more studies for participation.

An initial sample size of 154 for the main study was determined using a power analysis procedure specified by Cohen (1969, 1988) with the following parameters: Alpha = .05, power = .80 (using a 4:1 \( \beta/\alpha \) ratio), and an effect size estimate = .20 (i.e., a meta-analysis sample-weighted correlation estimate, Miller and Monge, 1986). Post-proposal meeting modifications to the design, however, called for a reduction in the number of treatment levels (i.e., from 3 to 2). Hence, the final sample size of 160 reflects a more powerful design containing approximately forty subjects for each cell. Forty participants were randomly assigned to each of the four conditions in order to test the proposed hypotheses. Data were collected by means of two self-reported questionnaires and performance scores on the Practice and Main Trials of a staffing task.

**Training**

Five senior undergraduate students were trained to act as supervisors (i.e., experimenters) for the main portion of this investigation. The training session, lasting
approximately three hours, consisted of each trainee acting as both a subordinate (i.e., subject) and a supervisor in order to deepen their familiarity with the study. In order to minimize the possibility for inadvertent show of support the supervisor was instructed to act only in a reflective capacity – i.e., only asking scripted questions (see Erez, Earley & Hulin, 1985) (See Script for the Experimental Sessions, Appendix D). Finally, in order to enhance realism, all supervisors were instructed to greet each subject dressed in a business casual attire – i.e., khakis and button shirt for males and conservative dress skirts and blouse for females.

Task

The Human Resources Staffing (HRS) simulation task, developed by Mone and Shalley (Mone & Shalley, 1995), was chosen for this study. The HRS task is realistic and sufficiently complex (see Wood, 1986) with task performance depending significantly on the use of various strategies (Diefendorff & Lord, 2003). The task for the Main Trial requires subjects to select applicants to fill 23 open positions spread across eight departments. In order to make accept and reject decisions, the task requires the subjects to assess the fit between each of the applicants and their potential managers based on the managers’ personality and personal preference information (see Appendix F). For each of the selected applicants the subjects were further required to provide a brief justification for their decision and propose a starting salary. An identical, but, shorter version of this task was used as a Practice Trial in which subjects were asked to make four high quality hiring decisions among nine candidates. The Practice Trial was used to familiarize the participants with the staffing task.
The experiment was designed to closely model joint (i.e., participative) decision making as it occurs in real organizations. Participants played the role of a human resources staffing manager entrusted with the responsibility of selecting and rejecting job candidates. The experimenter played the role of their supervisor. Depending on the experimental condition (discussed below), specific performance goals relating to the quality of the hiring decisions made by participants were assigned with varying levels of Voice and Choice. These dyadic interactions and the performance of the HR Staffing task occurred in small breakout rooms.

**Modifications to Task** Three minor modifications were made with respect to the original HRS task (Mone & Shalley, 1995). First, the original Practice Trial (Mone & Shalley, 1995) requires subjects to accept two and reject three candidates among a total of five candidates. Pilot A, however, revealed that the majority of the subjects (24 of 28 or 86%) finished the Practice Trial before the 15-minute time period. Moreover, post-experiment interviews revealed that the relative ease with which the subjects were able to finish the Practice Trial led to a gross underestimation of the difficulty of the Main Trial. Given the importance of providing subjects with a more realistic performance expectation four additional candidate descriptions (and two corresponding manager descriptions) were developed by the co-investigator and added onto the existing five candidates (see Appendix E). Subjects were, thus, required to accept four candidates and reject five candidates from a pool of nine candidates.

A second modification is related to the first. Specifically, in order to provide subjects with a more realistic evaluation of their capabilities regarding the HRS task, subjects were also provided with performance feedback on their Practice Trial (see
Appendix D and the Procedures). Specifically, after collecting the Practice Trial, the supervisor quickly scored the trial using a prepared key. Once scored, the supervisor simply announced, “Your score on the practice trial is _____ out of 9 matches.” No other information (e.g., specific errors) was provided. Again, the above modifications to the Practice Trial (described below) were designed to provide a more realistic preview of the Main Trial.

Finally, in order to equalize the effects of performance norms across conditions, subjects in all conditions were provided with the same normative information (see Appendix D). As such, subjects in all conditions were told, “Based on past studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches” (see Procedures below).

**Practice Trial** The 15-minute practice portion of the HRS task provided subjects with descriptions (e.g., work experience, education, marketability, personal information, and the interviewer’s assessment of the applicant’s personal characteristics) of nine pre-screened candidates for four open positions within the Human Resources department of a fictitious organization. The four open positions are linked to four managers whose descriptions were also provided (e.g., background, personality, and the preference for the type of individuals they would like to see fill the open positions in their department). High quality accept decisions are made by carefully examining the qualifications and various attributes of each candidate. An accept decision for any given candidate must also be accompanied by three additional decisions including (a) the manager with which the candidate will be placed, (b) his/her recommended starting salary, and (c) a brief justification for the selection decision. In addition, the subject must also provide a brief
justification (i.e., an explanation) for each of the rejected candidates. It is important to note here that given that the subject must take into consideration preferences of the managers to which the candidates will be assigned prior to hiring a candidate, the most educated or experienced candidate may not necessarily be the correct or the best possible match.

**Main Trial** The objective of the Main Trial was identical to the Practice Trial except that the Main Trial was substantially longer with more candidates (i.e., 46) and managers (i.e., 8) spread across eight different departments (Accounting, Finance, Computer Science-Software, Computer Science-Hardware, Engineering-Product Testing, Engineering-Systems, Engineering-Product Development, and Technical Writing). As in the Practice Trial, descriptions of each of the candidates were provided along with descriptions and preferences of each of the eight managers from their respective divisions. Each subject was given 30 minutes to make a maximum of 23 high quality **accept** decisions and 23 high-quality **reject** decisions for a total of 46 high-quality matches with goals varying by condition.

**Scoring** Performance for the Practice and Main Trials are assessed by summing the total number of correct accept and reject decisions made by each participant. Answer keys for both trials were obtained from professor Diefendorff (University of Colorado, Denver) via email communication (August, 2005). The answer keys were first devised and used by Mone and Shalley (1995) and also utilized by Diefendorff and Lord (2003) in their study of volitional and strategic effects of planning.

According to the scoring scheme, a “high quality” match is defined as the degree of “fit” between the managers’ preferences and the selected/rejected candidate’s personal
attributes as well as his/her educational and job-related background. In addition, incorrect decisions are simply counted as zero points – i.e., no points deducted – with the maximum number of points that can be achieved for the Practice and Main Trials being 9 (4 accept and 5 reject decisions as modified) and 46 points or matches (23 accept and 23 reject decisions), respectively. Given the limited amount of time allotted, however, no one achieved a score of 46 on the Main Trial.

Procedures

The procedure described below relates to Pilot A and the Main Study. The procedure used for Pilot B is described thereafter. The contents distributed and the procedures followed for the two studies were identical with the exception of the modifications stated in the Task section. Moreover, all procedures described below refer to one-on-one experimental sessions between one experimenter and one subject. Finally, all announcements were read from a script and actions taken by each supervisor described in the script (see Appendix D).

At the start of each experiment subjects were greeted by the experimenter and given a folder containing instructions and materials related to the experiment. Each subject was randomly assigned to one of four conditions with a pre-assigned number attached to all materials. Each folder contained (a) the consent form, (b) materials related to the Practice Trial, (c) Goal Selection Sheet (for Conditions 2 and 4), and (d) materials related to the Main Trial. The remaining materials – i.e., Questionnaires 1, 2 and the Debriefing form – were furnished to the subjects at the appropriate times throughout the experiment.
In order to prime the subjects into a frame of mind necessary for the simulation, the experiment began with an announcement (read from a script) asking each subject to place themselves in a real life work situation in which he/she was working as a human resources manager in charge of staffing personnel. The announcement emphasized that in such contexts, the staffing manager (i.e., the subject), typically has a great deal of control regarding how his/her job will be carried out with respect to hiring employees. This framing was deemed necessary as typical students in laboratory experiments tend to accept whatever it is that the experimenter tells them to do (Locke, Latham, & Erez, 1988). This simple priming was designed to impart a sense of autonomy entitlement in the subjects (see Study Script, Appendix D).

The above announcement was followed immediately by a 10 minute overview of the experiment (i.e., briefing). During this briefing, subjects were told that their participation is voluntary and that they will perform a Practice Trial lasting 15 minutes followed by two Main Trials (1 & 2) each lasting 30 minutes. Main Trial 2, however, was not administered as it was only designed to elicit a more accurate assessment of the subjects’ task-related perceptions (see Debriefing, Appendix I). The use of this minor deception was necessary in order to obtain the subject’s in-the-moment mental state (i.e., attitude and intentions) with respect to the task; particularly because the subjects’ response to measures contained in the second questionnaire needed to be made in reference to a current or future task (rather than previously completed task). Each briefing session ended with the subject giving their consent to participate.

Task instructions for the Practice Trial were provided to each subject by having the subject read (silently) a two-page description containing the rules and objectives of
the Practice Trial. Once the subject finished reading the instructions, the supervisor spent
another three minutes reviewing the key aspects of the Practice Trial including key
materials necessary for completing the task and the scoring scheme that will be used to
assess performance. The supervisor then left the room for 15 minutes to allow the subject
to work on the task without unnecessary distractions. At the end of the 15-minute
Practice Trial period (timed with a stop-watch) each supervisor instructed the subject to
stop working on the task. The supervisor then quickly scored the subject’s Practice Trial
and provided performance feedback by stating “Your score on the Practice Trial is ____
out of 9 possible matches.” No further details on the specific matches were provided.
Each Main Trial was preceded by Questionnaire 1 (see Appendix G) and the goal setting
manipulation (see below). Goal setting manipulations for each of the condition is
outlined below.

Pilot B (N= 31) was conducted in three separate sessions in a group setting.
Thirty-one subjects were split into groups of 10, 11, and 10 participants. In this pilot
study, each subject was assigned a specific strategy following the practice trial of the HR
Staffing task to use in performing the Main Trials. Each session lasted approximately
two hours and began with a brief overview of the experiment. The subjects were told that
they would perform three separate trials of the same task – i.e., Practice Trial, Main Trial
1, and Main Trial 2. Following this introduction, consent was obtained by the
experimenter and instructions for the Practice Trial began. The Practice Trial was
followed by two Main Trials lasting 30 minutes each (In this pilot participants did
actually perform two main trials). For those main trials, the subjects were assigned a specific strategy to use and told that they should use no other strategy except for the one with which they were assigned.

Specific strategies such as “Read the manager information first, then, the candidate information,” and “Look for personality information for both managers and candidates first” were assigned randomly to each participant for each trial. More precisely, before the first Main Trial, each of the eleven strategies were written on a separate piece of paper and drawn from a paper bag to be distributed to a participant. Thus, neither the experimenter nor the participant was aware which strategy would be assigned until after the drawing. The same procedure was repeated for the second Main Trial. While the possibility existed of a given participant being assigned the same strategy as the previous (i.e., the same one used for Main Trial 1), this did not occur. All participants, thus, were given a strategy that was different from the one they had used for performing Main Trial 1. Once a strategy was assigned to each participant the experimenter spent approximately two minutes clarifying questions related to the assigned strategies. At the end of the second Main Trial and prior to leaving the room the subjects filled out a demographic information sheet.

**Manipulations** The two levels of the voice factor – No Voice and Voice – are characterized by goal assignment (i.e., No voice) and six questions (i.e., Voice), respectively. The questions in the voice condition are designed to elicit thoughts regarding the task as well as the goal. These questions include (1) What do you think is an appropriate goal for you to try for on this task? (2) Can you think of ways to reach a higher performance level? (3) What aspect of the task did you find yourself having
trouble with? (4) What did you find worked well for you when you were performing the task? (5) What have you learned so far about the task that you can use to perform better? and (6) Why do you think this is an appropriate goal for you?

The two levels of the choice factor – *No Choice* and *Choice* – are characterized by goal assignment (i.e., no choice) and an eleven-goal range option (i.e., choice), respectively. A goal level of 18 matches was used for the goal assignment conditions (Condition 1 and 3) and as a midpoint for ranges provided in the *choice* conditions (Conditions 2 and 4). The difficult goal of 18 matches was based on a performance goal reached by approximately 10% (i.e., 2 standard deviations above the mean) of the participants in Diefendorff and Lord’s (2003) pilot sample.

**Condition 1 (No Voice-No Choice)** Prior to goal assignment, subjects in Condition 1 were told, “The company has established performance standards it wants met for the hiring of new employees and, based on those standards, your goal is to make 18 High Quality Hiring Decisions. Keep in mind that this is a difficult goal but it is obtainable.”

**Condition 2 (No Voice-Choice)** Subjects in the *No Voice + Choice* condition were provided with an opportunity to choose a performance goal from a pre-selected set of 11 goals without the opportunity to voice their thoughts on the task. As such, subjects were told, “The company has established performance standards it wants met for the hiring of new employees. Those standards are indicated on this form titled "Goal Selection Sheet." Review those performance standards and note that there is some leeway in those standards. Rather than me selecting a goal for you, I'd like you to choose a goal for yourself. From the range of acceptable performance levels on that sheet,
choose the goal that you want to try to achieve on the first 30-minute Main Trial. Keep in mind that these are difficult goals but they are obtainable” (see Appendix D). Subsequently, subjects were presented with a Goal Selection Sheet containing 11 performance goals ranging from 13 to 23 in increments of 1 with a midpoint of 18 matches.

**Condition 3 (Voice-No Choice)** Subjects in the *Voice + No Choice* condition responded to six questions related to the task (see list of question in the Manipulations section above). These questions were designed to provide an opportunity for the subjects to voice their opinions as well as elicit thoughts about the task itself. The choice manipulation was identical to Condition 1. Thus, prior to goal assignment, subjects in Condition 3 were told, “The company has established performance standards it wants met for the hiring of new employees and, based on those standards, your goal is to make 18 High Quality Hiring Decisions. Keep in mind that this is a difficult goal but it is obtainable.”

**Condition 4 (Voice-Choice)** Subjects in the *Voice + Choice* condition were given the opportunity to voice their thoughts regarding the task as well as some degree of control over the selection of their performance goal. Specifically, these subjects were asked six questions related to the task (see list of question in the Manipulations section above) and provided a list of 11 performance goal options from which to choose their own goal on the upcoming 30-minute Main Trial (see Condition 2).

**Normative Information** In addition to the above and in order to equalize the effects of performance norms, subjects in all conditions were provided with the same normative information. Specifically, subjects in all conditions were told, “Based on past
In studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches.”

At the end of the goal setting manipulation and once the subject had completed Questionnaire 1 the Main Trial began with the supervisor reviewing those key features of the Main Trial distinct from the Practical Trial. Once the subject acknowledged his/her understanding of the task instructions the supervisor initiated the timer and asked the subject to begin the task. In order to minimize potential confounding due to the supervisor’s presence (Ronan, Latham, & Kinne, 1973) the supervisor left the room while the task was being performed.

At the end of the 30-minute Main Trial, the supervisor collected all materials related to the Main Trial and instructed the subject to begin filling-out Questionnaire 2 (see Appendix H). More precisely, subjects were told “Now, you just have one final trial left. But before we get started on the final trial, I’d like you to fill out another short questionnaire. This questionnaire is similar to the first and asks about your attitude towards the task. Please use the same goal that [you were assigned] [you chose] for the upcoming trial.”

The supervisor then left the subject for 10 minutes during this time to minimize response bias due to the experimenter’s presence. After the 10 minutes the supervisor returned and collected the questionnaire and handed out the Debriefing (see Appendix I). At this time, the supervisor explained that the experiment is over and that the subject will not be required to perform the final trial.
Method Variance

The use of self-reported questionnaires is often subject to common method variance or mono-method bias which can lead to inflated correlations among measured variables (Cook & Campbell, 1979). Several steps were taken in this study to minimize such effects. Specifically, the measured variables were assessed over two different points in time. Questionnaire 1 (Procedural Justice, Task Understanding, and Perceived Support, see Appendix G) were given immediately after the completion of the Practice Trial but prior to the Main (i.e., experimental) Trial. Questionnaire 2 (Affect, Perceived Obligation, Strategy Quality, Attractiveness of Goal Attainment, TSSE, Goal Commitment, Strategy Information, Manipulation Checks, and Control Variables, see Appendix H) was administered immediately after the completion of the Main Trial (see Appendix I).

Measures

Several variables were measured throughout each experimental session. As alluded to earlier, the two questionnaires containing the study’s measures were distributed at two points in time in order to minimize systematic error due to common method. Furthermore, conceptually related measures were dispersed throughout each questionnaire in order to reduce the possibility of response bias stemming from ordering effects. Unless otherwise stated, the measures are based on a 7-point Likert-type rating format.
Procedural Justice is a measure assessing the subjects’ perception of the degree to which he/she feels that the PGS procedures used to derive an outcome was fair. Two of the three items developed by Roberson and his colleagues (Roberson, Moye, & Locke, 1999) were adapted for this study to assess perceptions of procedural fairness. The third item was dropped due to its significant similarity with one of the other two items – i.e., differing by one word; namely, set versus determine. Hence, the two items ask the subjects “To what extent do you consider the goal-setting process to be fair?” and “How fair were the procedures used to set your goals?” Roberson and his colleagues reported a coefficient alpha of .94 in their empirical study using this measure (Roberson, Moye, & Locke, 1999).

Two additional items developed by Colquitt (2001) were adapted to the present study as they specifically assess the process and decision control concepts procedural fairness proposed by Thibaut and Walker (1975). Assessed on a 7-point scale, these items include the questions “Were you able to express your views and feelings during the goal-setting procedure?” and “Have you had influence over the goal that was actually set during the goal setting procedure?” Coefficient alpha for Colquitt’s procedural justice measure was reported to be .93 (Colquitt, 2001). A list of the items contained in this measure can be found in Appendix G.

Perceived Support refers to the degree to which a given supervisor is viewed as both concerned and encouraging. The measure developed by Karasek and his colleagues and used in this study is a five–item measure of perceived supervisor supportiveness adopted from Karasek et al.’s factor analysis of the U.S. national survey (University of Michigan Quality of Employment Study, 1972) containing items related to job
satisfaction (Karasek, Triantis, & Chaudry, 1982). Two dimensions of supervisor supportiveness reflecting supervisor *attentiveness* and *instrumentality* were adopted for this study. Items are rated using a five-point Likert-type scale and include such statements as “My supervisor pays attention to what I am saying” (attentiveness/emotional support) and “My supervisor encourages me to develop new ways of doing things” (instrumental support). Reported coefficient alphas for the two supportiveness dimensions are .80 and .84 for attentiveness support and instrumental support, respectively (Karasek et al., 1982).

The limited interaction between the supervisor (i.e., experimenter) and the subordinate (i.e., subject) from which the subject is asked to infer the level of support made it unrealistic to use traditional measures of supervisor supportiveness (e.g., from Job Descriptive Index and Leader-Member Exchange literatures). In other words, because traditional measures of supervisor supportiveness are based on an assumption of familiarity or the notion that the subordinate has had ample time to form an impression of the supervisor, it was necessary to employ a measure that excluded such assumptions.

In addition to the above five items, it is also possible that subjects who are allowed to voice their thoughts/opinions regarding the task may view the supervisor as helpful. Hence, as a peripheral measure, two items adopted from Karasek et al.’s (1998) Job Content Questionnaire reflecting supervisor *helpfulness* (i.e., My supervisor is helpful when it comes to getting the job done) and *concern* (i.e., My supervisor seems to be concerned about my welfare) were included in both Pilot Study A and the Main Study to assess their psychometric properties when combined with the first five items (see Appendix G).
Task Understanding was assessed using a 5-item modified version of Subjective Knowledge Scale of the fashion industry developed by Flynn and Goldsmith (SKS: 1999). Modeled after Brucks’ (1985) typology of consumer knowledge (i.e., objective, subjective, and experience) and defined as individuals’ “..perception of the amount of information they have stored in their memory,” the modified SKS contains such subjective statements as “I do not feel very knowledgeable about this task (R),” “Compared to most other people I probably know more about this task,” and “I probably know everything there is to know about this task.” Flynn and Goldsmith (1999) validated an initial measure containing nine-items using a total of 561 undergraduate students using two independent samples. The authors derived a single factor consisting of five items reflecting fashion knowledge with an internal consistency estimate of .93 and acceptable criterion-related validity estimates using validated external constructs (see Flynn & Goldsmith, 1999).

The self-assessed comprehension measure described above differs from the more objective measures often used in instructional design (e.g., Gagne, 1962), training (e.g., Ford & Noe, 1987) and in memory experiments (e.g., Phye & Bender, 1987). While objective measures of task understanding would clearly help mitigate the introduction of error stemming from subjectivity, the synchronous nature of the phenomenon under examination and the equifinality with which the task can be accomplished lent themselves to a more subjective measure of task understanding.

Moreover, despite conceptual and empirical differences between objective and subjective knowledge measures (Spreng & Olshavsky, 1993) the two types of measures have been shown to be moderately to strongly (i.e., .30 to .60) correlated (Brucks, 1985;
Goldsmith & Goldsmith, 1997). Thus, the subjective measure was deemed appropriate for assessing understanding related to the HR Staffing task. A list of the items related to task understanding can be found in Appendix G).

Perceived Obligation measure used in this study is broadly based on the notion that the norm of reciprocity obliges the return of favorable treatment (Gouldner, 1960, as cited in Eisenberger, Armeli et al., 2001). The benefits exchanged in social relationships can range from impersonal resources (e.g., money, services, or information) to socioemotional resources (e.g., liking, respect, and approval). Applying this concept of reciprocity norm to organizations and more specifically to employee-employer relationships, Eisenberger and his colleagues proposed that a causal relationship may exist between the advantageous treatment bestowed (by the organization) and a feeling of obligation on the part of the recipient (by the employee) (Eisenberger, Cummings, Armeli, & Lynch, 1997). Fulfilling his/her feeling of obligation to the organization in turn should help the employee maintain a positive self-image while avoiding the social stigma associated with violating reciprocity norms. Indeed, several lines of evidence converge on this notion (Wayne, Shore, & Liden, 1997; Eisenberger et al., 2001).

The six-item felt obligation measure used in the present study reflects that norm of reciprocity dynamic occurring between a manager and his/her supervisor. More precisely, the just deed reaped by an employee (i.e., the manager) from his/her supervisor in the form of participation is expected to elicit feelings of obligation on the part of its recipient. It is with this in mind that the six items reflecting individuals’ felt obligation to care about the organization were adapted for this study (Eisenberger et al., 2001). Items in the measure include such statements as “I feel a personal obligation to do whatever I
can to help my supervisor by achieving my goal,” and “I owe it to my supervisor to give 100% of my energy to achieving the goal.” An empirical test of the above relationships by Eisenberger and his colleagues showed that felt obligation mediates the relationship between perceived organizational support and affective commitment. The same study revealed coefficient alpha for the six-item scale to be .83 (Eisenberger et al., 2001) (see Appendix H).

Affect was measured using the original form of the 20-item Positive Affect Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). Watson and his colleagues developed the PANAS to measure both state and trait positive and negative affect depending on the instruction given. Positive Affect (PA) reflects the extent to which a person feels enthusiastic, alert, and active while Negative Affect (NA) represents a general state of, or disposition toward, subjective distress and displeasure (Watson et al., 1988). The two orthogonal dimensions have been likened to Extraversion and Neuroticism of the Big Five (Costa & McCrae, 1989) and there is considerable amount of support suggesting this to be the case (Watson & Clark, 1992; Wilson & Gullone, 1999). Wilson and Gullone (1999), for example, reported average correlations reaching up to .40 between the two sets of measures. Finally, when used with short-term instructions, the PANAS has been shown to be sensitive to fluctuations in mood (Watson et al., 1988) with Cronbach’s alphas ranging from .86 to .90 and .84 to .87 for PA and NA, respectively. In this study, for the purpose of assessing subjects’ in the moment affective state, participants were asked to indicate on a five-point rating scale the extent to which they "feel this way at this moment" (see Watson et al., 1988, p. 1070) (see Appendix H). Also, for the present study, both PA and NA were examined simultaneously. While the
thrust of the hypotheses focus on the beneficial impact of PA, it is likely that the same questions posed for PA can simultaneously be examined using NA.

**Strategy Quality** Strategy Quality represents the quality of the strategy used by each participant. In order to assess the quality of the strategies used by the participants in the Main Study (N=167), two pilot studies (Pilot A=28; Pilot B=31) preceded the main data collection. Pilot Study A asked participants to list those strategies that they *actually used* as well as those that they *would like to use* (i.e., in the next trial) to perform the HRS task. The logic behind the latter relates to capturing *missed opportunities* to use one or more strategies. It was thought that increased familiarity with the task may lead participants to think of additional, possibly more effective strategies that they may use in the future if given the opportunity. This approach enabled the gathering of a more comprehensive set of strategies that can be included in the Main Trial.

The set of strategies (i.e., both *actually used* and *would like to use*) obtained via Pilot A underwent further reduction and refinement based on independent similarity judgments made by three doctoral students in psychology. The criterion used for making the *similarity* distinction (between two or more strategies) was based on an Angoff-like procedure (Angoff, 1956) in which two strategies were deemed as similar (thus, being grouped together) if the subject matter experts (i.e., doctoral students) judged that at least half of 100 randomly selected individuals would agree that two or more strategies are *essentially the same*. If not, the strategies were deemed distinct and kept for later refinement. This process of *grouping* similar strategies yielded eleven distinct strategies. This final set of strategies were then re-worded and refined by the same doctoral students to better capture the *essence* of each strategy.
Sample strategies obtained from the above procedure include “Read the manager information first, then, the candidate information,” “Reject everyone first, then, go back and accept the ones that are qualified,” and “See what the manager is looking for and focus on that information only.” On the assumption that the above eleven strategies may be incomplete, three additional blank spaces were provided along with the above list. These blank spaces enabled participants to further fill-in strategies that they used but not contained in the pre-set list.

In order to devise a system for assessing Strategy Quality, the above eleven strategies were pilot-tested for quality in Pilot B. Thirty-one undergraduate students participated in Pilot B. Each participant was assigned two of the eleven strategies to use in performing two separate Main Trials (each using a different strategy). Thus, with 31 participants, each of the eleven strategies was used by approximately six participants to perform the Main Trial.

The above procedure yielded a mean performance score for each strategy. This mean performance score (corresponding to each strategy) was calculated by summing the Main Trial performance scores (across the participants) for each strategy and dividing by the total number of participants that used a given strategy. Each performance score was then divided by 46 (the maximum number of points possible for the Main Trial) to yield a quality weight. As a result, those strategies corresponding to higher performance scores were assigned a higher weight than those corresponding to lower performance scores.

For example, assume that the performance mean for Strategy 10 is 42.33 across those who used this strategy to perform the Main Trial in Pilot B. This value would then be divided by 46 to yield a weight that is assigned to each strategy (e.g., 42.33 / 46 = .92).
Each weight assigned to a strategy would then be transformed using a simple linear transformation (i.e., $y = ax$, where $x =$ weight and $a = 100$) for ease of interpretation. This procedure would yield a Strategy Quality rating ranging from 0 to 100.

*Task-specific self-efficacy* refers to the “.belief in one’s capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands” (Wood & Bandura, 1989, p. 408). In line with the situation specificity argument put forth by Bandura (1997) a seven-item self-efficacy strength measure was devised to reflect efficacy judgments for seven levels of performance on the HRS task – e.g., “What are the chances in 100 that you will make more than ___ matches?” (see Lee & Bobko, 1994). Thus, subjects were asked to estimate their chances of obtaining various levels of performance (i.e., matches) using a scale ranging from 0 to 100. This measure represents self-efficacy as a mean confidence rating ranging from 0 to 100. As such, subjects’ estimates of their task-related efficacy for each of the seven performance levels were summed and divided by the total number of items (i.e., seven) to derive a TSSE strength composite. Cronbach’s alpha for such a measure is reported to be .79 (Lee & Bobko, 1994, Study 2).

The seven performance levels were determined from performance levels observed in a pilot study. Diefendorff and Lord (2003) reported a mean performance level of 12.21 high quality matches for their control group. However, the mean number of matches obtained by the participants in a pilot study (i.e., Pilot A) was 14.02. Thus, a 7-point performance distribution was devised using 14 matches as the mean. The resulting
performance scheme ranged from 8 to 20 high quality matches in increments of two with a mean of 14. A list of the TSSE measure used in the present study can be found in Appendix H.

Attractiveness of goal attainment  Subjects’ satisfaction with goal attainment was assessed for seven performance levels (see self-efficacy measure) centered about the mean performance level reported in a pilot study. For performance distribution, see self-efficacy scale above. A goal valence index used by Garland (1985), a measure similar to the attractiveness measure, reported an alpha coefficient of .64 (see Dachler & Mobley, 1973; Klein, 1991). Items for the attractiveness measure can be found in Appendix H.

The above index can be used to obtain various attractiveness measures. These include (a) summing the seven items to yield a total attractiveness score across performance levels, (b) splitting the sample into two groups to distinguish those who were more attracted to higher-level goals from those more attracted to lower-level goals, and (c) estimating within-person goal attraction by using the single attractiveness score corresponding to that subject’s assigned or chosen performance goal (Mento, Klein, & Locke, 1992).

Given that different participants in different conditions will either be assigned or allowed to choose their own goals, it was thought that the third within-person approach would be most appropriate. Specifically, for participants in Conditions 1 and 3 (i.e., No Choice conditions), a single attractiveness rating corresponding to a performance goal of 18 was used to represent Attractiveness of Goal Attainment. For those in Conditions 2 and 4 (i.e., joint goal setting conditions), the attractiveness rating corresponding most closely to the goal that the participant had set was used. For example, if a participant
chose a performance goal of 20 as the one they would try to shoot for, their attractiveness rating corresponding to the performance goal of 20 was used as his/her attractiveness score. For odd-numbered goals (e.g., 17), the two attractiveness ratings falling on either side (i.e., 16 and 18) of their chosen goal was averaged to derive their attractiveness score. More is said on this in Chapter 4.

*Goal commitment* is defined as one’s determination to reach a goal (Locke & Latham, 1990) or, more precisely, one’s conscious intention to exert effort towards goal attainment, persistence in pursuing that goal over time, and an unwillingness to lower or abandon that goal (Hollenbeck & Klein, 1987). In this study, goal commitment was assessed using Hollenbeck-Williams-Klein’s self-report measure of goal commitment (HWK: Hollenbeck et al., 1989; Klein, Wesson, Hollenbeck, Wright, & DeShon, 2001). This 5-item unidimensional measure of goal commitment consists of statements such as “I am strongly committed to pursuing this goal” and “It’s hard to take this goal seriously.” In a study that combines meta-analysis and multi-sample factor analytic techniques, Klein and his colleagues demonstrated the measure’s utility across task complexity, goals origin, and measurement timing. Cronbach’s alpha for the 5-item measure is reported to be .77 (Klein et al., 2001) (see Appendix H).

*Goal Level* As described in the previous section subjects were either assigned or allowed to choose a performance goal level. Subjects in the assigned conditions (i.e., 1 through 3) were assigned a difficult but obtainable goal of matching 18 candidates accompanied by the statement “The company has established performance standards it wants met for the hiring of new employees and, based on those standards, your goal is to make 18 High Quality Matches. Keep in mind that this is a difficult, but an obtainable
goal.” Those in the participation goal conditions (i.e., 2 and 4) were given a list eleven goals ranging from 13 to 23 matches in increments of two. This step was also accompanied by the statement “The company has established performance standards it wants met for hiring of new employees which are represented by the range of acceptable performance levels shown below. Indicate the goal (i.e., the number of high quality matches) that you will be trying to achieve on the next trial by circling the goal of your choice from the list below. These are difficult goals but they are obtainable.” In addition, in order to limit the discrepancy in goal difficulty across conditions the range of goals presented to those in the Choice conditions was centered about that given to those in the No Choice conditions (i.e., 18 matches).

*Performance* was assessed by calculating the total number of correct *accept* and *reject* decisions made by each participant. Hence, the maximum possible score for the Main Trial was 46 matches (23 accept + 23 reject decisions).

**Manipulation checks**

*Voice and Choice* The successfulness of the manipulations were assessed using two single-item measures reflecting the degree of input/process and decision controls, respectively. These two items are “My supervisor gave me a chance to express my opinion regarding the goal that was set” (voice) and “Compared to my supervisor I had complete control in deciding on the actual goal that was set” (choice) measured using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). These items can be found in Appendix H.
Perceived Overall Participation  One additional item was also included to assess the perceived overall degree of participation. That item, “I felt that I really participated in setting the goal,” was also rated using a 5-point scale (see Appendix H).

Control Variables

Ability The HRS task requires each subject to assimilate, evaluate, and process a large amount of information in a relatively short period of time. Hence, the ability to efficiently process relevant information is seen as critical to above-average performance. Nonetheless, high performance may also be achieved by recognizing and implementing creative strategies in either a supplementary or compensatory fashion with ability. Hence, in order to account for both of these effects, subjects’ performance score on the Practice Trial was used as a covariate where relevant.

General Information General background information for each of the subjects was collected via a questionnaire. These include (a) age, (b) gender, (c) major, (d) cumulative GPA, (e) SAT or ACT score, (f) U.S. residency-related questions – i.e., citizenship, years in U.S., first language, (g) work experience on similar task, and (h) experience with other study or studies using similar task. All of the above, including GPA, SAT, and ACT were self-reports and can be found in Appendix H.

Data Analysis

Prior to data preparation and tests of those hypotheses outlined in this chapter, the data were visually inspected for missing data. Those cases meeting predetermined criteria – i.e., cases in which at least half of the responses were missing – were excluded
from analysis. Data preparation was followed by summary statistics on each of the variables and an examination of the variable intercorrelations. Factor analysis was conducted on two measures – PANAS and Perceived Support – in order to examine the structures of the subscales associated with each of the two measures. Finally, internal consistencies of the study variables were examined and reported. With the exception of Attractiveness of Goal Attainment and Strategy Quality measures, all scores for all scales were calculated by summing the item responses and dividing by the total number of items (i.e., the scale-means for individual cases).

The formal test of the hypotheses was conducted in two phases and began with a 2-way multivariate analysis of variance (MANOVA) examining the relationships between each of the two factors – voice and choice – and all dependent variables contained in the study. Hence, the main and interactive effects of voice and choice are examined for each dependent variable. The above was followed by formal hypothesis testing using zero-order correlations and multivariate moderated and mediated regressions.

The second phase of the analyses involved the examination of the proposed hypotheses using targeted mediated and moderated regression. While the first phase above was designed to examine the direct effects of the independent variables on each of the dependent variable, given the distinct possibility that the two independent variables would only exert an effect on a subset of those variables contained in tests of moderation and mediation, the moderation and mediation procedure was carried out for all hypotheses. Where relevant, practice trial score was used as a control variable to control for ability. Specific procedures used for the subsets of hypotheses are outlined next.
Given that the majority of the hypotheses involved tests of partial mediation, the corresponding procedure outlined by Kenny and his colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981; Kenny, Kashy, and Bolger, 1998) were used as a primary criterion for supporting or rejecting each hypothesis. For the two hypotheses involving moderation (i.e., hypotheses 4 and 11c), a hierarchical linear regression procedure as described by Cohen and Cohen (1983; Cohen et al., 2003) was employed. Specifically, this procedure enables the researcher to order the predictors entered in a specified sequence, thereby, making possible the estimation of the unique contribution of each predictor on the dependent variable. For testing moderation, both the independent and moderator variables were scaled-centered in order to reduce the possibility of multicollinearity (Cohen, Cohen, West, and Aiken, 2003).

The first step in testing for moderation involves the researcher entering the primary independent variable into the equation. Second, the moderator variable is entered. Finally, the interaction term – created by multiplying the independent variable with the moderator variable – is entered. In order to establish moderation, the interaction variable must explain a significant amount of additional variance beyond that accounted for by the independent and moderator variables (Cohen & Cohen, 1983; Cohen et al., 2003).

As mentioned, the remaining hypotheses involving mediated regression (i.e., 5a through 11b, and hypotheses 12a and 12b) were tested using a procedure outlined by Kenny and his colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981; Kenny, Kashy & Bolger, 1998). According to Kenny and his colleagues, full or partial mediation can be verified by using a three-step procedure (Kenny et al., 1998).
First, it must be shown that the independent variable (X) is significantly related to the dependent variable (Y). Second, it must be shown that the independent variable (X) is significantly related to the mediator variable (M). Finally, it must be shown that the independent variable (X) is still significantly related to the dependent variable (Y) after controlling for the mediator (M). To establish that M mediates the X-Y relationship, the effect of X on Y, after controlling for M, must be either non-significant (full mediation) or significantly reduced (partial mediation). It is important to point out that if any of the first steps cannot be established, according to Kenny and his colleagues (Kenny et al., 1998), no mediation exists and there is no need to proceed. Complete tests of mediation will, thus, only be conducted when supported by the initial steps.

According to Kenny and his colleagues, the second and third steps above are essential for establishing mediation. However, given that the satisfaction of the second and third requirements implies a significant relationship between the independent and dependent variables called for in the first step, all three of the steps are required before mediation can be concluded. Indeed, this first step was made explicit in the Kenny et al. (1998) article, whereas, it was only implied in the Baron and Kenny (1986) article.

**Family-Wise Error**

Given the number of tests to be conducted using a single sample, it was deemed appropriate to adjust for the family-wise error rate. According to Keppel (1991), family-wise error (FWE) refers to the probability that a set of comparisons or significance tests is due to chance (i.e., Type I error or the probability of rejecting the null when in fact it is true). This is an issue when conducting a large number of tests (i.e., 27 in this case).
More specifically, as the number of tests conducted on a given data increases the FWE increases at an exponential rate. As such the basic Bonferroni adjustment is used by many social scientists to take into consideration the inflated Type I error rate associated with multiple tests. This formula simply adjusts the new significance level by taking into account the specific number of tests to be conducted – i.e., New Bonferroni Alpha (NBA) = \( \frac{\text{Alpha (FWE)}}{c} \). The NBA represents the new alpha or significance criterion used for each test. Alpha (FWE) represents the Alpha for the family wise error rate and \( c \) represents the number of tests to be conducted.

While the standard Bonferroni adjusts for the inflated Type I error for multiple tests, according to Keppel, it over-adjusts for it, thereby, reducing power and leading to an unrealistic significance criterion. This is due to a number of reasons including (a) FWE calculation assumes that the null hypothesis is true, which is unlikely to be the case; (b) all tests are assumed to be orthogonal when calculating the FWE which is also unlikely to be the case; and finally, (c) the test does not take into account whether the findings are consistent with theory and past research. Given the above, Keppel (1991) introduced a modified Bonferroni equation to keep FWE requirement at a more reasonable level. The equation is as follows:

\[
\text{Alpha (MB)} = \frac{\text{df [a]} \times \text{(conventional alpha level)}}{c}
\]

where
\[
\text{Alpha (MB)} = \text{modified Bonferroni alpha}
\]
\[
\text{df [a]} = \text{number of variables in the data to be analyzed}
\]
\[
\text{c} = \text{number of correlations}
\]
Using the above equation a corrected alpha level was estimated using the Type I error criteria of .05. The new Alpha was calculated as follows: Modified Bonferoni using

\[
.05 \text{ Alpha as Criterion } = \frac{13 (.05)}{27} = .02
\]

where
13 = the number of variables in the model
27 = the number of tests or hypotheses
.05 = standard significance criteria

Given the significance criteria given above for .05 (New = .02) significance level, the present study will conclude significance if the tested hypothesis exhibits significance at the .02 Modified Bonferoni level.
CHAPTER 4

RESULTS

This chapter presents the findings from data analyses of the main study. The section containing the formal test of the hypotheses is preceded by several subsections beginning with (a) a description of the study sample, (b) results of the experimental manipulations, (c) and summary statistics for all variables used in the analysis. With respect to the latter subsection (c), it should be noted that, because of the distinct predictions made for each of the four participation conditions, summary statistics for each variable are provided both within and across conditions. The formal tests of the hypotheses begins with a 2-way multivariate analysis of variance (MANOVA) examining the main and interactive effects of the two manipulated variables—Voice and Choice—on all mediating and dependent variables contained in the study. The above is followed by formal hypothesis testing using zero-order correlations and multiple linear regressions.

Participants

One hundred and seventy-five participants were recruited on a voluntary basis through the Ohio State University’s Department of Psychology Research Experience Program (REP). Data collection was completed during the 2005 Autumn quarter. All
participants received two-hours of extra-credit for their participation. Using a website managed by REP, a total sample size of 175 was achieved from which 167 were selected for analysis. Data obtained from eight subjects were excluded from the analyses due to various reasons including (a) walk-outs (n=3, .02%), (b) disengagement from the study as inferred by a main trial performance score of 1 (n=1, <.01%), and (c) incomplete questionnaire data (n=4, .02%). The “incompleteness” of data refers to the failure to complete at least one-half of the items contained in either of the two questionnaires. The distribution of the 167 participants across the experimental conditions was as follows: Conditions 1 (n=40), 2 (n=45), 3 (n=40), and 4 (n=42). Thus, the relative sizes of the sub-samples for each condition were similar.

Figure 4.1 depicts the age distribution of the participants. The sample consists predominantly of undergraduate freshmen (n=115, 68.9%) as indicated by their mean age (18.89, SD = 1.53) and inferred from their predicted year of graduation (i.e., Spring, 2009). Approximately 88% of the participants were between the ages 18 and 20 with the largest majority being the 18-year old group (37.3%). Of the 167 participants, 92 (55%) were female and 75 (45%) were male. One hundred and fifty-nine (95%) of the participants were born in the United States while the remaining foreign-born participants were from Hong Kong (n=1), Taiwan (n=1), South Korea (n=2), India (n=2), and Somalia (n=1). One foreign-born participant who did not report his/her country of origin also did not indicate any gender information.
Manipulation Checks

Three 1-item measures were utilized as manipulation checks for Voice, Choice, and Overall Participation. The 1-item Voice manipulation check asked participants to rate their agreement with the statement “My supervisor gave me a chance to express my opinion regarding the goal that was set.” The 1-item Choice manipulation check asked participants to rate their agreement with the statement “Compared to my supervisor, I had complete control in deciding on the goal that was set.” Lastly, the 1-item Overall Participation manipulation check asked participants to rate their agreement with the statement “I feel that I really participated in setting the goal.” Participants responded to each item using a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Thus, higher ratings indicate more of each construct.

Tables 4.1 below presents the marginal means and standard deviations associated with each manipulation. Multivariate and univariate results for each of the manipulation
checks are presented in Table 4.2. Here, the main and interactive effects of Voice and Choice factors on each of the manipulation checks are presented.

| Manipulation Checks | Voice | | | Choice | | | Overall | | Participation |
|---------------------|-------|---|---|-------|---|---|-------|---|
|                     | M     | SD | M  | SD  | M   | SD  |
| Voice               |       |    |    |      |     |    |
| No Voice            | 2.81  | 1.18 | 3.21 | 1.42 | 3.19 | 1.36 |
| Voice               | 3.74  | .86 | 3.18 | 1.09 | 3.49 | .93 |
| Choice              |       |    |    |      |     |    |
| No Choice           | 3.05  | 1.22 | 2.38 | 1.11 | 2.71 | 1.19 |
| Choice              | 3.47  | 1.01 | 3.95 | .88  | 3.91 | .82 |

Table 4.1 Marginal Means and Standard Deviations for Voice and Choice Manipulation Checks

| Source                  | Multivariate | | | Univariate | | | Overall | | Participation |
|-------------------------|--------------|---|---|------------|---|---|-------|---|
|                         | df | F | Voice | Choice | Overall |
| Voice (V)               | 1  | 15.27** | 36.91** | .01 | 4.94* |
| Choice (C)              | 1  | 39.75** | 7.68** | 105.77** | 72.20** |
| V x C                   | 1  | 1.77 | 2.56 | 3.58 | 8.23* |
| MSE                     |         | 1.02 | .98 | .97 |       |

Table 4.2 Multivariate and Univariate Analysis of Variance for Voice and Choice Manipulations. Multivariate $F$ ratios generated from Pillai’s statistic. $^a$Multivariate $df = 3, 161, ^b$ Univariate $df = 1, 163, *p < .05, **p < .01$

As shown in Table 4.2, the multivariate analysis of variance results on the three manipulation checks yielded significant overall effects of Voice and Choice at the multivariate ($F[3, 161] = 15.27, p < .001$ for Voice; $F[3, 161] = 39.75, p < .001$ for Choice) level. An examination of the univariate results for the Voice factor indicates a
main effect on Voice manipulation check ($F[1, 163] = 36.91, p < .001$) and the Overall Participation manipulation check ($F[1, 163] = 4.94, p < .05$). The Choice factor exerted a main effect on all three manipulation checks including Voice ($F[1, 163] = 7.68, p < .05$), Choice ($F[1, 163] = 105.77, p < .01$) and Overall Participation ($F[1, 163] = 72.20, p < .01$). Thus, those who were allowed control in choosing their performance goal (i.e., Choice) also felt that they had received some degree of Voice (see Table 4.2).

An inspection of the relative marginal means for the two Voice conditions in Table 4.1 (e.g., No Voice and Voice) reveal that participants in the Voice conditions agreed more with the statement “My supervisor gave me a chance to express my opinion regarding the goal that was set” ($M=3.74$, $SD=.86$) than those in the No Voice condition ($M=2.81$, $SD=1.18$). Similarly, participants in the Choice conditions agreed more with the statement “Compared to my supervisor, I had complete control in deciding on the goal that was set” ($M=3.95$, $SD=.88$) than participants in the No Choice condition ($M=2.38$, $SD=1.11$). For Overall Participation, means for those in both the Voice and Choice conditions were higher than the means for those in the No Voice and No Choice conditions ($M=3.49$ vs. $M=3.19$ for Voice; $M=3.91$ vs. $M=2.71$ for Choice); thus, indicating that those who were provided with either Voice or Choice (or both) perceived that they had participated in the goal setting procedure to a greater extent than those who were not provided such opportunities (see Table 4.1).

With respect to the interactive effects of the two factors, no overall interaction of Voice and Choice was observed for Voice ($F[3, 161] = 2.56, p > .05$) or Choice ($F[3, 161] = 3.58, p > .05$). However, as shown in Figure 4.2 an interaction was observed for Voice and Choice on Overall Participation ($F[1, 163] = 8.23, p < .05$). The interaction is
such that the provision of Voice led to a significant increase in perceived participation compared to No Voice with Choice exerting a stronger effect on Overall Participation than Voice alone. The above results in combination with the means reported for each condition (see Tables 4.1 and 4.2) suggest that both Voice and Choice manipulations were successful.

Figure 4.2  Interaction of Voice and Choice Factors on Overall Participation

Manipulation Check: Overall Participation

Summary Statistics

In order to provide a more complete picture of the data set, two sets of summary statistics are provided below. First, the relevant variable, the number of items associated with that variable, its samples size, means, and standard deviations are collapsed across conditions and displayed in Table 4.3.
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<th>Variable</th>
<th>Items</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
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<td>167</td>
<td>5.19</td>
<td>1.31</td>
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<tr>
<td>Perceived Support</td>
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<td>.69</td>
</tr>
<tr>
<td>Task Understanding</td>
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<td>167</td>
<td>3.67</td>
<td>.96</td>
</tr>
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<td>167</td>
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<td>.94</td>
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<td>.54</td>
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<td>8.14</td>
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<td>15.29</td>
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</table>

Table 4.3  Sample Sizes, Means and SDs Across All Conditions (N = 167).

The above variables are further broken down by condition and those sample sizes, means, and standard deviations are shown in Table 4.4. To test the differences in means across the four conditions for each variable, an ANOVA procedure with Tukey post-hoc was carried out. Significant differences are indicated next to the mean values (see Table 4.4). Significant mean differences across conditions are also indicated next to the mean values for each measured variable. Note that for Goal Level, first and third conditions
show a mean of 18 with zero variance. These two fixed values correspond to the two *no Choice* conditions (e.g., Conditions 1 and 3) in the study. For these conditions participants were simply assigned a goal of 18.

<table>
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<th>Variable</th>
<th>Cond</th>
<th>n</th>
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Table 4.4 Sample Sizes, Means and SDs by Condition (N = 167). Means with common subscripts are not significantly different from one another at *p* < .05 based on Tukey’s post-hoc test. Univariate *df* = 1, 163.
Table 4.4 continued

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Summary Statistics By Measure

In order to facilitate discussion of each measured variable, Table 4.5 provides the intercorrelations among the study variables and their internal consistency estimates in the diagonals. A total of ten measures contained three or more items and for those measures
Cronbach’s alpha is reported. For the two-item Procedural Justice measure, the intercorrelation between the items is reported. Each of the study’s measured variables is discussed in more detail next.

_Procedural Justice_ Two separate measures were initially used to assess perceived fairness of the goal setting procedure (i.e., Roberson et al., 1999; Colquitt, 2001). However, initial descriptive analysis revealed that Colquitt’s (2001) two-item measure overlapped significantly with the two items used for _Voice_ and _Choice_ manipulation checks. For example, while these two items were collectively designed to assess overall fairness perception, the two items – i.e., “Were you able to express your views and feelings during the goal-setting procedure?” and “Have you had influence over the goal that was actually set during the goal setting procedure?” – closely correspond to those _Voice_ and _Choice_ items used for manipulation checks. The correlation between Colquitt’s (2001) first item and the _Voice_ manipulation check was .67 (p < .01) while the correlation between Colquitt’s second item and the _Choice_ manipulation check was .71 (p < .01). Also, given the manipulations of Voice and Choice in this study this measure yielded a poor internal consistency estimate (Cronbach’s alpha = .54). The two items adopted from Colquitt’s measure of procedural fairness were thus deemed redundant with the manipulation checks. As a result, all analyses involving Procedural Justice were conducted using Roberson et al.’s (1999) two-item measure of overall procedural fairness.
<table>
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<td>.09</td>
<td>.18*</td>
<td>.07</td>
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<td>-.04</td>
<td>.11</td>
<td>.05</td>
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<td>.27**</td>
<td>.17*</td>
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<td>.45**</td>
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<td>.00</td>
<td>.14</td>
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<td>.13</td>
<td>.09</td>
<td>.14</td>
<td>.08</td>
<td>-.02</td>
<td>-.11</td>
<td>.14</td>
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<td>.02</td>
<td>-.12</td>
<td>.11</td>
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<td></td>
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<tr>
<td>15. Main Trial Performance</td>
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<td>.00</td>
<td>-.02</td>
<td>.08</td>
<td>.03</td>
<td>.08</td>
<td>-.16*</td>
<td>.09</td>
<td>.10</td>
<td>.35**</td>
<td>.01</td>
<td>.11</td>
<td>.21**</td>
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</tr>
</tbody>
</table>

* < .05  ** < .01

Table 4.5 Variable Intercorrelations and Coefficient Alphas. Coefficient Alphas are provided in the diagonals in parentheses with the exception of Procedural Justice (2-item intercorrelation)
As shown in Table 4.3, the mean for Procedural Justice was found to be 5.19 (SD=1.31) on a 7-point Likert-type scale indicating that a large majority of the participants viewed the goal setting procedure to be at least “slightly” fair (see Appendix G). As expected, significant differences in within condition means was found (F [3, 163] = 3.77, p < .05) (see Table 4.4). An examination of the means in Table 4.4 suggests that participants in Conditions 1 and 3 (i.e., the No Choice conditions) viewed the procedure as less fair (M=4.68, SD=1.6 for Condition 1; M=5.06, SD=1.37 for Condition 3) in comparison to Conditions 2 (M=5.48, SD=.99) and 4 (M=5.48, SD=1.09). The inter-item correlation was also found to be fairly high (r = .89, p < .01) suggesting an acceptable level of internal consistency.

Task Understanding  The 5-item measure of Task Understanding showed an overall mean of 3.67 (SD=.96) on a 7-point scale, suggesting that the majority of the participants did not feel that they understood the task (see Appendix G). An examination of the within-condition means show no differences across the four conditions (F [3, 163] = .93, p > .05) (see Table 4.4). Finally, the coefficient alpha for Task Understanding was found to be acceptable at .77.

Perceived Support  The Perceived Support measure consists of two subscales (5-item and 2-item) that were deemed appropriate for capturing overall supervisor support. Before estimating the means and intercorrelations with the remaining variables the 7-item measure was factor-analyzed using a one-factor confirmatory factor analysis (CEFA: Tateneni, Mels, Cudeck, and Browne, 2001). As an index of fit, the Root Mean Square of Approximation (RMSEA) was used (Brown & Cudeck, 1992). According to the guidelines provided by Browne and Cudeck, an RMSEA of <=.05 indicate “good” or
“close” fit; values falling within .05 to .08 are considered “fair”; values between .08 to .10 are considered “mediocre,” and those >.10 are considered “poor.”

The results of this factor analysis are shown in Table 4.6. As indicated in Table 4.6 and using the above criteria for assessing fit, the single-factor solution exhibited a “fair” fit to the data (RMSEA = .07, CI = .062, .089) with factor loadings ranging from .73 to .82. The seven items combined explained approximately 61% of the variance in the first factor representing perceived supervisor support. Thus, the 7-items collectively representing the latent variable Perceived Support were deemed appropriate for use in data analysis.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
<th>Communalities</th>
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<tr>
<td>2</td>
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<td>.81</td>
<td>.66</td>
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<td>7</td>
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<td>RMSEA</td>
<td>.07 CI: .062, .089</td>
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</table>

Table 4.6  Factor Loadings and Communalities for the Single-Factor Solution for Supervisor Support Scale via CEFA: Communalities, Eigenvalues, and Percent of Variance. CI=confidence interval.

Means and standard deviations for the 7-item Perceived Support measure are shown in Tables 4.3 and 4.4. The overall mean of Perceived Support was found to be 3.78 (SD=.69) across conditions with within-condition means ranging from 3.41
For Condition 1 and 4.02 (SD=.52) for Condition 3. Significant differences were found (F [3, 163] = 9.25, p < .01) between Conditions 1 and the remaining Conditions (e.g., 2, 3, and 4) with Condition 3 exhibiting the highest mean significantly different from Conditions 2 and 4 (see Table 4.4). Coefficient alpha was found to be .89 for the 7-item measure (see Table 4.5).

In light of the above, it appears that those participants in Condition 1 (no Voice + no Choice) viewed their supervisors to be least supportive while those in Conditions 2 (no Voice + Choice), 3 (Voice + no Choice), and 4 (Voice + Choice) viewed their supervisors to be more supportive. Surprisingly, those in Condition 3 viewed their supervisors to be most supportive. Finally, as shown in Table 4.5, coefficient alpha for the 5-item measure was found to be acceptable at .85.

**Affect** The Positive Affect Negative Affect Scale (PANAS: Watson et al., 1988) scale is a 20-item multidimensional scale with two main factors – PA and NA. Given the large number of items purported to contribute to each latent variable, the fit of the two factors to the data were again investigated using a confirmatory factor analysis for a 2-factor solution (CEFA: Tateneni, Mels, Cudeck, and Browne, 2001) program. Table 4.7 contains the item descriptions, rotated factor loadings, communalities, eigenvalues, percent of variance explained by each factor, and the RMSEA point estimate including its associated confidence intervals.

Using the above guideline, the initial factor analysis for the two-factor solution yielded a “poor” fit to the data – i.e., a RMSEA of .11 (CI = .09, .12). A number of attempts were made to reduce the RMSEA point estimate to at least .08 (reasonable fit) or better. These attempts include fitting the data to (a) three, four, and five factors, and (b)
excluding three, four, and five of the NA items with communalities below .3. However, the only possibility of reducing the RMSEA point estimate was to fit the data to a three-factor model.

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<th>Item</th>
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<th>2 (NA)</th>
<th>Communalities</th>
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<td>.46</td>
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<tr>
<td>3</td>
<td>Excited</td>
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<td>.08</td>
<td>.52</td>
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<td>5</td>
<td>Strong</td>
<td>.52</td>
<td>.05</td>
<td>.37</td>
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<tr>
<td>9</td>
<td>Enthusiastic</td>
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<td>-.08</td>
<td>.66</td>
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<tr>
<td>10</td>
<td>Proud</td>
<td>.52</td>
<td>-.13</td>
<td>.31</td>
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<tr>
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<td>Alert</td>
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<td>.44</td>
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<tr>
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<td>Inspired</td>
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<td>.53</td>
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<td>Guilty</td>
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<td>Ashamed</td>
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<td>.27</td>
<td>.12</td>
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<td>3.39</td>
<td>16.93</td>
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Table 4.7 Factor Loadings for the Two-Factor Model of PANAS via CEFA: Communalities, Eigenvalues, and Percentages of Variance. Commun = communality.

The resulting three-factor model (with all items) was found to be “mediocre” with a RMSEA point estimate of .09 (CI = .08, .10). The lower-bound 90% confidence interval, however, included a RMSEA of .08, suggesting that for the present sample the
three-factor model falls somewhere between “fair” and “mediocre” fit (Browne & Cudeck, 1992) (see Table 4.7). The improved fit of the three-factor model notwithstanding, the decision was made to use the 10-item and 7-item subscales to represent PA and NA, respectively. The logic behind this decision is embedded in the discussion of the PA and NA below.

**Positive Affect** Results of the two factor solution are presented in Table 4.7. With respect to the 10-item PA subscale, the loadings were generally high with individual loadings ranging from .52 (proud) to .82 (enthusiastic). At least for the PA subscale, the near-zero loadings on the remaining two factors indicate a relatively pure measure of PA. The communalities for the PA items also suggest a significant amount of shared variance for each item with the remaining items. An examination of the factor intercorrelation with NA revealed a negative correlation (r = -.22). As shown in Table 4.7, the 10 PA items also accounted for approximately 27.37 percent of the variance in factor 1 (see Table 4.7).

The overall mean for PA, as shown in Table 4.3 was found to be 2.66 (SD=.79) on a 5-point rating scale. The within-condition means displayed in Table 4.4 indicate no significant differences across the four conditions (F [3, 163] = .52, p > .05). Finally, the coefficient alpha, shown in Table 4.5 was found to be acceptable at .89.

**Negative Affect** CEFA results for the two-factor solution suggest that the 10-item NA subscale may more appropriately be split into two 7- and 3-item scales. Specifically, the three items – scared, nervous, and afraid – composing the third factor all had communalities below .28 (scared=.27, nervous=.24, afraid=.17) indicating that these three items did not contribute significantly to the overall NA measure. These items
appeared to represent latent construct closer to anxiety and fear. While these emotional states were argued to be subsumed by NA (Watson et al., 1988), there is little or no justification for why these emotions would play a role in the present study context. This line of thought is consistent with the mere 4.2% of the variance explained by the three items and its relatively low correlation \((r = .27)\) with the 7-item NA factor. The above rationale and data suggest that the three NA items do not adequately represent the same latent construct as the 7-item NA factor. As a result, while the full 10-item PA measure was retained, the three NA items were dropped from the 10-item NA scale and the 7-item subscale was retained to represent NA.

The retained 7-items (i.e., 2, 4, 6, 8, 11, 13, and 18) correspond to general aversive mood states described by Watson and his colleagues (Watson et al., 1988) and are respectively labeled distressed, upset, guilty, hostile, irritable, ashamed, and jittery. The average communality estimate for the 7-item subfactor was found to be .32 with three of the retained items (6, 8, and 18) sharing less proportion of the variance when compared with the remaining variables. Nonetheless, the three items – labeled guilty, hostile, and jittery – contributed to the overall reliability of the NA subscale and were deemed conceptually consistent with the notion of aversive mood states as suggested by Watson and his colleagues (Watson et al., 1988). More importantly, these three emotional states are expected to play a role in the present study as perceptions of unfairness is likely to elicit one or more of these emotions.

Table 4.3 displays the overall mean of the NA measure \((M=1.69, SD=.54)\) for the 5-point rating scale indicating that the majority of the respondents disagreed with the NA descriptors. Similar to PA, no significant differences were found across the four
conditions (F [3, 163] = 1.45, p > .05). The coefficient alpha for the reduced 7-item NA measure, as shown in Table 4.5, was found to be .70.

**Strategy Quality** Strategy Quality was assessed by assigning a strategy quality weight to each of the eleven strategies and calculating a mean score for each participant using only those strategies that they had reported as having used. The weights were based on performance data obtained from Pilot B. Specifically, a mean performance score for each strategy was calculated by summing the Main Trial performance scores for each strategy (from Pilot B) and dividing by the total number of participants that used a given strategy. This value was further divided by 46 (the maximum number of points possible) to yield a single weight to be assigned to each strategy. As a result, those strategies corresponding to higher performance scores were assigned a higher weight than those corresponding to lower performance scores. Finally, each weight assigned to a strategy was transformed using a simple linear transformation (e.g., \( y = ax \), where \( x = \) weight and \( a = 100 \)) for ease of interpretation. This procedure yielded a Strategy Quality rating ranging from 0 to 100.

In addition to the eleven pre-determined strategies, three blank spaces were provided for participants to fill-in additional unlisted strategies. Of the 166 participants, 64 reported using additional strategies. However, a closer examination of these strategies revealed that the majority of these participants (N=47) simply reported the same strategies that they had reported using (via the pre-set list). Seventeen participants, however, reported using at least one strategy not listed in the pre-set list. An examination of these strategies revealed 16 individuals reporting one new strategy (i.e., not on the pre-set list) and one individual reporting two new strategies. Given that no performance
information was available for these strategies (from Pilot B), a mid-level quality value of .50 was assigned as a weight in the calculation of overall strategy quality.

As shown in Table 4.3, the overall mean of strategy quality was 56.94 (SD=8.14) indicating that the quality of those strategies used by the majority of the participants were slightly above average. Inspection of Table 4.4 indicates no significant differences in the quality of strategies used across the four conditions (F [3, 163] = .12, p > .05).

*Perceived Obligation* The six-item Perceived Obligation measure exhibited an acceptable coefficient alpha of .83. Its overall mean was found to be 5.52 (SD=.94) with no significant differences observed across the four conditions in the study (F [3, 163] = .48, p > .05).

*Attractiveness of Goal Attainment* The 7-item Attractiveness of Goal Attainment measure was designed to assess a given participant’s attraction to varying levels of main trial performance scores. The 7-items correspond to seven levels of performance goals ranging from 8 to 20 matches (or points) in increments of two. As noted in the previous chapter, the Attractiveness of Goal Attainment was operationalized by using the value of the single rating provided for the performance level corresponding to the subject’s goal level. As a result, for participants in Conditions 1 and 3 (i.e., No Choice conditions), a single attractiveness rating corresponding to a performance goal of 18 was used to represent Attractiveness of Goal Attainment. For those in Conditions 2 and 4 (i.e., joint goal setting conditions), the attractiveness rating corresponding most closely to the goal that the participant had set was used.

As shown in Table 4.3, the overall mean Attractiveness of Goal Attainment rating was found to be 4.04 (SD=1.17) on a 5-point scale; indicating that the majority of the
participant viewed either their assigned goal (i.e., 18) or their jointly-set goals as “fairly” attractive (see Appendix H). An examination of Table 4.4 also shows no significant differences between the means across the four conditions. While the mean for Condition 2 (M=4.93, SD=.93) was higher than the remaining conditions (Ms=4.28, 3.78, and 3.88 for Conditions 1, 3, and 4), the difference was not significant as indicated by an analysis of variance (F [3, 163] = 1.91, p > .05).

**Task-Specific Self-Efficacy** The score for the 7-item TSSE measure was formed by averaging the self-efficacy ratings across the seven performance levels. The overall mean for TSSE was 44.59 (SD=19.59) with no significant differences across the four conditions (F [3, 163] = .66, p > .05) (see Tables 4.3 and 4.4). Hence, perceived efficacy for the staffing task did not increase for participants who were given the opportunity Voice or Choice. The measure exhibited high internal consistency as indicated by a coefficient alpha of .94 (see Table 4.5).

**Goal Commitment** The score for the 5-item Goal Commitment measure was formed similarly by averaging the five ratings. Its overall mean and standard deviation can be found in Table 4.3 (M=3.39, SD=.74). No significant differences were found across the four conditions (F [3, 163] = .17, p > .05). Coefficient alpha for the Goal Commitment was found to be .78.

**Goal Level** As shown in Table 4.3, the 1-item mean Goal Level across conditions was found to be 17.05 with a standard deviation of 1.18 for the entire sample (N=167). Note that approximately half of the sample (those in the *no choice* conditions) was assigned a goal level of 18. An inspection of the within condition means show significant differences (F [3, 163] = 19.13, p < .01) between the two *no Choice* conditions (M=18.0,
SD=0 for Conditions 1 and 3) and the two *Choice* conditions (M=16.4, SD=2.09; M=15.95, SD=2.26 for Conditions 2 and 4, respectively) (see Table 4.4). Thus, those participants who were given the chance to jointly-set their performance goals exhibited a tendency to choose goals that were significantly lower than the assigned goal of 18 (t = -7.79, p < .01).

*Practice Performance*  Table 4.3 displays the practice performance scores for the HR Staffing task. From a maximum score of nine, the mean was found to be 6.07 with a standard deviation of 2.17. The within condition means in Table 4.4 show no difference between the four conditions with respect to practice trial performance (F [3, 163] = 1.94, p > .05).

*Main Trial Performance*  The overall (i.e., across conditions) performance mean for the main trial was found to be 15.29 (SD=5.83) (see Table 4.3). This value is slightly higher than that reported by Diefendorff and Lord (2003) (13.55, SD=5.11) but below that of the assigned goal of 18. Thus, it can be inferred that, as was intended, the assigned goal 18 was sufficiently difficult. A comparison of the means across the four conditions revealed no significant differences (F [3, 163] = 2.10, p > .05).
Tests of Hypotheses

Hypothesis testing for the present study was carried out in two stages. The goal of the first stage was to examine all main and interactive effects of the Voice and Choice manipulations on all mediating and dependent variables. A 2-way multivariate analysis of variance was used for this stage. Next, zero-order correlations and multiple regression analyses were used to test hypotheses related to moderation and partial mediation.

Preliminary MANOVAs

A summary of the overall or omnibus effect of Voice and Choice on the study’s 12 mediating and dependent variables are presented prior to the testing of each hypothesis. Table 4.8 displays the marginal means for the 12 variables and Table 4.9 displays the multivariate and univariate results. For the multivariate tests, the Pillai’s statistic is used as it is particularly robust for smaller sample sizes, unequal cell sizes, and for heterogeneous covariances (Keppel, 1991). Table 4.9, containing multivariate and univariate statistics was split into two sections in order to accommodate all 12 dependent variables. Multivariate analysis of variance results suggest overall effects of Voice (F [3, 161] = 3.28, p < .05) and Choice (F [3, 161] = 5.52, p < .05) but no overall interaction effect of Voice and Choice on the dependent variables (F [3, 161] = 1.54, p > .05) (see Table 4.9).
Univariate analysis results in the same table indicate main effects of Voice on Perceived Support, Attractiveness of Goal Attainment, and Main Trial Performance. Choice exerted main effects only on Procedural Justice and Goal Level. Thus, Voice and Choice collectively exerted main effects on five of the twelve dependent variables while exerting an interactive effect only on Perceived Support. As will be explained in the next chapter, two reasons can likely explain these results. First, the lack of a significant main effect of either Voice or Choice on all of the study’s dependent variables may be, in large part, due to the weak autonony entitlement framing that was designed to impart a sense of inherent control typically possessed by human resource managers.

Second, it is possible that the lack of a meaningful consequence associated with the subordinates’ task performance may also have lessened the impact of Voice and Choice on each of the dependent variables. More will be said on this in the next chapter. Despite this small number of main effects on the dependent variables, the study proceeded with the hypothesis testing for the sake of furthering our knowledge of the relationships among the sets of dependent variables included in the study. Each of these is discussed separately with their respective hypothesis.
### FACTORS

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Table 4.8 Marginal Means and Standard Deviations for All Dependent Variables as a Function of Voice and Choice
### Table 4.9 Multivariate and Univariate Analysis of Variance for Voice and Choice on All Dependent Variables

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<th>$F^a$</th>
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<th>Negative Affect</th>
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<td>.72</td>
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<td>.63</td>
<td>.29</td>
<td>.89</td>
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<table>
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<th>TSSE</th>
<th>Goal Commitment</th>
<th>Strategy Quality</th>
<th>Goal Level</th>
<th>Main Trial Performance</th>
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*Multivariate F ratios generated from Pillai’s statistic. Multivariate $df = 3, 161$, Univariate $df = 1, 163$. $^*p < .05$, $^{**}p < .01$
Hyp 1a. The Voice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.

Hypothesis 1a predicted a main effect of Voice on perceptions of Procedural Justice. As shown in the univariate results in Table 4.9, the main effect of Voice on perceptions of Procedural Justice was not found to be significant ($F[1, 163] = .95, p > .05$). An inspection of the marginal means in 4.6 indicate that participants who were afforded the opportunity to discuss the staffing task with their supervisors (i.e., Voice) did not perceive the goal-setting procedure to be more fair ($M = 5.28, SD = 1.25$) than those who were not afforded such opportunity ($M = 5.10, SD = 1.37$). The Voice component of participation did not affect fairness perceptions and, as such, hypothesis 1a was not supported.

Hyp 1b. The Choice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.

Hypothesis 1b predicted a main effect of Choice on perceptions of Procedural Justice. Univariate results are shown in Table 4.9 with marginal means for Choice displayed in Table 4.8. As shown in Table 4.9, Choice exerted a main effect on perceived Procedural Justice ($F[1, 163] = 9.30, p < .05$). An inspection of the marginal means in Table 4.6 shows that, indeed, those who were allowed to jointly-set their performance goals viewed the goal-setting procedure to be more fair ($M = 5.48, SD = 1.04$) than those who were simply assigned a goal ($M = 4.87, SD = 1.50$). As a result, hypothesis 1b was supported.
**Hyp 2a.** *The Choice component of Participation in Goal Setting will be positively related to Perceived Support.*

Hypothesis 2a predicted a main effect of Choice on perceptions of supervisory Support. Univariate results are shown in Table 4.9 with marginal means for Choice displayed in Table 4.8. No main effect of Choice on perceived Support was found ($F_{[1, 163]} = .79, p > .05$). As indicated by the marginal means for Supervisor Support in Table 4.8, those who were given the opportunity to jointly-set their goals (i.e., Choice) did not perceive their supervisors to be any more supportive ($M = 3.85, SD = .62$) than those who were simply assigned a performance goal ($M = 3.76, SD = .79$). Thus, no support was found for hypothesis 2a.

**Hyp 2b.** *The Voice component of Participation in Goal Setting will be positively related to Perceived Support.*

Hypothesis 2b predicted a main effect of Voice on perceptions of supervisory Support. As shown in Table 4.9 a main effect of Voice on supervisor support was found ($F_{[1, 163]} = 22.25, p < .01$). An examination of the marginal means shown in Table 4.8 suggests that participants whose supervisors provided an opportunity for Voice were viewed as more supportive ($M = 4.05, SD = .53$) than those supervisors who did not provide such opportunity ($M = 3.58, SD = .77$). Hypothesis 2b, thus, was supported.

**Hyp 3a.** *The Voice component of Participation in Goal Setting will be positively related to Task Understanding.*
Hypothesis 3a predicted that the Voice component of participation in goal setting would be positively related to Task Understanding. As shown in Table 4.9, however, Voice did not exert a main effect on Task Understanding (F [1, 163] = .92, p > .05) (see Table 4.9). Marginal means shown in Table 4.8 indicate that there was no difference in the levels of Task Understanding for the Voice (M = 3.74, SD = .98) and the no Voice (M = 3.60, SD = .95) groups. Thus, those afforded the opportunity to discuss the staffing task with their supervisors did not feel that they understood the task better than those from whom such opportunities were withheld (see Table 4.8). As a result, hypothesis 3a was not supported.

**Hyp 3b. Task Understanding will be positively related to Strategy Quality.**

Hypothesis 3b predicted that Task Understanding would be positively related to Strategy Quality. As shown in Table 4.5, the zero-order correlation between Task Understanding and Strategy Quality was not significant (r = .08, p > .05). Hence, an enhanced level of Task Understanding did not necessarily lead to increases in Strategy Quality. Hypothesis 3b, thus, not supported.

4. **Perceived Support will moderate the effects of the Choice component of Participation in Goal Setting on Procedural Justice such that the strength of the positive relationship between Choice and Procedural Justice will increase as Perceived Support increases in an uncrossed interaction.**

Hypothesis 4 predicts a moderating role for perceived supervisory support such that the effect of Choice on Procedural Justice is expected to be stronger under conditions
of increased supervisory support. For this analysis, both the independent and moderator variables were first scale-centered to reduce the possibility for collinearity (Cohen et al., 2003). A hierarchical regression procedure was then employed with Choice entered into the equation first and Perceived Support entered second. The Choice-Support interaction term was entered in the final step to examine its contribution above and beyond the unique effects of the two predictors. A significant incremental amount of variance in procedural justice explained by the interaction term would signify moderation.

The results of the moderation analysis are presented in Table 4.10. Procedural Justice was significantly predicted by both Choice ($R^2 = .05$, $p < .05$) and Perceived Support ($\Delta R^2 = .15$, $p < .01$). The interaction term (Choice x Support), however, did not significantly account for additional variance in Procedural Justice perceptions ($\Delta R^2 = .01$, $p > .05$) beyond that account for by Choice and Perceived Support. As a result, hypothesis 4 was not supported.

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*p < .05  **p < .01

Table 4.10  Moderated Regression Analysis Summary using Perceived Support as Moderator of the relationship between Choice and Procedural Justice (n = 167).
With the exception of hypothesis 11c, the remaining hypotheses involved tests of mediation. For these hypotheses, the causal steps approach provided by Kenny and his colleagues and described in the previous chapter was used for establishing mediation (Baron & Kenny, 1986; Judd & Kenny, 1981; Kenny et al., 1998).

5a.  

**Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Affect.**

Hypothesis 5a predicts a partial mediation role for Procedural Justice (PJ) with respect to the Voice-Affect relationship. It was established in Table 4.9 that Voice did not exert a main effect on either PA (F [1, 163] = .05, p > .05) or NA (F [1, 163] = 1.02, p > .05) (see Table 4.9). In addition, as indicated in Table 4.5, Voice was not significantly correlated with PA (r = .03, p > .05) or NA (r = -.07). Thus, X had no effect on Y and, as a result, the mediation test was unnecessary and the hypothesis was not supported (Kenny et al., 1998).

5b.  

**Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Affect.**

Hypothesis 5b predicted that Procedural Justice will partially mediate the effects of Choice on Affect (both PA and NA). Similar to hypothesis 5a, however, Choice did not exert a main effect on either Positive (F [1, 163] = .72, p > .05) or NA (F [1, 163] = .00, p > .05) (see Table 4.9). As a result, Procedural Justice did not mediate the effects of Choice on Affect and hypothesis 5b was not supported.
5c. 

*Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Perceived Obligation.*

Hypothesis 5c predicted Procedural Justice to mediate the relationship between Voice and Perceived Obligation. Again, as shown in Table 4.9, Voice did not exert a main effect on Perceived Obligation (F [1, 163] = 1.00, p > .05). More specifically, Voice failed to enhance one’s feeling of obligation towards one’s supervisor. Thus, Procedural Justice did not partially mediate the effects of Voice on Perceived Obligation and hypothesis 5c was not supported.

5d. 

*Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Perceived Obligation.*

Hypothesis 5d predicts that the effects of Choice on Perceived Obligation will be partially mediated by Procedural Justice perceptions. Similar to hypothesis 5b, Choice did not exert a main effect on Perceived Obligation (F [1, 163] = .20, p > .05) (see Table 4.9). Again, Choice did not affect one’s feelings of obligation towards one’s supervisor. As a result, Procedural Justice did not partially mediate the effects of Choice on Perceived Obligation and hypothesis 5d was not supported.

6. 

*Task Understanding will partially mediate the effects of the Voice component of Participation in Goal Setting on Strategy Quality.*

Hypothesis 6 predicted that the effect of Voice on Strategy Quality would be partially mediated by Task Understanding. The univariate results shown in Table 4.9 indicate that Voice failed to exert a main effect on Strategy Quality (F [1, 163] = .03, p >
.05). Marginal means displayed in Table 4.8 further indicate that those who were given Voice did not necessarily develop better strategies (M=56.82, SD=8.69) than those from whom Voice was withheld (M=4.69, SD=1.41; M=). The data thus suggest that Task Understanding does not mediate the relationship between Voice and Strategy Quality and no support was found for hypothesis 6.

7a. **Perceived Obligation will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment.**

Hypothesis 7a predicts a partial mediation role for Perceived Obligation with respect to the Procedural Justice--Attractiveness of Goal Attainment relationship. As shown in Table 4.5 (Variable Intercorrelations), Procedural Justice was not significantly correlated with Attractiveness of Goal Attainment (r = -.04, p > .05). Hence, the first step in the procedure for testing mediation could not be established. As a result, based on Kenny et al.’s criteria, hypothesis 7a was not supported.

7b. **Affect will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment.**

Hypothesis 7b predicts that Affect (PA and NA) will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment. It was determined in hypothesis 7a that Procedural Justice is not significantly correlated with Attractiveness of Goal Attainment. In the absence of this “total effect,” partial mediation could not be established and hypothesis 7b was not supported. Thus, neither PA nor NA mediated the relationship between perceived fairness and one’s attraction to goal attainment.
7c. \textit{Affect will partially mediate the effects of Procedural Justice on Task-Specific Self-Efficacy.}

Hypothesis 7c predicts that Affect (i.e., PA and NA) will partially mediate the effects of Procedural Justice on Task-Specific Self-Efficacy. As shown in Table 4.5 the relationship between Procedural Justice and Task-Specific Self-Efficacy was not significant ($r = -.07$, $p > .05$). The failure to establish this first requirement for demonstrating partial mediation precluded further testing. Thus, hypothesis 7c was not supported. Neither PA nor NA mediated the relationship between perceived fairness and one’s self-efficacy for the staffing task.

8a. \textit{Perceived Support will partially mediate the Choice component of Participation in Goal Setting on Task-Specific Self-Efficacy.}

The next two hypotheses (8a and 8b) predict a partial mediation role for Perceived Support with respect to Choice- and Voice-TSSE relationships. For hypothesis 8a, Table 4.5 shows a nonsignificant relationship between Choice and TSSE ($r = .08$, $p > .05$). Given the failure to find a significant relationship between the X and Y variables no mediation could be established and no support was found for the prediction that Perceived Support would mediate the relationship between Choice and TSSE.

8b. \textit{Perceived Support will partially mediate the Voice component of Participation in Goal Setting on Task-Specific Self-Efficacy.}

Hypothesis 8b similarly proposed Perceived Support as a mediator of the Voice-TSSE relationship. As shown in Table 4.5, the correlation between Voice and TSSE, is
not significant \( (r = .07, p > .05) \). Given the failure to establish this first step, the full test of mediation could not be carried out and, as a result, no support could be found for hypothesis 8b.

8c. **Strategy Quality will partially mediate the effects of Task Understanding on Task-Specific Self-Efficacy.**

Hypothesis 8c predicted that Strategy Quality will partially mediate the effects of Task Understanding on TSSE. As shown in Table 4.5, Task Understanding was significantly correlated with TSSE \( (r = .18, p < .05) \). Thus, the first step in testing mediation was established. However, Strategy Quality and Task Understanding are not significantly correlated \( (r = .08) \). Thus, the second step the procedure for testing mediation could not be established and no further tests were conducted and, as a result, hypothesis 8c was not supported.

Hypotheses 9a through 10b are concerned with single mediators with multiple predictor variables. For these four hypotheses, the predictor variables were entered in the first step as a set.

9a. **Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation and Affect on Goal Commitment.**

Hypothesis 9a predicts that the effects of Perceived Obligation and Affect (PA and NA) on Goal Commitment will be partially mediated by Attractiveness of Goal Attainment. As shown in Table 4.5, the correlations between Goal Commitment and the two independent variables Perceived Obligation \( (r = .44, p < .01) \) and Affect (PA \( [r = .45, \) \]...
p < .01], NA [r = -.23, p < .01]) were significant. Thus, the first step required for testing mediations was established. The second step requires that the mediator variable be significantly correlated with the independent variable(s). As shown in Table 4.5, the correlations between Attractiveness of Goal Attainment and Perceived Obligation (r = .27, p < .01) and PA (r = .16, p < .05) were significant although its relationship with NA was not (r = -.03, p > .05). Given that X was related to both Y and M (albeit only PA and not NA), the second step in the procedure for testing mediation was established and the third step carried out.

Table 4.11 below presents the results of the mediation analysis. Both PA and NA were entered together along with Perceived Obligation as a set. Thus, in the first model, Goal Commitment was regressed on Perceived Obligation, PA, and NA. As shown, in the first step (first column), Perceived Obligation, PA, and NA explained approximately 34% of the variance in Goal Commitment (R² = .34, p < .01). More precisely, Goal Commitment was significantly predicted by Perceived Obligation (β = .36, p < .01) and PA (β = .35, p < .01) but not by NA (β = -.12, p > .05). A second model, reported in the second column represents the second step of the Kenny et al. (1998) procedure. The same set of independent variables accounted for a significant 8% of the variance in the mediator (i.e., Attractiveness of Goal Attainment) (R² = .08, p < .01). Again, Perceived Obligation (β = .25, p < .01) and PA (β = .11, p < .05) significantly predicted Goal Commitment while NA did not (β = .01, p > .01).

A third model, reported in the third column represents the final step in testing for mediation. After controlling for the influence of the mediator in the first hierarchical
step, the set of independent variables still accounted for a statistically significant amount of variance in Goal Commitment ($\Delta R^2 = .29, p < .01$).

<table>
<thead>
<tr>
<th>Step</th>
<th>Independent Variable</th>
<th>DV: Goal Commitment</th>
<th>Model 2 DV: Attractiveness of Goal Attainment</th>
<th>Model 3 DV: Goal Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived Obligation</td>
<td>.36**</td>
<td>.25**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PA</td>
<td>.35**</td>
<td>.11*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>-.12</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attractiveness of Goal Attainment</td>
<td></td>
<td>.24**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Delta R^2$</td>
<td></td>
<td>.06**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Delta F$</td>
<td></td>
<td>1.89**</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Perceived Obligation</td>
<td>.33**</td>
<td>.33**</td>
<td>.29**</td>
</tr>
<tr>
<td></td>
<td>PA</td>
<td>.33**</td>
<td>.33**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>-.12</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Delta R^2$</td>
<td></td>
<td>.29**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Delta F$</td>
<td></td>
<td>24.18**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total R^2</td>
<td>.34**</td>
<td>.08**</td>
<td>.35**</td>
</tr>
<tr>
<td></td>
<td>Total F</td>
<td>28.30**</td>
<td>4.88**</td>
<td>22.01**</td>
</tr>
</tbody>
</table>

Note. $n = 167$. Values in table are standardized regression coefficients unless otherwise labeled. * $p < .05$. ** $p < .01$.

Table 4.11 Mediated Regression Analysis Summary using Attractiveness of Goal Attainment as a Mediator of the relationship between Perceived Obligation and Affect and Goal Commitment

With the mediator controlled, both Perceived Obligation ($\beta = .33, p < .01$) and PA ($\beta = .33, p < .01$) significantly predicted Goal Commitment, thus, ruling out the possibility of full mediation. In addition, a comparison of regression models 1 and 3 indicates a reduction in $R^2$ from .34 (Model 1) to .29 (Model 3). This is also evident in the reduction of betas for Perceived Obligation (from .36 to .33) and PA (from .35 to .33) from Model 1 to Model 3. As a result, the independent variables, as a set, still explained
approximately 30% of the variance in Goal Commitment after controlling for the effects of Attractiveness of Goal Attainment. Thus, hypothesis 9a was partially supported.

9b. Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation and Affect on Goal Level.

Hypothesis 9b predicts that Attractiveness of Goal Attainment will similarly mediate the effects of Obligation on Goal Level. As shown in Table 4.5, however, Goal Level was unrelated with any of the variables relevant to hypothesis 9b – Obligation (r = .05, p > .05), PA (r = .09, p > .05), NA (r = -.05, p > .05), and Attractiveness of Goal Attainment (r = -.00, p > .05). Since the first step for testing mediation could not be established, hypothesis 9b was not supported.

10a. Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Commitment.

Hypothesis 10a predicts that TSSE will partially mediate the effects of multiple predictors (Affect, Perceived Support, Task Understanding, and Strategy Quality) on Goal Commitment. As a first step, the relationship between the set of independent variables and the dependent variable is examined. It was established in hypothesis 9a that Goal Commitment is significantly related to PA (r = .45, p < .01) and NA (r = -.23, p < .01). Table 4.5 further shows that Goal Commitment is significantly related to Perceived Support (r = .24, p < .01), Task Understanding (r = .17, p < .05), and Strategy Quality (r = .45, p < .01). Thus, the set of independent variables were significantly
related to Goal Commitment. The second step in testing for mediation involves the X-M relationship. Table 4.5 show significant correlations between the mediator (TSSE) and a subset of the independent variables including PA ($r = .23$, $p < .01$), NA ($r = -.26$, $p < .01$), and Task Understanding ($r = .18$, $p < .05$) but not Strategy Quality ($r = .08$, $p > .05$) or Perceived Support ($r = -.01$, $p > .05$). Given that a subset of the independent variables met first two requirements for testing mediations, the formal mediation testing was carried out.

Table 4.12 below presents the results of the mediation analysis. The first column represents the first model with Goal Commitment regressed on PA, NA, Perceived Support, Task Understanding, and Strategy Quality. As shown, this set of independent variables collectively explained approximately explained 28% of the variance in Goal Commitment ($R^2 = .28$, $p < .01$). The relative contributions made by each of the predictor variables differed, however, with PA exerting the greatest impact ($\beta = .38$, $p < .01$) followed by Perceived Support ($\beta = .15$, $p < .05$). The remaining predictors did not significantly predict Goal Commitment as shown by their beta coefficients – i.e., NA ($\beta = -.10$, $p > .05$), Task Understanding ($\beta = .07$, $p > .05$), Strategy Quality ($\beta = .13$, $p = .05$).

The next model, reported in the second column of Table 4.12, represents the second step in the procedure (Kenny et al., 1998). For this step, TSSE was regressed on the same set of independent variables as above. As indicated by the total $R^2$ at the bottom of the second column, this set of independent variables explained approximately 11% of the variance in TSSE ($R^2 = .11$, $p < .01$). The respective betas in the same column also indicate that the two Affect variables (PA [$\beta = .17$, $p < .05$], NA [$\beta = -.20$, $p < .01$]) primarily accounted for the majority of the variance in TSSE.
<table>
<thead>
<tr>
<th>Step</th>
<th>Independent Variable</th>
<th>Model 1 DV: Goal Commitment</th>
<th>Model 2 DV: TSSE</th>
<th>Model 3 DV: Goal Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PA</td>
<td>.38**</td>
<td>.17*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>-.10</td>
<td>-.20**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived Support</td>
<td>.15*</td>
<td>-.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task Understanding</td>
<td>.07</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategy Quality</td>
<td>.13</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TSSE</td>
<td></td>
<td></td>
<td>.22**</td>
</tr>
<tr>
<td></td>
<td>Δ R²</td>
<td></td>
<td></td>
<td>.05**</td>
</tr>
<tr>
<td></td>
<td>Δ F</td>
<td></td>
<td></td>
<td>8.43**</td>
</tr>
<tr>
<td>2</td>
<td>PA</td>
<td>.37**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>-.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceived Support</td>
<td>.16*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task Understanding</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategy Quality</td>
<td>.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Δ R²</td>
<td></td>
<td></td>
<td>.24**</td>
</tr>
<tr>
<td></td>
<td>Δ F</td>
<td></td>
<td></td>
<td>10.58**</td>
</tr>
<tr>
<td></td>
<td>Total R²</td>
<td>.28**</td>
<td>.11**</td>
<td>.29**</td>
</tr>
<tr>
<td></td>
<td>Total F</td>
<td>12.40**</td>
<td>4.12**</td>
<td>10.63**</td>
</tr>
</tbody>
</table>

Note. n = 167. Values in table are standardized regression coefficients unless otherwise labeled. * p < .05. ** p < .01.

Table 4.12  Mediated Regression Analyses Summary using TSSE as a mediator of the relationship between Affect, Perceived Support, Task Understanding, and Strategy Quality and Goal Commitment.

The final step in Kenny et al.’s (1998) procedure is presented in the third column of Table 4.12. For this step, Goal Commitment was regressed on the set of independent variables with TSSE entered as a control variable. Results of the third step are displayed in the third column of Table 4.12. The independent variables collectively accounted for a significant amount of variance (Δ R² = .24, p < .01) in Goal Commitment even after controlling for TSSE; thus, ruling out full mediation. Moreover, the 28% of variance in Goal Commitment accounted for by the set of independent variables (R² = .28, p < .01) in Model 1 was reduced by 4% to 24% (Δ R² = .24, p < .01) in Model 3. Notwithstanding
this 4% reduction, the beta weights for the independent variables (from Model 1 to Model 3) remained relatively constant: PA (.38 to .37), NA (-.10 to -.09), Perceived Support (.15 to .16), Task Understanding (.07 to .06), and Strategy Quality (no change).

The above results suggest that TSSE does not partially mediate the relationship between the set of independent predictors – i.e., PA, NA, Perceived Support, Task Understanding, Strategy Quality – and Goal Commitment. As a result, hypothesis 10a was not supported.

10b. Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Level.

Hypothesis 10b predicts that the effects of those same variables just examined on Goal Commitment will also be mediated by TSSE with Goal Level as the dependent variable. As indicated in hypothesis 9b, however, Goal Level was unrelated to PA (r = .09, p > .05) and NA (r = -.05, p > .05). Table 4.5 additionally shows that Goal Level is unrelated to Perceived Support (r = -.02, p > .05), Task Understanding (r = .00, p > .05), and Strategy Quality (r = -.03, p > .05). As a result, the first step in Kenny et al.’s steps for testing mediations could not be established and hypothesis 10b was not supported.

11a. Goal Commitment will partially mediate the effects of Attractiveness of Goal Attainment on Task Performance.

Hypothesis 11a predicts that Goal Commitment will partially mediate the effects of Attractiveness of Goal Attainment on Task Performance. As shown in Table 4.5,
Attractiveness of Goal Attainment did not correlate significantly with Main Trial Performance ($r = .10, p > .05$). Given this failure to establish the first step in testing for mediation, hypothesis 11a was not supported by the data.

**11b. Goal Commitment will partially mediate the effects of Task-Specific Self-Efficacy on Task Performance.**

Hypothesis 11b predicts that Goal Commitment will partially mediate the relationship between TSSE and main trial performance. As shown by the significant correlation in Table 4.5 between TSSE and Main Trial Performance ($r = .35, p < .01$), the first step testing for mediation was established. Goal Commitment was also significantly related to TSSE ($r = .21, p < .01$), thus, satisfying the second requirement (see Table 4.5). The relationship between the mediator (Goal Commitment) and the dependent variable (Task Performance), however, was not significant ($r = -.01, p > .05$). This precluded further mediation testing and hypothesis 11b was not supported.

**11c. Goal commitment will moderate the effects of Goal Level on Performance such that Goal Level and Performance will be unrelated when there is no commitment and the strength of the relationship between Goal Level and performance will increase as Goal Commitment increases.**

Hypothesis 11c predicts that Goal Commitment will moderate the effects of Goal Level on Main Trial Performance. This hypothesis, like hypothesis 4 which also predicted moderation, was tested using moderated regression with Main Trial Performance as the dependent variable. Again, both the independent and moderator
variables were first scale-centered to reduce the possibility for collinearity (Cohen et al., 2003). Goal Commitment was then entered first and Goal Level entered in a second hierarchical step. In the final equation, the Goal Commitment-Goal Level interaction term was entered.

<table>
<thead>
<tr>
<th>Step</th>
<th>Predictor Variable</th>
<th>β</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$\Delta F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Goal Commitment</td>
<td>-.01</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td>2</td>
<td>Goal Level</td>
<td>.11</td>
<td>.01</td>
<td>.01</td>
<td>2.19</td>
</tr>
<tr>
<td>3</td>
<td>Commitment x Goal Level</td>
<td>.63</td>
<td>.02</td>
<td>.02</td>
<td>.81</td>
</tr>
</tbody>
</table>

Total: .03

N = 167. *p < .05  **p < .01

Table 4.13  Moderated Regression Analysis Summary using Goal Commitment as a Moderator of the relationship between Goal Level and Main Trial Performance

Results of this moderated regression analysis is shown in Table 4.13. Neither Goal Commitment ($R^2 = .00, p > .05$) nor Goal Level ($R^2 = .01, p > .05$) significantly predicted Main Trial Performance. Similarly, the interaction of Goal Commitment and Goal Level failed to significantly predict Main Trial Performance ($R^2 = .02, p > .05$). Thus, Goal Commitment did not moderate the effects of Goal Level on Main Trial Performance and hypothesis 11c was not supported.

The next two hypotheses (12a, and 12b) both require the inclusion of Goal Level, a variable that has been found to be unrelated to any of the study variables. As a result, no support could be found for these two hypotheses.
12a. *Goal Level will partially mediate the effects of Attractiveness of Goal Attainment on Performance.*

12b. *Goal Level will partially mediate the effects of Task-Specific Self-Efficacy on Performance.*

Table 4.14 below summarizes the results of the hypothesis testing. Figure 4.3 also depicts the relationships among the study variables using the hypothesized model.
<table>
<thead>
<tr>
<th>Hyp</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>The Voice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.</td>
<td>N.S.</td>
</tr>
<tr>
<td>1b</td>
<td>The Choice component of Participation in Goal Setting will be positively related to perceived Procedural Justice.</td>
<td>Supported</td>
</tr>
<tr>
<td>2a</td>
<td>The Choice component of Participation in Goal Setting will be positively related to Perceived Support.</td>
<td>N.S.</td>
</tr>
<tr>
<td>2b</td>
<td>The Voice component of Participation in Goal Setting will be positively related to Perceived Support.</td>
<td>Supported</td>
</tr>
<tr>
<td>3a</td>
<td>The Voice component of Participation in Goal Setting will be positively related to Task Understanding.</td>
<td>N.S.</td>
</tr>
<tr>
<td>3b</td>
<td>Task Understanding will be positively related to Strategy Quality. Perceived Support will moderate the effects of the Choice component of Participation in Goal Setting on Procedural Justice such that the strength of the positive relationship between Choice and Procedural Justice will increase as Perceived Support increases in an uncrossed interaction.</td>
<td>N.S.</td>
</tr>
<tr>
<td>4</td>
<td>Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Affect.</td>
<td>N.S.</td>
</tr>
<tr>
<td>5a</td>
<td>Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Affect.</td>
<td>N.S.</td>
</tr>
<tr>
<td>5b</td>
<td>Procedural Justice will partially mediate the effects of the Voice component of Participation in Goal Setting on Perceived Obligation.</td>
<td>N.S.</td>
</tr>
<tr>
<td>5c</td>
<td>Procedural Justice will partially mediate the effects of the Choice component of Participation in Goal Setting on Perceived Obligation.</td>
<td>N.S.</td>
</tr>
<tr>
<td>5d</td>
<td>Task Understanding will partially mediate the effects of the Voice component of Participation in Goal Setting on Strategy Quality.</td>
<td>N.S.</td>
</tr>
<tr>
<td>6</td>
<td>Perceived Obligation will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment.</td>
<td>N.S.</td>
</tr>
<tr>
<td>7a</td>
<td>Affect will partially mediate the effects of Procedural Justice on Attractiveness of Goal Attainment.</td>
<td>N.S.</td>
</tr>
<tr>
<td>7b</td>
<td>Continued</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.14 Summary of Hypotheses and Corresponding Results. N.S. = Not Supported
Table 4.14 continued

<table>
<thead>
<tr>
<th></th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>7c</td>
<td>Affect will partially mediate the effects of Procedural Justice on Task-Specific Self-Efficacy.</td>
</tr>
<tr>
<td>8a</td>
<td>Perceived Support will partially mediate the Choice component of Participation in Goal Setting on Task-Specific Self-Efficacy.</td>
</tr>
<tr>
<td>8b</td>
<td>Perceived Support will partially mediate the Voice component of Participation in Goal Setting on Task-Specific Self-Efficacy.</td>
</tr>
<tr>
<td>8c</td>
<td>Strategy Quality will partially mediate the effects of Task Understanding on Task-Specific Self-Efficacy.</td>
</tr>
<tr>
<td>9a</td>
<td>Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation and Affect on Goal Commitment.</td>
</tr>
<tr>
<td>9b</td>
<td>Attractiveness of Goal Attainment will partially mediate the effects of Perceived Obligation and Affect on Goal Level.</td>
</tr>
<tr>
<td>10a</td>
<td>Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Commitment.</td>
</tr>
<tr>
<td>10b</td>
<td>Task-Specific Self-Efficacy will partially mediate the effects of Affect, Perceived Support, Task Understanding and Strategy Quality on Goal Level.</td>
</tr>
<tr>
<td>11a</td>
<td>Goal Commitment will partially mediate the effects of Attractiveness of Goal Attainment on Task Performance.</td>
</tr>
<tr>
<td>11b</td>
<td>Goal Commitment will partially mediate the effects of Task-Specific Self-Efficacy on Task Performance.</td>
</tr>
<tr>
<td>11c</td>
<td>Goal commitment will moderate the effects of Goal Level on Performance such that Goal Level and Performance will be unrelated when there is no commitment and the strength of the relationship between Goal Level and performance will increase as Goal Commitment increases.</td>
</tr>
<tr>
<td>12a</td>
<td>Goal Level will partially mediate the effects of Attractiveness of Goal Attainment on Performance.</td>
</tr>
<tr>
<td>12b</td>
<td>Goal Level will partially mediate the effects of Task-Specific Self-Efficacy on Performance.</td>
</tr>
</tbody>
</table>
Figure 4.3 Revised Hypothesized Model Based on Significant Variable Intercorrelations (see Table 4.5).
CHAPTER 5

DISCUSSION

This study was designed to more clearly map the effects of participation operationalized as process and decision controls on task motivation and performance. More precisely, by incorporating the process (voice) and decision (choice) control operationalizations of participation in a 2x2 full factorial design and by integrating the cognitive, social, and moral perspectives associated with participation’s effects, this study (a) examined the degree to which each component of participation – i.e., voice and choice – can indeed be used to operationalize participation in the context of goal setting; (b) investigated the effects of perceived participation on the four component factors (i.e., moral, cognitive, social, and motivational) thought to result from participation; and finally, (c) empirically tested a set of intervening process variables theorized to link participation with goal commitment and task performance. The theorized relationships among the study variables are shown in Figure 2.1. The outline of this chapter follows the proposed objectives described above.
Voice and Choice as Participation

The substantial confusion regarding exactly what participation is set the stage for the first objective of this study. Borrowing from the organizational justice literature this study examined whether participation can be operationalized using two distinct types of control – i.e., Voice and Choice. The MANOVA results reported in chapter 4, indeed, suggest that both the act of simply allowing participants to express their concerns (Voice) as well as affording them decision making power (Choice) contribute significantly to perceived participation in the goal setting process. This finding demonstrates the generalizability of the noninstrumental aspect of control to the participation context and suggests that the construct of participation must be viewed as containing both Voice (i.e., noninstrumental) as well as Choice (i.e., instrumental) components.

As proposed by the value-expressive theory, Voice is important in and of itself because people value “having the chance to state their case irrespective of whether their statement influences the decision of the authorities” (Tyler, 1987, p 333). While the effects of Voice as process control has been studied in the context of fairness perceptions (see Lind & Tyler, 1988; Earley & Lind, 1987), this study is the first to isolate the effects of Voice and Choice in the context of participative goal setting. The main effects of Voice and Choice on Overall Participation suggest that Voice (as an end in itself rather than as a means of personal control or gain) is as important as actual decision control when attempting to impart feeling of participation to subordinates.
Multivariate and Univariate Results

As expected, the multivariate results suggest that both Voice and Choice exert significant overall effects on the dependent variables. An examination of the univariate results, however, showed significant main effects of either Voice or Choice on only five of the twelve dependent variables including Procedural Justice, Perceived Support, Attractive of Goal Attainment, Goal Level and Task Performance. In other words, Voice and Choice factors did not exert significant main effects on seven of the twelve dependent variables including Task Understanding, Perceived Obligation, PA, NA, Strategy Quality, Goal Commitment, and TSSE. Two likely reasons exist for these nonsignificant effects.

First, the effectiveness of the *autonomy entitlement* framing carried out at the start of the experiment may have been insufficient in instilling a sense of autonomy inherent to a human resources manager position. In other words, participants may not have genuinely felt that they were entitled to exercise control over the goal setting procedure; whether assigned or jointly-set. A study that examined the perceived fairness associated with voice and choice by Earley and Lind (1987), for example, used a priming method in which he provided his participants with the following statement: “During the course of normal work activities we sometimes find that opportunities for a person to be involved in the design of his or her work may exist, but not everyone is given this chance by their supervisors. During the course of the experiment you may or may not receive such opportunities depending on your experimental condition. As you respond to the various questionnaires try to imagine yourself in an actual job situation and keep in mind any opportunities you might or might not be provided” (pp. 1151 – 1152).
In this study, participants were provided with the following statement at the start of each experiment: “Before we begin this experiment it is important for you to understand the role of a typical Human Resources Manager. HR managers are typically given the right to hire or fire employees. With respect to hiring employees, they typically have a significant amount of control over who, when, and how many employees should be hired at any given time. It is important for you to keep this in mind throughout the experiment as you discuss hiring goals with your supervisor” (see Appendix D).

The Earley and Lind priming described above makes explicit the fact that some, but not all of the participants will receive opportunities for input depending on one’s condition. The knowledge that opportunities for input will only be selectively provided depending on one’s condition is more likely to set the stage for feelings of resentful demoralization (see Cook & Campbell, 1976) than the method used in this study. With respect to the approach taken in this study, the participants are asked to infer, based on the procedure, information regarding whether or not they received sufficient input into the process.

While the majority of the participants appears to have recognized the relative degree to which they were given either Voice or Choice, the lack of a referent group (i.e., information regarding the fact that only a subset of the participants were allowed to participate) may well have given the impression that all participants were treated similarly. If so, neither the lack of participation or full participation may have led to genuine feelings of injustice or justice, respectively. Thus, a key difference between the two above priming approaches relates to information regarding the other participants (i.e., a referent group) and the way in which they were treated during the experiment.
The absence of information regarding this reference group may have mitigated genuine feelings anticipated to be associated with the two factors.

An additional possibility is that participants may not have attached sufficient significance to the performance outcome. For example, a comparison of this study and a study by Lind and his colleagues (Lind et al., 1990) reveals a crucial difference between the two; namely, the perceived relevance of the goals set by the subordinates (see Lind et al., 1990). In the study by Lind and his colleagues, subjects were told that their input (i.e., Voice) would be used to change university policy regarding how courses are scheduled. This priming is likely to have had an impact on the participants’ perception of the meaningfulness of their role in the decision making process. In the present study, a subordinate’s Voice was provided without additional information regarding whether or not it would lead to any meaningful consequences other than the implicit understanding that they would receive extra credit for participating in the study. It was believed that high performance on the task would be sufficiently ego-involving; thus, serving as its own reward (see Diefendorff & Lord, 2003; Latham et al., 1994; Erez & Arad, 1986). The limited number of main effects, however, suggests the possibility that the lack of a salient link between Voice and Choice and an observable or meaningful outcome may have weakened the impact of the participation factors on the dependent variables. The above explanations are discussed further in the limitations section of this chapter.

Notwithstanding the above, the hypotheses presented in this study hold value in empirically linking those critical cognitive processes that lead to motivation and task performance. Thus, testing of the hypotheses was carried out as planned and the summary and implications of those results presented. This summary is organized in sets
beginning first with (a) the predictors (i.e., Voice and Choice), (b) the three theorized (direct) outcomes of participation – i.e., moral, social, and cognitive, (c) the moderation hypotheses, and finally (d) the mediation hypotheses (with respect to those intervening variables) thought to be responsible for linking participation with goal commitment and task performance. Contributions of this study are presented next followed by its limitations and future research implications.
Discussion of Results

In light of the above, this study found full or partial support for only a small subset (i.e., approximately 10% or 3 of 27) of the proposed hypotheses. Despite this, the findings of this study offer critical insights into (a) participation itself as a construct; (b) its key outcomes, and (c) identify a subset of the intervening processes that may help to link participative interventions with motivation and productivity. These findings collectively offer new theoretical and practical insights into those aspects of participative interventions deemed critical for their success. Also, notwithstanding the failure of the two factors to exert main effects on the seven (of twelve) dependent variables, the significant correlations found between the outcome factors and Goal Commitment via a subset of the intervening mechanisms provide a firm foundation for future research in explaining how participation can lead to motivation and productivity. These are discussed in more detail in the following sections. Finally, as shown on Table 4.5, it is also worth noting that in addition to its relationships to the moral and social factors, Voice and Choice exerted main effects on Task Performance and Goal Level, respectively. Those who were provided an opportunity to discuss their concerns related to the task outperformed those who were not provided with such an opportunity. Choice, on the other hand, led to the setting of lower goals than those that were simply assigned 18 matches.
Voice and Choice as Participation

Based on the notion that the opportunity for input may be valued as an end in itself rather than as a means of personal control or gain (see Tyler, 1987), Voice was treated in this study as a distinct component of participation. Specifically, it was predicted that Voice would be positively related to the three outcome components that have been theorized to result from participation including the moral component assessed via Procedural Justice (hypothesis 1a), the social component assessed via Perceived Support (hypothesis 2b), and the cognitive component assessed via Task Understanding (hypothesis 3a).

In addition to the opportunity for input, per se, the actual influence or Choice given to subordinates in decision making was similarly viewed as an important component of participation that is distinct from Voice. The importance of Choice in decision making stems from the instrumental perspective of procedural justice in which the actual influence is believed to be valued for economic reasons – e.g., securing a more beneficial outcome for oneself (Thibaut & Walker, 1975). Similar to Voice, Choice was thus predicted to positively influence one’s perception of Procedural Justice (hypothesis 1b) and Perceived Support (hypothesis 2a). These processes were further predicted to occur through a series of intervening cognitive processes outlined in Figure 4.3 and ultimately leading to increased task performance via goal commitment. The next three sections summarize the findings and implications of the effects of Voice and Choice on the three outcome components of participation – i.e., moral, social, and cognitive.
Moral Component of Participation

The predictions linking participation with its moral component were only partially supported. Based on theory and past evidence, this study predicted that both Voice and Choice in goal setting would be positively related to perceptions of Procedural Justice (see hypotheses 1a and 1b, respectively). The obtained results show that while Choice in PGS positively relates to Procedural Justice, Voice does not. The positive relationship found between Choice and Procedural Justice is consistent with past research (Coch & French, 1948; Aryee et al., 2004) and theory supporting the idea that perceived control is instrumental for enhancing fairness perceptions (Lind et al., 1990; Thibaut & Walker, 1975). Put differently, subordinates who are given the chance to jointly set their performance goals tend to perceive the goal setting process to be more fair than those who are not given such an opportunity.

The finding with respect to Voice, on the other hand, contradicts earlier evidence suggesting that Voice is positively linked to Procedural Justice (Lind et al., 1990; Alexander & Ruderman, 1987). Lind and his colleagues, for example, showed that undergraduate students who were provided the opportunity to provide their input into a goal setting process without actual control over the decision outcome (i.e., noninstrumental input) viewed the process to be more fair (Lind et al., 1990). In the present study, subordinates who were provided with an opportunity to discuss the task and the goal with their supervisors did not perceived the goal setting procedure to be more fair than those from whom such an opportunity was withheld.

Given the above, the findings with respect to the moral component of participation suggest that when it comes to judging the fairness of a given procedure, the
actual influence that one is able to exert in the decision making process (i.e., Choice) may play a greater role than the simple act of expressing one’s concerns (i.e., Voice). Indeed, the overwhelming evidence in support of the former (see Brockner & Wiesenfeld, 1996) and the relatively scant evidence for the latter (Shapiro, 1993) with respect to procedural fairness are in line with the robust effect of Choice in enhancing fairness perceptions. The significance of this finding is discussed in the contributions section.

Social Component of Participation

Similar to the moral component, partial support was found for the social component of participation. Based on the theorized social implications of participation, it was predicted that both Voice and Choice in decision making would relate positively to perceptions of support from one’s supervisor, respectively (see hypotheses 2a and 2b). In other words, both Voice and Choice were viewed as socially pertinent to the extent that they satisfy fundamental psychological motives such as the desire for self-identity and the need for self-esteem (Lind & Tyler, 1988; Tyler, 1987). Similarly, the value-expressive perspective of procedural fairness proposes that giving workers the opportunity to voice their input communicates respect and consideration (Tyler, 1987). Thus, participation, operationalized as Voice and Choice was predicted to enhance perceptions of supervisor support.

The results obtained from data were reverse of that found for the moral component (i.e., Procedural Justice). Specifically, Voice positively influenced Perceived Support while Choice did not. Those who were given the opportunity to discuss the task and the performance goals viewed their supervisors to be more supportive. Those given
actual control in setting their performance goals, however, did not view their supervisors to be more supportive. The significant effect of Voice on Perceived Support indirectly supports Tyler et al.’s study in which the likelihood of endorsement of a judicial official was enhanced through the opportunity to present one’s case (Tyler et al., 1985). This finding is also consistent with Stodgill’s (1963) assertion that consideration – i.e., the degree to which a leader acts in a friendly and supportive manner, shows concern for subordinates, and looks out for his/her subordinate’s welfare – is one of two factors defining a good leader (Stodgill, 1963, as cited in Yukl, 1998). While consideration, and similarly, supportiveness, can be communicated through multiple means by a supervisor, this study suggests that one method may be through the consideration of his/her subordinates’ thoughts and concerns – e.g., regarding a given task. The data, indeed, support this perspective.

Unlike Voice, Choice in PGS was not significantly related to Perceived Support. Largely based on fairness heuristic theory (FHT) proposed by Lind and his colleagues (Lind, 1995; Lind et al., 1993), decision control (i.e., Choice) in PGS was anticipated to enhance perceptions of trust and support. FHT proposes that decision control is often used by individuals as an informational cue to allay subordinates’ anxieties of being exploited by his/her supervisor (Lind, 1995). In the present study, however, no support was found for such a notion. Those who were allowed to jointly set their performance goals were not more likely to view their supervisors as more supportive than those who were not provided with such an opportunity.

The above finding suggests that unlike the moral aspect of participation, the social benefits of participation may be acquired more effectively through the provision of
Voice, more so than Choice. In other words, at least in the context of PGS, a supervisor is more likely to be viewed as supportive to the extent that s/he actively listens to the concerns expressed by his/her subordinate. On the other hand, a supervisor is more likely to be viewed as fair and just to the extent that s/he shares decision making power with his/her subordinate. This distinction is critical to the extent that much of participation research has confounded the two outcome factors of participation (see Erez and Arad, 1986).

The importance of the above findings with respect to moral and social factors of participation is substantial. The participation literature is fraught with inconsistencies in the way in which the construct of participation has been operationalized. As described in chapter 1, the concept of participation not only varies substantially in terms of its meaning, dimension, and form (Cotton et al., 1988; Dachler & Wilpert, 1978; Locke & Schweiger, 1979; Sashkin, 1984), but researchers have often confounded the social, cognitive and motivational outcomes related to participation through the use of a common label (Earley, 1985; Erez & Arad, 1986; Latham & Yukl, 1976; Latham & Saari, 1979; Latham & Steele, 1983). To reiterate, the involvement factor has been operationalized as either a dyadic consultation between supervisor/experimenter and worker/subject (e.g., Earley, 1985; Latham & Yukl, 1976; Latham & Saari, 1979; Latham & Steele, 1983), a group discussion on the goal to be set (Locke, Winters & Latham, 1994), or a group discussion on task-relevant or task-irrelevant information (Erez & Arad, 1986); all of which may reflect each of the cognitive, social, and motivational factors to varying degree. As a result, it has been difficult for researchers to make firm conclusions regarding the precise outcomes associated with participative interventions.
This study’s findings with respect to participation’s effects on the two distinct outcome components (moral and social) suggest that while Choice or perceptions of control is likely to enhance perceptions of fairness thereby eliciting questions of morality, the Voice component is more likely to highlight the social aspect of participative interventions (i.e., by enhancing perceptions of supervisory support). As such, in addition to making a clear distinction between Voice and Choice, the above findings strongly encourage the separate examination of those outcomes associated with moral and social aspects.

**Cognitive Component of Participation**

The hypothesis related to the cognitive aspect of participation was not supported in the present study (see hypothesis 3a). Locke and Schweiger (1979) asserted that participation results in greater understanding of the task through such factors as greater goal clarity and the exchange of task-related information. Based on the information processing approach linked to participation, it was hypothesized that participation via Voice would serve to facilitate the discovery and dissemination of task-related information to subordinates, resulting in enhanced understanding of the task (Locke & Schweiger, 1979).

While past studies (Erez & Arad, 1986; Latham et al., 1994) have linked participation with task-related strategies and in turn task performance, no study has directly tied participation with task understanding. Put differently, while higher performance has been linked with the provision or generation of task-related strategies through participative interventions (Erez & Arad, 1986; Latham et al., 1994), what has
been unknown is whether the provision of Voice in the absence of explicit task-related strategies can facilitate task understanding and thereby lead to the production of high quality strategies and ultimately to higher performance. The results of the analysis in the present study suggest that the sole provision of Voice without explicit reference to specific strategy or strategies is not likely to positively influence subordinates’ task understanding.

It is important to note that the crucial link between task understanding and task-related strategies is implied here based on the assumption that the development of high quality strategies is contingent on one’s understanding of the task itself. The nonsignificant correlation between Task Understanding and Strategy Quality, however, suggests that enhanced understanding of a given task did not lead to the development of high quality strategies. Again, in referring to the meaningfulness of the performance outcome, it may be the case that participants in this study did not associate their performance with a valued outcome as was done in Lind et al.’s study (Lind et al., 1990). If so, those who better understood the task may not have been sufficiently motivated to use that knowledge to develop useful strategies towards enhancing their performance on the staffing task. This perspective is further supported by the nonsignificant correlation found between Task Understanding and actual Task Performance.

While unexpected, it should also be noted that this study was the first of its kind to examine the potential cognitive benefits of participation from a pure process standpoint. That is, unlike previous studies in which subordinates were provided with explicit task-related strategy information (e.g., Erez & Arad, 1986) or asked to develop their own strategies (e.g., Latham et al., 1994), this study simply inquired about those
task characteristics in the absence of explicit strategy-related information that could potentially be used to enhance task performance. In light of this and past findings with respect to those cognitive benefits of participative interventions, it is suggested that the simple provision of Voice in the form of task-related characteristics may be ineffective in enhancing task understanding. In other words, if one wishes to ensure that PGS is linked to task performance the information exchange between a subordinate and his/her supervisor must not only be specific to the task itself but it must also hold utility for enhancing performance – i.e., specific and effective strategy-related information.

Additional Effects of Voice and Choice

In addition to the above outcomes related to Voice and Choice two additional effects are worth mentioning. First, Voice exerted a significant main effect on Task Performance. This finding indicates that those who were provided an opportunity to discuss the task with their supervisors outperformed those who were not provided such opportunities. On the one hand, this finding may appear to support Locke’s assertion that performance benefits associated with participation is largely due to the dissemination of critical task-related information (e.g., task strategies). On the other hand, this study was intentionally designed to avoid providing participants with those critical task- and/or strategy-related information. More precisely, the experimenters were trained specifically to ask questions and to only respond in a reflective manner. Hence, no explicit information was provided to the participants with respect to how the task should be performed. It is thus unlikely that the superior performance observed in the Voice conditions stemmed from direct information exchange.
While difficult to substantiate with the obtained data, it is possible that Voice improved task performance through one or more of the factors – e.g., via improved strategies or enhanced motivation stemming from perceptions of support. Voice, however, was unrelated to Strategy Quality and Perceived Support was only significantly related to Perceived Obligation and Goal Commitment, both of which reflect motivation to do well on the task. Given the potential problems associated with Strategy Quality and Task Performance measures (see Limitations section below), it is difficult to make firm conclusions. What is clear is that those in the Voice conditions were provided with an additional opportunity to think about the task thus making task-related concerns more salient. This additional time devoted to thinking about the task was in turn significantly related to task performance. Whether this linkage can be explained through the social and/or cognitive mediating factor is a question for future research.

In addition to the significant Voice-performance relationship, those given an opportunity to jointly choose their performance goals set goals that were significantly lower than those provided in the assigned conditions (i.e., a goal of 18). While those given Choice were expected to outperform those in the assigned conditions the relationship between Goal Level and Task Performance across all conditions was not significant. This was also the case with a subset of the data consisting only of those in the Choice conditions (i.e., 2 and 4). On the other hand, using the latter subset Goal Level was significantly related to Task-specific Self-efficacy. Hence, while those who were asked to jointly set their performance goals chose goals that were significantly lower than the goal of 18 they were also more confident with respect to their ability to perform the task. The robust relationship demonstrated in the past with respect to Goal
Level and performance further suggests possible issues related to the Task Performance measure used in this study. This issue is raised in the Limitations section below.

**Moderation Hypotheses**

Among the hypotheses included in this study were two proposing moderating relationships (see hypotheses 4 and 11c). Hypothesis 4 predicted that Perceived Support would moderate the effects of Choice on Procedural Justice in such a way that the strength of the Choice-Procedural Justice relationship was predicted to be stronger when Perceived Support was high (hypothesis 4). This study, however, found no support for this hypothesis; the strength of the relationship between Choice and Procedural Justice did not change as a function of Perceived Support. Said differently, the presence of a more supportive supervisor did not necessarily strengthen the effect of Choice on Procedural Justice perceptions.

The above finding is surprising in light of the fact that Perceived Support was predicted to behave in a similar fashion with the interactional dimension of organizational justice (Colquitt et al., 2001). In chapter 1, Perceived Support was likened to interactional justice based on their interpersonal emphasis. Indeed, similar to that correlation reported by Colquitt and his colleagues (2001) between interactional justice and procedural justice ($r = .38, p < .01$), Perceived Support was significantly related to Procedural Justice ($r = .40, p < .01$). Also, given that a previous finding reported an interaction between interactional justice, procedural justice, and distributive justice dimension on retaliatory behavior (Skarlicki & Folger, 1997), a peripheral analysis was conducted to examine the interactive effects of Procedural Justice and Perceived Support.
on NA, a construct that is conceptually related to retaliatory intention. This additional analysis revealed no significant interactive effect of the two predictors on NA (β = .42, p > .05).

Given the above, one logical conclusion is that Perceived Support, in fact, is distinct from interactional justice in spite of their common linkages to Procedural Justice. This suggests that the two variables – i.e., Perceived Support and interactional justice – not only differ in terms of their antecedents but also should be viewed differently in studies linking PGS with fairness perceptions. A second conclusion is related again to the perceived relevance of the goal setting and the goal setting procedure to those participants involved in the study. It is possible that those who did not take the experiment seriously responded accordingly as described above.

The second moderation hypothesis (11c) predicting a moderating role for Goal Commitment on the effects of Goal Level on Task Performance was also not supported. As such, the strength of the Goal Level-Performance relationship did not increase as Goal Commitment increased. The lack of support for this hypothesis was, in part, due to the absence of a significant relationship between Goal Commitment and Task Performance. This is particularly unusual given the robust effect of Goal Commitment that has been shown in the past (Klein et al., 1999). Klein and his colleagues, for example, reported a mean corrected correlation of .35 between Goal Commitment and Performance for difficult goals and .20 for moderately difficulty goals. Given this robust evidence in support of the link between the two variables, the nonsignificant relationship found between Goal Commitment and Performance suggests two possibilities.
One possibility for the above is that there was insufficient variability or restriction in range in Goal Commitment. An examination of the Goal Commitment variable, however, shows that it ranged from 1.4 to 5.0 across the four conditions with a mean of 3.39 (SD=.74); suggesting that it is unlikely the restriction in range or variability that is responsible for the lack of a significant relationship between commitment and performance.

A second possibility is that the performance score, as used in this study was either contaminated by factors unrelated to actual performance or it was deficient in capturing true performance (Binning & Barrett, 1989). While difficult to speculate on the source of the contamination itself, an examination of Goal Commitment’s relationship with a subset of the remaining variables suggests that this may be a distinct possibility. For example, Goal Commitment was significantly related with Procedural Justice, Perceived Support, Task Understanding, Strategy Quality, and TSSE. On the other hand, Task Performance was significantly related to only three of the 14 variables included in the study – i.e., Practice Performance, NA, and TSSE. While its significant relationships with these three variables were as expected the fact that Task Performance was unrelated specifically to Task Understanding and Strategy Quality makes plausible the contamination of the Task Performance measure.

In light of the above, the method used to score performance was revisited and one potential source of contamination identified. According to the scoring scheme proposed by Mone and Shalley (1990), the participant (i.e., the subordinate) must select or reject job applicants by weighing a set of information related to each candidate – e.g., personality, education, experience, teamwork skills and so on. The participant must
additionally assess the fit of the candidate against the preferences of the hiring managers. One potential issue that arises with the above scoring scheme is that the weight given to each piece of information can vary by participant. In other words, two participants can differ with respect to the value or importance s/he attaches to a given candidate’s personality, education, or job-related experience. In addition, the indicated preferences of the managers are at times indirect and subtle – i.e., providing a description of the manager’s personality as opposed to a clear description of exactly what the manager is actually looking for in a candidate. While a careful examination of the managers’ preferences is likely to lead one to the correct set of candidates (i.e., the correct answer) the participant must nonetheless be mindful of the subtle nuances associated with the managers’ preferences.

Given the above, the possibility for participants to differentially weigh a given candidate’s attributes and qualifications and the ambiguities associated with a subset of the managers’ preferences may well have resulted in the contamination of the Task Performance construct. It is thus possible that the performance score reflects not pure performance per se but also, in part, the personal values participants attached to what they believe to be a good worker.

In addition to contamination, it is possible that the performance score as assessed using the method suggested by Mone and Shalley (1995) may not have been sufficient in capturing the true latent construct of task performance (i.e., deficiency). Content analysis of the reasons provided by each participant for accepting or rejecting candidates show a wide variability with respect to both quality and quantity. This suggests that some of the participants, more so than others, may have engaged in deeper processing of the
Mediation Hypotheses

A number of mediation hypotheses were proposed and tested. For the most part, these predictions were not supported. One partial mediation hypothesis was partially supported with Attractiveness of Goal Attainment partially mediating the effects of Perceived Obligation (but not Affect) on Goal Commitment (hypothesis 9a). Thus, the one’s obligation towards one’s supervisor positively affected one’s level of commitment both directly and indirectly through his/her attraction to goal attainment. Setting aside the nonsignificant main effect of Choice on these three variables, this finding suggests that one path through which participation influences Goal Commitment is through the moral component of participation (i.e., Procedural Justice). Put differently, the significant positive relationships among Procedural Justice, Perceived Obligation, Attractiveness of Goal Attainment, and Goal Commitment found in this study suggest that the linkage between the moral component of participation and Goal Commitment is partially mediated by perceptions of obligation and goal attraction.

The above finding is the first of its kind to empirically link the moral component of participation with one’s commitment to a goal while simultaneously integrating a set of intervening cognitive mechanisms. Past studies, for example, have theorized (Locke, Latham, & Erez, 1988; Hollenbeck & Klein, 1987) and demonstrated (Li & Butler, 2004; Erez, Earley, & Hulin, 1985; Renn, 1998) links between participation and goal
commitment. Participation has further been linked with procedural justice (Alge, 2001; Renn et al., 1999) and satisfaction (Roberson et al., 1999; Douthitt & Aiello, 2001). This study, however, is the first to empirically demonstrate the relevance of Perceived Obligation and Attractiveness of Goal Attainment in linking participation with Goal Commitment. The Choice component of participation, thus, appears to be instrumental in enhancing perceptions of fairness which, in turn, is likely to elicit feelings of obligation to return the favor. Moreover, one mechanism through which feelings of obligation translates to Goal Commitment is through attraction to one’s goal. Thus, collectively, these findings suggest two important mechanisms (Perceived Obligation and Attractiveness of Goal Attainment) that can help to further our understanding of the participation—Goal Commitment link.

With respect to the remaining partial mediation hypotheses, this study failed to find support (see Table 4.13). As suggested earlier, however, it is likely that the previously mentioned factors associated with the priming and importance attached to the performance outcome may have contributed to their nonsignificant results. Specifically, the ineffectiveness of the autonomy entitlement framing and the lack of value or meaning attached to task performance are likely to have contributed to weaken the predicted effects. These issues are discussed in greater detail in the section on the study’s limitations.

Study Contributions

There are several contributions made by the present study. A key contribution of this study relates to the importance of making a clear distinction between Voice and
Choice components in operationalizing participation. This study is the first to demonstrate that the construct of participation can and should be viewed as consisting of two distinct components. Traditional studies on PGS were primarily concerned with decision control with respect to one’s task goal (Erez & Arad, 1986; Latham et al., 1994; Li & Butler, 2004; Renn 1998; Roberson et al., 1999). The MANOVA results in chapter 4 show main effects of both Voice and Choice on perceptions of participation. Thus, allowing subordinates the opportunity to express their concerns regarding their job or task can be viewed as a form of participation that should be viewed as distinct from participation in the form of decision control. Generalizing this Voice component of participation to the work setting, it is likely that discussions between a supervisor and his/her subordinates on project deadlines and on foreseeable obstacles related to a given project (in the absence of actual decision control given to subordinates) will enhance perceived participation on the part of the subordinates.

The above point is critical to the extent that managers at all levels of a given organization are often unable to make provisions for decision control to all of his/her subordinates. This may be due to a number of reasons including department or organizational constraints, department-wide performance quotas, pressure from executives, as well as efficiency concerns and time constraints associated with giving decision control to all subordinates. In such instances, the provision of Voice (e.g., via departmental email) in the absence of Choice, would provide a means of imparting feelings of participation without unnecessarily alienating one’s subordinates.

A related, second contribution of this study is the differential outcomes associated with the two components of participation. Voice in PGS, unlike Choice, was
significantly and positively related to Perceived Support, a social component. On the
other hand, Choice in PGS, unlike Voice, was significantly and positively related to
perceived Procedural Justice, a moral component. While both Voice and Choice are
important for enhancing feelings of participation, the fact that they lead to different
consequences is invaluable for furthering our understanding of those mechanisms
responsible for linking participation with attitudes and productivity (see Locke &
Schweiger, 1979).

The finding that the two forms of participation lead to different consequences
addresses a key issue related to participation research in general and to PGS in particular.
With respect to the former, the participative intervention successfully carried out by Coch
and French (1948) is likely to have contained components of both Voice and Choice.
Moreover, notwithstanding the multidimensional and multi-form views (see Dachler &
Wilpert, 1978; Locke & Schweiger, 1979; Cotton et al., 1988), participative interventions
may be categorized into those that place emphasis on Voice and those that emphasize
Choice. The various participation forms summarized by Cotton and his colleagues (work
decisions, consultative, short-term, informal, employee ownership, and representative
participation), for example, may place greater emphasis on Voice, Choice, or both.
Framing the various participative interventions by assessing the degree to which they
provide opportunities for Voice and Choice may help to reduce the seemingly unlimited
number of perspectives into a more manageable set.

With respect to PGS, the above findings again help to clarify the construct of
participation itself as well as providing the first step in clarifying some of the confusion
surrounding the moral, social, cognitive and motivational outcomes related to
participation. First, the use of such generic labels as involvement (see Earley, 1985; Latham & Saari, 1979; Latham & Steele, 1983; Erez & Arad, 1986) in lieu of participation has led to substantial confusion regarding precisely what participation is. More precisely, participation has often been operationalized as a process of goal setting in a group (i.e., the selection of an appropriate goal by five to six participants, see Erez & Arad, 1986; Latham et al., 1988, Experiments 1 and 2). As described in chapter 1, however, the use of this operationalization leaves open alternative explanations – e.g., peer influence and group identification – that can be substituted for participation’s effects. In light of the findings reported in this study, future research on participation should make a clear distinction between the degrees of Voice and Choice given to participants. The provision of one without the other or the lumping of the two in a single operationalization of participation may lead to confusion over which component was actually responsible for enhancing feelings of participation.

Second, the moral and social consequences associated with Voice and Choice, respectively, suggest that participative interventions may lead to different outcomes depending on the relative emphasis placed on either Voice or Choice. While past studies have hypothesized various factors – i.e., social, moral, motivational, and cognitive – as potential outcomes related to participation, no study has explicitly assessed each of the factors presumed to be associated with participation. Choice was positively related to procedural fairness suggesting that PGS interventions can have moral implications. Unlike Choice, Voice was positively related to perceived supervisor support suggesting that PGS can have positive social consequences. The fact that Choice did not enhance Perceived Support and Voice did not enhance Procedural Justice perceptions provide a
convincing argument for separating out the moral and social outcome components of participation in future investigations. Thus, depending on the organization’s goals, it may be possible to carefully construct participative interventions to maximize its effect on either the moral and social components through the relative emphasis on Voice or Choice.

A third contribution of this study relates to the nonsignificant effect of Voice on Task Understanding. Past research has demonstrated the cognitive benefits of participation via the provision of or self-generation of task-related strategies (see Erez & Arad, 1986; Latham et al., 1994). This study examined whether Voice alone, in the absence of explicit strategy information would also lead to increased Task Understanding and thus the development of higher quality strategies. Investigation of this issue was deemed important to the extent that many participative interventions may not include the provision of explicit task-related strategy information. By separating out the cognitive component from the moral, social, and motivational outcome components and by limiting the operationalization of participation strictly to Voice and Choice, this study was able to more closely examine the potential effects of Voice on Task Understanding.

Notwithstanding the lack of support for the above prediction, the absence of a significant relationship between participation (in the form of Voice) and Task Understanding suggests that the provision of Voice alone may not guarantee improvements in Task Understanding, thus, Strategy Quality and performance. This nonsignificant finding further strengthens Locke and his colleagues’ assertion that, with respect to its cognitive benefits, participation interventions must involve the exchange of task-related information and strategies in order to improve task performance. While
acknowledging the importance of explicit task-related strategy information, the findings of this study also suggest that participation, when operationalized as Voice and Choice, can enhance perceptions of fairness and supervisory support; both of which have been shown in the past to improve motivation and task performance (see Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Latham & Saari, 1979).

The final contribution of this study relates to the partial support found for the mediating effects of Attractiveness of Goal Attainment. Specifically, Attractiveness of Goal Attainment partially mediated the effects of Perceived Obligation (but not Affect) on Goal Commitment suggesting one possible path through which participation may lead to motivation to perform. It is important to reiterate here that Choice did not exert a main effect any of the three variables – i.e., Obligation, Attractiveness, Goal Commitment. Nonetheless, the patterns of relationship found linking Choice and Procedural Justice with the three explanatory mechanisms suggest at least one path through which Procedural Justice perceptions may lead to Goal Commitment (see Figure 4.3). While a number of studies have demonstrated the positive outcomes associated with fairness perceptions (see Brockner & Wiesenfeld, 1996 for review), this study is the first to provide a set of cognitive mechanisms that may further our understanding of how participation may be linked to motivation, and ultimately, task performance.

Study Limitations and Future Research

One limitation of the present study is the uncertainty associated with whether the autonomy entitlement priming was effective. Specifically, Locke, Latham, and Erez (1988) noted that typical students in laboratory experiments tend to accept and carry out
whatever it is that the experimenter tells them to do. It was necessary, thus, to mitigate this tendency by priming participants into thinking that they do in fact have a significant amount of control over the hiring process. Towards this end, the following announcement was made to each subject prior to the start of the experiment: “Before we begin this experiment it is important for you to understand the role of a typical Human Resources Manager. HR managers are typically given the right to hire or fire employees. With respect to hiring employees, they typically have a significant amount of control over who, when, and how many employees should be hired at any given time. It is important for you to keep this in mind throughout the experiment as you discuss hiring goals with your supervisor” (see Appendix D).

While the above priming was deemed appropriate and sufficient, one possible explanation for its failure to produce the intended effect is related to its potency. On the one hand, this priming may have been effective for a small subset of the participants (i.e., in genuinely imparting a sense of entitlement rather than a superficial recognition that they were given some degree of opportunity for input), while on the other, it may have lacked the potency to influence the perceptions of the majority. This suspicion is based on informal post-experiment interviews conducted with a handful of subjects. A large majority of these participants admitted that they were not aware of the true objective of the priming. As a result, while these participants outwardly acknowledged not receiving either Voice or Choice, they did not genuinely feel that they had been justly or unjustly treated. This, in turn, may have led to the mitigation of their sense of justice or injustice expected as a result of the priming.
A stronger priming manipulation was used by Earley and Lind (1987) which contained information about the possibility of exclusion. As mentioned earlier, in a study examining the effects of voice and choice on perceptions of procedural justice and control, the authors described the possibility that, depending on the condition, the subject may or may not receive opportunities for input; thus, setting the stage for possible resentful demoralization (see Cook & Campbell, 1976). However, because this priming method made explicit the fact that they would be in one condition or another, it was deemed overly obvious and would have defeated the purpose of the study.

Specifically, the above priming method explicitly asks participants to seek out information related to their degree of participation. This study, however, was designed, in part, to examine whether participants can infer the degree to which they were able to participate in the goal setting procedure. This distinction was deemed important to the extent that the former priming procedure makes explicit the fact that they may or may not be treated unfairly. In such a case, the obvious outcome of one’s lack of participation would have been a sense of injustice (i.e., procedural unfairness). Because this study was designed to tease out the effects of participation (specifically on the four outcome components) in an impartial manner, the decision was made to utilize a more subtle priming technique.

Having described the advantage and disadvantage of the priming method used in this study, future laboratory research will need to incorporate a priming technique that falls somewhere in between the two described or use a design that obviates such priming. On the one hand, given the generally high levels of compliance seen particularly in undergraduate students (Locke et al., 1988), a stronger priming technique than the one
used in this study may be more appropriate for imparting a firm sense of entitlement and to ensure a wide range of genuine justice perceptions. Additionally, as can be inferred from Earley and Lind’s priming technique and consistent with social exchange theories of motivation (e.g., Adams, 1965), information regarding a referent group may be critical for enhancing the strength of the relationship between participation and justice perceptions. A study by van den Bos and Lind (2001), for example, showed that under some conditions, the treatment of others is as potent a consideration in justice judgments as is one's own treatment (see also van den Bob, Lind, Vermunt, & Wilke, 1997). Thus, setting aside the social and cognitive benefits of participation for the moment, one possibility for imparting a genuine sense of fair or unfair treatment may be the incorporation of information regarding the treatment of a similar other.

On the other hand, researchers must also be mindful of inadvertently linking participation with fairness perceptions at the cost of excluding social and cognitive benefits associated with participation. That is, the positive links found between Voice, participation, and perceived supervisor support in this study, suggest that in addition to fairness perceptions, participation can lead to positive social outcomes. Thus, if one’s interest is to separate out the effects of participation on each of the outcome components (moral, social, cognitive, motivational), then one must be cautious when using explicit priming manipulations that make equity-related information overly salient. Future research thus may also benefit by finding more effective (i.e., potent) means of priming participants while simultaneously minimizing the possibility of inadvertently linking participation with one or more of the outcome components.
An ideal situation would have been to conduct a quasi-experimental study in which the participants inherently expect or possess a certain degree of control. Such a situation would have obviated the need to implement such priming procedures and would have enhanced generalizability of the findings. Future research should benefit from designs that take advantage of situations in which participants inherently possess some degree of control over decision making or utilize priming methods with sufficient degree of potency that will result in substantial levels of autonomy entitlement.

The second limitation of this study is related to the above in that the outcome associated with task performance thus the significance or valence attached to the goal setting procedure may not have been sufficient to the participants. It is generally accepted that the greater the importance attached to a given outcome, the greater the felt injustice associated with an unjust outcome (Rawls, 1971). In line with Vroom’s notion of valence (i.e., the desirability or value attached to an outcome), the word importance as used here may be derived from any number of sources including monetary rewards, self-esteem (e.g., performance on a IQ test or personality measure), promotion and/or gaining respect and admiration from one’s peers (i.e., being a valued employee or coworker). In the present study, all participants were informed at the start of each experiment that they would receive two extra credit points as long as they cooperated with the experimenter and regardless of whether they completed the experiment.

On the one hand, the task itself was viewed to be sufficiently rewarding given its practical nature – e.g., tasks that a participant can see as being relevant to real world work settings. On the other hand, it can also be argued that the task was artificial in that typical selection procedures involve actual interviews and deliberations over a longer period of
time (i.e., longer than 30 minutes). The result of the latter may have been that participants did not take the task seriously. If a large majority of the participants, for example, placed greater importance on the two extra-credit points that they were promised and less importance on their task performance, the goal setting procedure, regardless of the condition, may have been viewed with some degree of indifference.

Given the above, future research should incorporate tasks that are sufficiently meaningful to its participants. As mentioned, a number of possibilities exist with respect to enhancing the probability that the outcome performance would hold meaning. These can include the use of personality tests, intelligence tests, performance on an exam and/or even simulated work samples in which the outcome would have implications for the participants’ self-esteem or ego. These may be particularly effective given that people generally show a tendency to use of procedural fairness information to make self-attributions for ego-involving outcomes (see Brockner, Heuer, et al., 2003).

The first two were considered prior to this study’s design but were not used in order to avoid the possibility of participants experiencing extreme distress. The latter two were deemed impractical due to logistical reasons. The HR Staffing task was thought to be sufficient in modeling a high fidelity job simulation in which participants would be motivated to do well (see Mone & Shalley, 1995; Diefendorf & Lord, 2003). The results, however, suggest that perhaps a more ego-related task or the use of monetary incentives may have been more effective in instilling genuine feelings of fairness and unfairness associated with the goal setting procedure.

The third potential limitation of this study relates to the method used to provide Voice to participants. Specifically, in the Voice conditions (i.e., 3 and 4), supervisors
(i.e., experimenters) were instructed to restrict their verbal interaction with the HR managers (i.e., participants) by simply asking pre-determined questions related to the task. While this technique was necessary in order to isolate the effects of Voice on two of the three proximal factors of interest (i.e., Social and Cognitive), it may have also inflated the perceived superficiality of the experimental session. That is, typical discussions (i.e., participation) that take place between a supervisor and his/her subordinate are likely to include suggestions as well as objections by the supervisor; thus, reflecting more of a 2-way dialogue rather than a sterile ask a question, wait for a response, ask the next question session. It is also possible that the participants possessed insufficient task knowledge at the time of the Voice manipulation to fully solidify their strategies towards enhancing their performance on the upcoming task. Notwithstanding this potential limitation, the significant main effect of Voice on Task Performance (see Table 4.9) further affirms the value of the participation-productivity link via non-cognitive factors.

The fourth limitation of this study relates to the methods used to assess Strategy Quality and Task Performance. Extensive efforts were made to ensure the gathering of a comprehensive set of strategies with reliable quality ratings. These include (a) the use of a pilot study to gather a comprehensive set of strategies that can potentially be used for performing the HR Staffing task; (b) the use of graduate students to assess the distinctiveness of each strategy; and (c) the implementation of a validation strategy using an independent sample. Nonetheless, this study’s reliance on the participants’ self report leaves open the possibility that the obtained strategies may be less reliable than anticipated. More specifically, there are several unanswered questions regarding strategy
use including (a) the degree to which one strategy was used more than the others; (b) the frequency with which the participant changed strategies during the 30-minute trial; and (c) the degree of accuracy in the number and types of strategies reported.

First, it is difficult to ascertain the extent to which each of the strategies reported by the participants was used to perform the task. It is likely that one strategy was utilized more than the rest depending on various factors including the candidate’s profile, the salience of a particular strategy, and the preference specified by the manager. For those same reasons, it is also difficult to infer how frequently each of the strategies reported were utilized to perform the task. For some, a single strategy may have sufficed in selecting the appropriate candidate. For others, multiple strategies may have been attempted prior to settling on a single strategy. Finally, the accuracy of the reported number and types of strategies may have introduced errors (random and/or systematic) in reporting. In other words, the inherent fallibility associated with human memory (Loftus, 2001), impression management (Scandell & Wlazelek, 1999), as well as individual differences in recognition ability may all have contributed to error variance.

Alternative techniques were examined and considered in the initial phases of the study’s design. These include the direct observation method previously used for assessing assembly tasks (Audia, Kristof-Brown, Brown, & Locke, 1996), the use of videotapes (Deshon, 1993), and online computer tracking of specific steps taken during task performance (Chesney & Locke, 1991). While useful for tasks that can easily be observed given its heavy reliance on cognitive processes these strategy assessment techniques were deemed inappropriate for the HR Staffing task. There are additional issues related to the above methods, however. The direct observation method (either by
the supervisor or via video), for example, may unduly influence the participant’s motivation for the task. Finally, the use of such techniques as the online computer tracking would have required specialized software associated with the task which was nonexistent.

In addition to the above, the verbal protocol method used by Siegler (1989) was considered in which participants are asked to think aloud their cognitions including the formulation and use of specific strategies. This is carried out in real time with an observer or a video-tape recording the thought processes of the performer. While this method also suffers from potential contamination due to reasons stated above (i.e., increased motivation due to the presence of an observer), with slight modifications it may be feasible for the HR Staffing task. For example, it may be possible to have participants verbalize their strategies into a microphone rather than with a videotape. Such method might provide a less intrusive means of obtaining strategy-related information. Given the above, future research will need to carefully consider (a) the type of task in terms of its fidelity and valence; (b) the assessibility of task-related strategies in real time; and (c) the possibility of unintended contamination.

Related to the above is the way in which Task Performance was assessed. As mentioned, it is plausible that the performance measure used in this study may have been contaminated by factors other than true performance. It is also plausible that the performance construct as operationalized in this study was deficient in capturing true performance. It is conceivable, for example, that individual differences in the value attached to candidate attributes may have contaminated the performance construct. In other words, the importance given to various pieces of information related to each
candidate – e.g., personality, education, experience, teamwork skills – may have varied across participants. Additionally, the subtleness with which the managers expressed their preferences may have further introduced error variance in the Task Performance measure.

As alluded to earlier, it is possible that the performance measure as was used in this study and elsewhere (see Mone & Shalley, 1995; Diefendorff & Lord, 2003) suffers from deficiency (Binning & Barrett, 1989). Given that some participants are likely to have engaged in deeper processing of the information leading up to their decision choice (i.e., accept or reject), an additional analysis and consideration of the predictive utility of the rationale may provide additional insight into the creation of a more comprehensive performance construct.

In anticipation of the above, the consistency of the responses were initially examined with Pilot A (N=28) and also with the five undergraduate research assistants. However, no unusual patterns emerged – e.g., one or more incorrect options consistently being chosen or vise-versa. One unlikely but possible explanation for the contamination may lie in the difference in the ages of the participants in this study and those who participated in Pilot A. The average age of the sample used in this study was 18.89 (SD=1.53) while those in Pilot A was 22.2 (SD=1.98). If the former group of participants were less careful in reading the preferences of the managers (thus, less likely to accurately infer the preferences of the managers), it may have resulted in severe contamination of their performance scores.

Given the above, it may be necessary in future research to (a) carefully consider the age group of the participants; (b) consider the possibility of reducing the criteria used to select candidates – e.g., to one or two; (c) clarify manager’s preferences by making
their concerns more explicit; and (d) by utilizing an covariate measure to control for the participants’ value attached to those selection criteria (e.g., education, personality, or intelligence).

In addition the above limitations, the short time span associated with the experiment and the near-simultaneous method used to obtain the data preclude predictions related to longer-term effects of such goal setting procedures as utilized in this study. While the cognitive benefits of PGS (i.e., task understanding and strategy quality) may exhibit some degree of consistency over time, participation’s effect on social and moral components (i.e., Perceived Support and Procedural Justice) may gradually decline (or possibly increase) over time as individuals become habituated to or with a given procedure.

While uncertain, the brevity of the experiment itself may also have affected the NA dimension of the PANAS measure (Watson et al., 1988). As discussed in chapter 4, three of the ten NA items contributed little to the general NA factor. These items, representing scared, nervous, and afraid affective states may behave differently under conditions where participation occurs (or does not occur) over an extended period of time. In such conditions, depending on such factors as the (a) subordinate’s understanding of the typical decision making process, (b) subordinate’s trust towards his/her supervisor, and (c) importance of the task and its outcome, the subordinate may indeed experience feelings of fear and nervousness. Thus, while difficult to make firm conclusions, the stability of the 10-item NA factor may be subject to fluctuations stemming from experimental duration. This issue may be better addressed through a longitudinal study that implements the experimental treatment over a longer period of
time (e.g., six months or the duration of a given project). Finally, given the atypical finding obtained in this study with respect to the NA dimension, caution should be taken before these results are generalized to other settings.

The final limitation of the study relates to the generalizability of the findings. Several steps were taken to maintain the integrity of the present study including (a) a thorough review of the literature on PGS, (b) a rigorous evaluation of the theoretical and empirical evidence in support of the proposed hypotheses, and (c) the use of an experimental procedure to maximize internal validity of the proposed links. It should be noted that findings derived from the utilization of a convenience sample (i.e., student population) conducted in a laboratory setting must be interpreted with caution when generalizing to real organizations with real employees. Nonetheless, the model displaying the interrelationships among the variables investigated in this study (see Figure 4.3) provide a useful framework from which to view the processes linking participation with productivity.

Conclusion

This study addressed several important questions related to participative goal setting including (a) whether participation can be conceptualized as consisting of both Voice and Choice; (b) whether these distinct components of participation lead to different outcomes, and (c) whether various sets of intervening mechanisms can be used to further our understanding of the link between participation, motivation, and productivity.

A systematic administration of the experiment on 167 participants revealed that (a) participation can indeed be operationalized as consisting of both Voice and Choice;
(b) the two components of participation are associated with different outcomes – i.e., moral and social; (c) the simple provision of Voice is unlikely to lead to enhanced understanding of a given task; (d) the provision of Voice resulted in higher performance; (e) the provision of Choice lead to the setting of lower goals than the assigned goal (i.e., 18) when Choice was not provided; and (f) the link between participation and motivation (i.e., Goal Commitment) may potentially be mediated by such intervening mechanisms as Perceived Obligation to one’s supervisor and Attractiveness of Goal Attainment. These findings collectively further our understanding of participation in general and PGS in particular; thus, guiding future construction of more effective participative interventions.
LIST OF REFERENCES


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APPENDIX A

RECRUITMENT SCRIPT POSTED VIA RESEARCH EXPERIENCE PROGRAM
Hello. My name is Steve Jeong and I am a graduate student in Industrial and Organizational Psychology here at OSU. I am currently working on my dissertation with Professor Howard J. Klein of the Department of Management and Human Resources and the Department of Psychology. We would like your assistance in examining human motivation by volunteering to participate in a research study. The study is expected to last approximately 2 hours for which you will receive 2 hours of REP credit.

This study involves you acting as a human resource manager in a simulated high-tech company. As a manager you will be asked to review a set of applicants and to make various hiring-related decisions. You will also be asked to complete two questionnaires assessing your attitudes, intentions, and reactions towards the task and the study.

Your participation is completely voluntary and you may terminate your participation at any time without penalty. Your responses will be kept completely confidential. To protect your privacy, no information that could identify you (e.g., your name) will be collected during the study. Your name will only be used for sign-up purposes and for awarding you REP credit. Once you have received credit for participating all identifying information will be permanently deleted from the database and any documents linking you to this study will be destroyed.

To summarize, the study will last approximately 2 hours with 2 hours of REP credit awarded. In addition, through your participation you may also gain valuable experience related to decision making simulations and become more familiar with psychological research. We sincerely hope that you can help us extend our knowledge of human motivation by volunteering your time.

If you have any questions at any time during the quarter please call Steve Jeong at (614) 571-6722 or email me at Jeong.36@osu.edu.

To sign-up, please simply select the time and date that is most convenient to you. Please remember to allow approximately 2 hours for the study.

In closing, let me repeat that your participation is strictly voluntary, but I hope that you will be interested in helping us out with this project. I thank you for your time.
APPENDIX B

CONSENT FORM
The Ohio State University Consent to Participation in Research

Protocol title: Participation and Goal Setting

Protocol number:

Principal Investigator: Howard J. Klein, Ph.D.

I consent to my participation in research being conducted by Howard J. Klein, Ph.D. of The Ohio State University and/or his/her assistants and associates.

The investigator has explained the purpose of the study, the procedures that will be followed, and the amount of time it will take. I understand the possible risks and benefits, if any, of my participation. I know that I can choose not to participate without penalty to me. If I agree to participate, I can withdraw from the study at any time, and there will be no penalty.

I have had a chance to ask questions and to obtain answers to my questions. I can contact Steve Jeong at (614) 571-6722 or Jeong.36@osu.edu if I have any additional questions about this research. For questions about my rights as a participant or to discuss other study-related concerns or complaints with someone who is not part of the research team, I may contact the Office of Responsible Research Practices at (614) 688-4792.

I.A.A.1.1.1.1.1.1 Participant
I have read this document and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this consent form. I will be given a copy of this signed document.

Printed name of subject __________________________________________  Signature of subject ___________________________ AM/PM
Date and time ____________________________________________________

Investigator/Research Staff
I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A signed copy of this consent form has been given to the participant or his/her representative.

Printed name of person obtaining consent ______________________________ Signature of person obtaining consent ___________________________ AM/PM
Date and time ____________________________________________________
APPENDIX C

SCRIPT FOR PILOT B
I. INTRODUCTION

ANNOUNCE TO PARTICIPANT: Thank you for agreeing to participate in this study. My name is Stephen Jeong a co-investigator to the principle investigator of this study, Dr. Howard Klein from the Departments of Management and Human Resources and Psychology.

Please take one packet (handout packet) of information and take a seat here. We need to first get your consent for participation.

II. STUDY INTRODUCTION / CONSENT SCRIPT

ANNOUNCE TO PARTICIPANT:

This study in which you are about to participate involves an investigation into the various strategies that maybe used to improve performance on a Human Resource Staffing task. As the name implies, the Human Resource Staffing task involves you selecting from a pool of applicants the most qualified candidates for the positions that are available. We are interested in seeing which strategy or strategies lead to the highest performance. Before I explain the details of the task I would like to emphasize several things regarding this study.

First, your participation is voluntary; you are free to quit the experiment at any time without penalty. Second, in order to investigate the effectiveness of a particular strategy, you will perform three separate trials of the same task. The first will be a 15-minute practice trial to familiarize you with the task. The second will be a 30-minute Main Trial 1 in which you will use an assigned strategy to perform the task. The final trial (or Main Trial 2) is identical to Main Trial 2, except you will be asked to use a different strategy. Finally, we expect this experiment to take approximately 2 hours for which you will be awarded 2 hours of REP credit toward your course grade.

While your names were collected in order to schedule the study session, NO NAMES or other identifying information will be recorded during this session. This study does not require you to divulge any information that is sensitive or that could be harmful to you in any way if revealed. Nonetheless, to protect your privacy, once you have received REP credit for your participation, any information linking you to this study will be destroyed. Any questions so far?

If there are no questions, please take out the form marked “The Ohio State University Consent to Participation in Research” and read it over carefully before giving your consent by signing at the bottom. The second copy is yours to keep.
ACTION: Once the student signs the copy, collect Consent Form.

III. GENERAL BACKGROUND OF TASK & INSTRUCTIONS

ANNOUNCE TO PARTICIPANT: Today you will be working three separate trials of a task known as the Human Resource Staffing task in which you will be asked to hire or reject various applicants for various positions in a fictitious company. Specifically, you will begin with a 15-minute practice trial followed by two 30-minute trials of the Main Trial. Please take out the form marked “Practice Trial” and for the next few minutes read the directions given on the first two pages as carefully as you can.

NOTE: Give 5 minutes before recapping.

ANNOUNCE TO PARTICIPANT: OK, Are you pretty clear on what the task entails? Let’s briefly recap before starting the task.

First, for the next 15 minutes you'll work on a practice version of the task in which you will fill FOUR positions in the Human Resource Department. Specifically, you'll hire TWO individuals for the STAFFING division of HR and TWO individuals for the COMPENSATION division of HR. Your task will be to decide who should be hired for each position, based on what you see as the BEST MATCH between the applicants' unique qualifications and the hiring preferences of the managers. For those whom you believe should not be hired, you should indicate it as such. This means that there should be 4 “accepted” candidates and 5 “rejected” candidates. Does that make sense?

Second, in making your hiring decisions you will refer to three main pieces of information: (1) the candidate descriptions, (2) the manager descriptions, and (3) the salary range information.

Third, if you reject a candidate, you need to indicate that in the “accept/reject” box next to the candidate’s name and provide your justification for your decision for it to be counted towards your overall performance score. On the other hand, if you decide to “accept” a candidate, you will not only write “accept” in that same box but you will also give your best estimate of (a) his/her starting salary (b) the manager that you will place him/her with, and (c) your justification for your decision.

Fourth, let me remind you that this is a practice task so focus on learning and familiarizing yourself with the task.

Fifth, even though this practice trial is for learning, you might still want to carefully examine the “Scoring” procedure so that you understand what we mean by a High Quality Match.

SCORING: Your score will be based on the total NUMBER of Accept AND Reject decisions. That is, you can receive a perfect score of 9 matches if you are able to make 4 High Quality Accept Matches and 5 High Quality Reject Matches. Remember that both
Accept and Reject decisions count as long as they are appropriate. On the other hand, if you reject a highly qualified candidate OR accept a highly unqualified candidate, they will not be counted. Do you have any questions for me at this point? If not, then, I will give you 15 minutes to practice. Feel free to begin when you’re ready. I will be back when your 15 minutes is up.

III. BEGIN PRACTICE TRIAL: (Time: 15 minutes)

ANNOUNCE: OK, it has been 15 minutes; please stop working.

ANNOUNCE: To give you an idea of how you did, I will read off the correct decisions. Please give yourself 1-point for each correct Accept or Reject decision by writing “1” on the left side of the candidate’s name in the Decision Information Sheet. I will only read who should have been hired and who should have been rejected without the specific match information (i.e., which manager the candidate should have been placed with).

ANNOUNCE: The following candidates should have been hired: Henry Ashland, Pati Gonzalez, Lind Elseworth, and Franklin Whitney. If you ACCEPTED all four of these individuals, you should give yourself FOUR points. The following candidates should have been rejected: Susan Griffin, Steven Landon, Jill Chesler, William Baker, and James Carlisle. If you REJECTED all five of these individuals, you should give yourself FIVE points. Once you tally the total number of points, please write this number on top of the Decision Information Sheet and circle that number.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Candidate</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct ACCEPT decisions</td>
<td>Henry Ashland</td>
<td>Jennifer Osborne</td>
</tr>
<tr>
<td></td>
<td>Pati Gonzalez</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Linda Elseworth</td>
<td>Ryan Moreland</td>
</tr>
<tr>
<td></td>
<td>Franklin Whitney</td>
<td></td>
</tr>
<tr>
<td>Correct REJECT decisions</td>
<td>Susan Griffin</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Steven Landon</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Jill Chesler</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>William Baker</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>James Carlisle</td>
<td>N/A</td>
</tr>
</tbody>
</table>

V. MAIN TRIAL: STRATEGY DEVELOPMENT (Time: 30 minutes)

ANNOUNCE: OK, now that you have familiarized yourself with the task, let’s go on to the first Main Trial. The next task is substantially longer with more candidates and managers from different departments. Go ahead take out the packet labeled “Main Trial,” take out the Decision Information Sheet, and refer to the Main Trial Instructions. Take a minute to read through the first page so you can see what I mean. NOTE: Give a minute before continuing.
The first Main Trial will last for 30 minutes and has a total of 46 candidates to select from and 23 open entry-level management positions across 8 different departments. Since there are 8 departments you will have 8 manager descriptions (1 for each department/division). Refer to Table 1 for the number of open positions and salary information.

Any questions so far? Now, I will pass out the specific strategy that I’d like you to use to perform the task. Please read it over and raise your hand if you’re not sure about your strategy.

If you don’t have any questions, I will leave you for 30 minutes to work on the task. Before I do, please remember a couple of things: First, write ONLY in the Decision Information Sheet as the other materials will be re-used. Second, use ONLY the particular strategy that you have been assigned rather than coming up with your own strategy. This exercise is not to see whether you can outperform the others. Rather it is designed to see which strategy yields the best performance. For this reason, it is critical that you use ONLY the strategy that you are assigned.
APPENDIX D

SCRIPT FOR MAIN STUDY
IV. INTRODUCTION

ANNOUNCE TO PARTICIPANT: Thank you for agreeing to participate in this experiment. My name is [Your Name, a Research Assistant] OR [Steve Jeong, a co-investigator] to the principle investigator of this study, Dr. Howard Klein of the Departments of Management and Human Resources and Psychology. Please take this binder and take a seat here. We need to first get your consent for participation.

V. STUDY INTRODUCTION / CONSENT SCRIPT

ANNOUNCE TO PARTICIPANT: This study in which you are about to participate involves an investigation into goal setting procedures and task performance. To examine the various effects of goal setting, you will be participating in a simulation. This simulation involves you, the participant, playing the role of a Human Resource manager of a company in-charge of hiring or rejecting job applicants. In this simulation, I will act as your supervisor. Before I explain the details of the task I would like to emphasize several things regarding this experiment.

First, your participation is voluntary; you are free to quit the experiment at any time without penalty. Second, this experiment will involve you performing three separate trials of the same task. The first trial will last for 15 minutes and will just be for practice. The other two trials, referred to as Main Trial 1 and Main Trial 2 will each last 30 minutes. In addition to performing those three trials, you will be asked to fill-out a short questionnaire between each trial. Finally, we expect this experiment to take approximately 2 hours for which you will be awarded 2 hours of REP credit toward your course grade.

While your names were collected in order to schedule the study session, NO NAMES or other identifying information will be recorded during this session. This study does not require you to divulge any information that is sensitive or that could be harmful to you in any way if revealed. Nonetheless, to protect your privacy, once you have received REP credit for your participation, any documents linking you to this study will be destroyed. Any questions so far?

If there are no questions, please take out the form marked “The Ohio State University Consent to Participation in Research” and read it over carefully before giving your consent by signing at the bottom. The second copy is yours to keep.

ACTION: Once the student signs the copy, collect Consent Form. Note: Keep all forms related to the experiment together and in the order presented.
III. GENERAL BACKGROUND OF TASK & INSTRUCTIONS

ANNOUNCE TO PARTICIPANT: Before we begin this experiment it is important for you to understand the role of a typical Human Resources Manager. HR managers are typically given the right to hire or fire employees. With respect to hiring employees, they typically have a significant amount of control over who, when, and how many employees should be hired at any given time. It is important for you to keep this in mind throughout the experiment as you discuss hiring goals with your supervisor. Does that make sense? OK, then, let’s proceed with the study.

ANNOUNCE TO PARTICIPANT: Today you will be working on a human resources staffing task in which I will play the role of a supervisor and you will play the role of a human resources manager. Your job will be to select individuals for various positions in a fictitious organization. Please turn to the tab marked “Practice Trial” and for the next few minutes read the directions given on the first two pages as carefully as you can. NOTE: Give 5 minutes before recapping.

ANNOUNCE TO PARTICIPANT: Are you pretty clear on what the task entails? OK, then let’s briefly recap before starting the task.

First, for the next 15 minutes you'll work on a practice version of the task in which you will fill FOUR positions in the Human Resource Department. Specifically, you'll hire TWO individuals for the STAFFING division of HR and TWO individuals for the COMPENSATION division of HR. Your task will be to decide who should be hired for each position, based on what you see as the BEST MATCH between the applicants' unique qualifications and the hiring preferences of the managers. For those whom you believe should not be hired, you should indicate it as such. This means that there should be 4 “accepted” candidates and 5 “rejected” candidates. Does that make sense?

Second, in making your hiring decisions you will refer to three main pieces of information: (1) the candidate descriptions, (2) the manager descriptions, and (3) the salary range information.

Third, if you reject a candidate, you need to indicate that in the “accept/reject” box next to the candidate’s name and provide your justification for your decision for it to be counted towards your overall performance score. On the other hand, if you decide to “accept” a candidate, you will not only write “accept” in that same box but you will also give your best estimate of (a) his/her starting salary (b) the manager that you will place him/her with, and (c) your justification for your decision.

Fourth, let me remind you that this is a practice task so focus on learning and familiarizing yourself with the task.

Fifth, even though this practice trial is for learning, you might still want to carefully examine the “Scoring” procedure so that you understand what we mean by a High Quality Match.
SCORING: Your score will be based on the total NUMBER of Accept AND Reject decisions. That is, you can receive a perfect score of 9 matches if you are able to make 4 High Quality Accept Matches and 5 High Quality Reject Matches. Remember that both Accept and Reject decisions count as long as they are appropriate. On the other hand, if you reject a highly qualified candidate OR accept a highly unqualified candidate, they will not be counted. Do you have any questions for me at this point? If not, then, I will give you 15 minutes to practice. Feel free to begin when you’re ready. I will be back when your 15 minutes is up.

VI. BEGIN PRACTICE TRIAL: (Time: 15 minutes)

ANNOUNCE: OK, it has been 15 minutes; please stop working.

ACTION: Collect all materials related to the Practice Trial. Check the key table shown below to calculate the number of “correct” accept & reject matches.

ANNOUNCE: To give you an idea of how you did, let me calculate your score on the Practice Trial.

ACTION: Go through the subject’s Decision Information Sheet and calculate the number of matches (both Accept & Reject decisions) using the key below. Announce ONLY the number of correct matches (combined Accept & Reject) to the subject and write this number down on the TOP RIGHT-HANDEL corner of the subject’s Decision Information Sheet. Incorrect Accept/Reject decisions or those left blank should not be counted as a High Quality Match. Do not share specific match information with the subject – e.g., Henry should be placed with Jennifer etc.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Candidate</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct ACCEPT decisions</td>
<td>Henry Ashland</td>
<td>Jennifer Osborne</td>
</tr>
<tr>
<td></td>
<td>Pati Gonzalez</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Linda Elseworth</td>
<td>Ryan Moreland</td>
</tr>
<tr>
<td></td>
<td>Franklin Whitney</td>
<td></td>
</tr>
<tr>
<td>Correct REJECT decisions</td>
<td>Susan Griffin</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Steven Landon</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Jill Chesler</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>William Baker</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>James Carlisle</td>
<td>N/A</td>
</tr>
</tbody>
</table>

ANNOUNCE: Your score on the practice trial is _____ out of 9 matches.

V. MAIN TRIAL: (Time: 30 minutes)

ANNOUNCE: OK, now that you have familiarized yourself with the task, let’s go on to the first Main Trial. The next task is substantially longer with more candidates and managers from different departments. Go ahead and turn the tab marked “Main Trial 1”
and take out the Decision Information Sheet and refer to the Main Trial Instructions. Take a minute to read through the first page so you can see what I mean. **NOTE: Give a minute before continuing.**

The first Main Trial will last for 30 minutes and has a total of **46** candidates to select from and **23** open entry-level management positions across **8** different departments. Since there are 8 departments you will have **8** manager descriptions (1 for each department/division). Refer to **Table 1** for the number of open positions and salary information.

Any questions so far? Given that there are 23 open positions for you to fill from a pool of 46 candidates I’d like you to have a goal in mind for this 30 minute trial, a specific level of performance that you will be trying to achieve.

**VI. GOAL SETTING MANIPULATION**

**Goal Condition Selection:**

**NOTE TO RESEARCHER:** To find out which one of the four conditions the subject belongs to, refer to the randomly determined goal condition (e.g., 1 – 4) noted next to the subject name on the “Subject Scheduling List.”

<table>
<thead>
<tr>
<th>Condition</th>
<th>Instructions (Note: After a question listen to response attentively)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Based on past studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches. The company has established performance standards it wants met for the hiring of new employees and, based on those standards, your goal is to make 18 High Quality Matches. Keep in mind that this is a difficult, but an obtainable goal.</td>
</tr>
<tr>
<td>2</td>
<td>Based on past studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches. The company has established performance standards it wants met for the hiring of new employees. Those standards are indicated on this form titled &quot;Goal Selection Sheet.&quot; Review those performance standards and note that there is some leeway in those standards. Rather than me selecting a goal for you, I’d like you to choose a goal for yourself. From the range of acceptable performance levels on that sheet, choose the goal that you want to try to achieve on the first 30-minute Main Trial. Keep in mind that these are difficult goals but they are obtainable.</td>
</tr>
</tbody>
</table>
Based on past studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches. Before determining what your goal should be for the next trial, however, I am interested in what you think, so I'd like to ask you a few questions.

Q1: What aspect of the task did you find yourself having trouble with?
Q2: What did you find worked well for you when you were performing the task?
Q3: What have you learned so far about the task that you can use to perform better?
Q4: Can you think of ways to reach a higher performance level?
Q5: What do you think is an appropriate goal for you to try for on this task?
Q6: Why do you think this is an appropriate goal for you?

Thank you for your input. The company has established performance standards it wants met for the hiring of new employees and, based on those standards, your goal is to make 18 High Quality Matches. Keep in mind that this is a difficult, but an obtainable goal.

Based on past studies using this task, typical scores range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches. Before determining what your goal should be for the next trial, however, I am interested in what you think, so I'd like to ask you a few questions.

Q1: What aspect of the task did you find yourself having trouble with?
Q2: What did you find worked well for you when you were performing the task?
Q3: What have you learned so far about the task that you can use to perform better?
Q4: Can you think of ways to reach a higher performance level?
Q5: What do you think is an appropriate goal for you to try for on this task?
Q6: Why do you think this is an appropriate goal for you?

Thank you for your input. The company has established performance standards it wants met for the hiring of new employees. Those standards are indicated on this form titled "Goal Selection Sheet." Review those performance standards and note that there is some leeway in those standards. Rather than me selecting a goal for you, I'd like you to choose a goal for yourself. From the range of acceptable performance levels on that sheet, choose the goal that you want to try to achieve on the first 30-minute Main Trial. Keep in mind that these are difficult goals but they are obtainable.

ANNOUNCE:

For Conditions 1 & 3 ONLY: OK, now that you know what goal level you will be trying to achieve on the next trial….

For Conditions 2 & 4 ONLY: OK, you chose a goal of _____ (read the goal that the subject chose) as the one you will try to achieve on the next trial.

Let’s now have you fill-out a brief questionnaire before getting started on the task. Before you fill-out the questionnaire, I’d like you to read the directions very carefully and answer them as honestly as you can. Remember, your name is not attached to the questionnaire.
VII. QUESTIONNAIRE 1

ACTION: Handout Questionnaire 1 and collect when he/she finishes.

ANNOUNCE: OK, I will now leave the room so that you can freely work on the task without distractions. Before I do that, do you have any last minute questions? I will be back in 30 minutes; go ahead and begin when ready.

UPON RETURN:
ACTION: Collect the Decision Information Sheets related to the Main Trial.

ANNOUNCE: Now, you just have one final trial left. But before we get started on the final trial, I’d like you to fill out another short questionnaire. This questionnaire is similar to the first and asks about your attitude towards the task.

VIII. QUESTIONNAIRE 2

ANNOUNCE:

NOTE: For Conditions 1 & 3 ONLY: For this questionnaire, when asked about your performance goal, use the same goal that you were assigned.

NOTE: For Conditions 2 & 4 ONLY: For this questionnaire, when asked about your performance goal, use the same goal that you chose.

ANNOUNCE: I will be back in 10 minutes to collect the questionnaire.

ACTION: Handout Questionnaire 2 and leave the room for 10 minutes.

IX. UPON RETURN

• NOTE: Once subjects finish filling out the questionnaires, collect the questionnaires and handout the Debriefing. Explain at this time that the experiment is over and that students will not be required to do the third trial (see below).

ANNOUNCE: Take a minute to review the debriefing. It will explain the purpose of the study as well as the reason why you won’t be performing the third trial. As you’re reading through it, let me know if I can clarify anything for you.

ANNOUNCE: Does that make sense? Do you have any questions for me?

X. HANDOUT DEBRIEFING – Solicit questions related to the study.

EXPLAIN IN YOUR OWN WORDS: Emphasize to the subject that it is critical that he/she not reveal the purpose of the study and the minor deception used to his/her friends who may potentially participate in the experiment. This is because their knowledge of that fact can severely affect the validity of the obtained data.

FINAL STEP: Solicit questions related to the study and thank the participant.
APPENDIX E

MATERIALS RELATED TO THE PRACTICE TRIAL
Company Profile

The name of the company you work for is Foreman, Anderson, and Selznick (FAS). FAS is a large computer company headquartered in Charlotte, North Carolina. They employ approximately 100,000 people in various facilities across the country. FAS is going to be opening a new facility in Phoenix, which is expected to staff approximately 6,000 employees.

Task Description

You are the Staffing Manager for FAS’s Phoenix plant. Your primary responsibility is to hire a number of people to fill positions in various departments. Today you will be focusing on filling the entry-level management positions with qualified individuals.

The company's approach to recruiting applicants has been to widely advertise the positions in newspapers. The advertisements specified the qualifications desired for each position and stated that all applicants must come into the HR office to fill out an application and have a screening interview. The screening interview is meant to provide you with more qualitative information on each applicant than you would have with just a written application (e.g., personality, interpersonal skills, appearance, etc.). Both sources of information are combined into an overall summary description of each applicant for you to review. You'll also review descriptions of the manager from each department and their preferences for hiring.

At this point in the hiring process, all applications have been processed and individuals who do not meet the minimum qualifications for each job have been removed from further consideration. Thus, the applicants you will consider today have at least the minimum qualifications specified in the newspaper advertisements. Your task is to decide which applicant provides the BEST MATCH with the managers from each department. Thus, you want to select individuals based on how well they meet the preferences of the managers from each department.

Task Instructions

In order to get familiarized with the task, for the next 15 minutes you'll work on a practice version of the task in which you will fill FOUR positions in the Human Resource Department. More specifically, you'll hire TWO individuals for the STAFFING division of HR and TWO individuals for the COMPENSATION division of HR. To do this you'll read through descriptions of the applicants and descriptions of the hiring preferences of the managers from each division. Again, your task is to decide who should be hired for each position, based on what you see as the BEST MATCH between the applicants' unique qualifications and the hiring preferences of the managers. You should focus on making high quality decisions and avoid accepting or rejecting someone without
carefully thinking through the decision. Hiring the wrong person can prove costly in the long run, as well as not hiring the right person.

If you turn to the next few pages (pages 3 – 7) you'll see FOUR pieces information: (1) Decision Information Sheet, (2) Candidate Information, (3) Manager Information, and (4) Salary Information. First, on pages 3 and 4, you will find the Decision Information Sheet. This is the only place you should write anything. If you look at these two sheets you’ll see that it has each applicants' name and next to each name are four blank spaces corresponding to (a) Accept/Reject Decision, (b) Starting Salary, (c) Manager Assignment, and (d) your Justification for your hiring decision.

1. **Accept/Reject Decision:**
   For each of the nine applicants you will indicate whether that person should be hired (accept) or not hired (reject). If you decide to hire an applicant, write accept in the appropriate box. If you decide to not hire an applicant, write reject in that same box. Remember, the “accept/reject” box should not be left blank (e.g., if you decide not to hire a candidate, be sure to write “reject” in the box and provide your justification). A blank space indicates that you have not made a hiring decision and will be counted against you.

   For the practice task, there are 4 open positions, so you should have 4 ACCEPT decisions and 5 REJECT decisions. Obviously, if you decide to reject an applicant, you do not need to decide on his/her salary or assign him/her to a manager BUT you should provide your justification for your “reject” decision. Does it make sense? Please ask questions if you’re not sure.

2. **Salary Decision**
   The second space to the right of each name is for your beginning salary decision. For this annual salary decision, use the salary range guideline provided for you on page 7. Once you decide to hire an applicant, you should refer to the salary range and select an exact dollar amount within the range given. If you think that a candidate is highly qualified, then, you should choose a salary that is closer to the upper limit of the given range and vise-versa. You only need to fill this in for people you hire.

3. **Placement Decision**
   The third space to the right of each name is for you to identify which manager the person should be placed with. Read the manager descriptions carefully and try to think about whether or not a potential candidate will work well with a particular manager. Remember that it is not just “qualifications” per se, but the match between the manager and the candidate can be just as important. Again you only need to fill this out for the individuals you hire.

4. **Your Explanation**
   Finally, in the blank space labeled “Justification,” provide a brief (a sentence or two) justification for why you decided to accept OR reject each applicant. Try to provide specific reasons – e.g., "This candidate did not have the required experience for what the manager was looking for."

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**SCORING:** Your score will be based on the TOTAL NUMBER of Accept AND Reject decisions. That is, you can receive a perfect score of 9 matches if you are able to make 4 High Quality *Accept* Matches and 5 High Quality *Reject* Matches. This means that both *Accept* and *Reject* decisions count as long as they are appropriate. On the other hand, if you reject a highly qualified candidate OR accept a highly unqualified candidate, they will not be counted. At this point, if you are unsure about what to do, please ask your supervisor (the researcher).
**DECISION INFORMATION SHEET**

**Instructions:** On this page, please record your (a) hiring decision, (b) beginning salary, (c) placement decision, and (d) justification for the candidates. Regarding the hiring decision, you may hire the candidate (accept) or not hire the candidate (reject). For those candidates that you hire, use the given salary information as a guideline. Also, for each candidate hired, indicate which manager the new employee will work for. Finally, for each accept AND reject decisions, briefly explain why you made that decision.

<table>
<thead>
<tr>
<th>Human Resources Candidate</th>
<th>Hiring Decision (Accept / Reject)</th>
<th>Annual Beginning Salary</th>
<th>Manager Assigned</th>
<th>Justification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Griffin</td>
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<tr>
<td>Henry Ashland</td>
<td></td>
<td></td>
<td></td>
<td>Justification:</td>
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<tr>
<td>Steven Landon</td>
<td></td>
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<td></td>
<td>Justification:</td>
</tr>
<tr>
<td>Linda Elseworth</td>
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<td></td>
<td>Justification:</td>
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<tr>
<td>Jill Chesler</td>
<td></td>
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<td></td>
<td>Justification:</td>
</tr>
<tr>
<td>Human Resources Candidate</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>William Baker</td>
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<tr>
<td>Pati Gonzalez</td>
<td></td>
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<tr>
<td>Franklin Whitney</td>
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<tr>
<td>James Carlisle</td>
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<td></td>
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</tbody>
</table>

Justification:
<table>
<thead>
<tr>
<th>Candidate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Griffin</td>
<td>Susan Griffin is 22 years old and has just graduated from the University of Nebraska with a bachelor’s degree in psychology. Her overall GPA was a 2.5, with a 2.8 in her major. Her work experience consists of working as a counselor at a camp for disabled children during summers while she was in high school and college. She has excellent references from the managers of this camp. Susan told the recruiter that she is very interested in working with people and feels that she has good interpersonal skills. She felt that a career in Human Resources would fit her interests and skills. The recruiter thought that Susan had a very pleasant personality and seemed extremely outgoing.</td>
</tr>
<tr>
<td>Henry Ashland</td>
<td>Henry Ashland is 25 years old and has just completed his MBA with an emphasis in Human Resources at Arizona State University (ASU). He graduated at the top of his class. Henry’s undergraduate degree in computer science was also from ASU. He spent the two years between his bachelor's degree and master's degree working as a programmer for a small electronics firm in Phoenix. Although he was very good at his job, he decided he would be happier in a position which required more interaction with people. Given this, he decided to return to school for his MBA. He has good references both from his former employer and from professors at ASU. Henry struck the recruiter as intelligent, self-assured and someone who can excel given the right guidance.</td>
</tr>
<tr>
<td>Steven Landon</td>
<td>Steven Landon is 32 years old and is presently employed in FAS's Buffalo site as an engineer. He has a bachelor's degree in general engineering from Rochester Institute of Technology. His overall GPA was a 3.1, with a 3.0 in his major. Steven has been employed as an engineer with FAS since his college graduation. He has excellent letters of recommendation from his past supervisors. They all have stressed his competence and technical expertise. However, they have stated that his interpersonal skills are weak if not lacking entirely. Steven told the recruiter that he is very interested in this position and the Phoenix location. He said that he had grown tired of the engineering field and wanted to get more experience working with people. He also said he’d had enough of freezing to death and wanted to move to a warm, sunny climate.</td>
</tr>
<tr>
<td>Linda Elseworth</td>
<td>Linda Elseworth is 26 years old and has been working in the human resource department for a major competitor of FAS for 4 years. She feels she has reached the &quot;glass ceiling&quot; in her present position and hopes that FAS can offer more in terms of upward mobility. While at her present job, she has received several awards of distinction for her high quality, innovative work. She has a bachelor's degree in Management (3.2 GPA) from Southeastern Louisiana University, with a minor in Psychology (3.0 GPA). She has very positive letters of reference from a manager at her present job and professors in the management department at SLU. The recruiter felt she was very bright and personable, but maybe a little over-eager.</td>
</tr>
<tr>
<td>Jill Chesler</td>
<td>Jill Chesler is 21 years old and is completing her associate's degree in human resources at Cochise Community College. Her overall GPA is a 2.6, with a 2.9 in her major. She has attended school part-time while working full-time as a secretary at the college. Her supervisor's letter of reference states that she has been a good employee, follows directions well, and always does what is asked of her. The recruiter felt that Jill had a professional appearance and seemed eager to prove herself.</td>
</tr>
<tr>
<td>Candidate</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
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</tr>
<tr>
<td>William Baker</td>
<td>William Baker is a 27-year old who graduated from NYU with a degree in Management. Upon graduation, he went to work for a financial firm in Manhattan for two years but decided that the job did not fit his “free-spirit” personality. He then worked as an assistant manager on a European cruiseliner and was able to travel extensively throughout Europe. Through his travels, he has gained valuable cultural perspectives that he believes will be an asset with FAS. Just prior to submitting his application with FAS, William was self-employed, importing precious stones and clothing made of Alpaca wool from Peru. The business lasted just over a year but went under with the downturn in the economy. As he hasn’t worked for a few months, he is eager to get back into the workforce and expressed this to the recruiter.</td>
</tr>
<tr>
<td>Pati Gonzalez</td>
<td>Pati Gonzalez is 28 years old with a degree in Psychology. After graduation, she went to work for a mid-sized company as a market research assistant. Her knowledge of human behavior, an eye for detail, and a willingness to go beyond people’s expectations, helped her move quickly up the corporate ladder and within just three years she was promoted to the marketing manager position. Soon thereafter, she was offered a position as a human resources manager. Because as a marketing manager, she was constantly in negotiations over the budget, she thought she might enjoy a position where things were more structured with little surprises. Though she enjoyed the interaction with people and the clarity of her role, the company went bankrupt and she is now seeking a similar position with FAS.</td>
</tr>
<tr>
<td>Franklin Whitney</td>
<td>Franklin Whitney is a 31-year old who has been employed by Visteon, an automotive accessory manufacturer. He has been working as a safety officer in-charge of insuring the physical safety of the workforce. Franklin joined the Navy after high school and worked as a nuclear technician. Although he enjoyed the work, he disliked the highly structured environment and the fear-driven management styles common in the military. After the military, he received both a business degree and an MBA in human resource management from University of Akron. The poor job market, however, offered little in line with his training and he settled with a job with Visteon. He has been with Visteon for three years now and feels that it is time to make the change. He is eager and according to the recruiter, appears highly motivated.</td>
</tr>
<tr>
<td>James Carlisle</td>
<td>James Carlisle is 36 years old and received a bachelor’s degree in world history from Southern Methodist University. He spent the next five years traveling around the world and teaching English. He speaks three languages including Spanish, Japanese, and Portuguese. For the past eight years, he has worked as a human resources manager for a number of different firms small and large. The recruiter was able to contact a few of those companies and received favorable comments from majority of the supervisors who worked with James. However, a couple of the supervisors refused to comment on his past performance. Nonetheless, the recruiter thought that James appeared highly sociable and cordial.</td>
</tr>
</tbody>
</table>
## MANAGER INFORMATION

<table>
<thead>
<tr>
<th>Manager</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryan Moreland</td>
<td>Ryan Moreland will be the head of the Human Resources - Staffing department. There are two entry-level management positions in staffing which need to be filled. Ryan has a Ph.D. in Human Resources /Labor Relations from Cornell University. After completing his doctorate he worked as a professor at Georgia Institute of Technology for 3 years before deciding that teaching and research was not for him. He decided that he would prefer to work for a corporation in Human Resources management. Ryan started as a recruiter for FAS five years ago, and within a year and a half became a first level manager in Human Resources. Two years later he was promoted to a second level manager and has just received the promotion to department head. Ryan's rapid movement through the management ranks is attributed to his being bright, energetic, and highly professional. He is considered to be a demanding manager who expects nothing but perfection from his employees. As long as his employees perform up to his expectations, he is very good about rewarding their performance and supporting their career development.</td>
</tr>
<tr>
<td>Jennifer Osborne</td>
<td>Jennifer Osborne will be the head of the Human Resources - Compensation department. There are two entry-level management positions in compensation which need to be filled. Jennifer has worked with FAS in the northwest region, and is now taking a promotion and moving to the southwest to take on more responsibility. She has a very demanding nature and is very thorough in all her work activities. Those employees working under her who are willing to put forth full effort do very well. Employees expecting a lot of decision control and autonomy, tend to not work well with her. Jennifer has a bachelor's degree in General Business and a master's degree in Compensation, both from Duke University. Although she has a strong educational background, she feels formal education can't replace good common sense and experience. She has been with the company for 12 years and has worked hard to get to her current position. Jennifer is anxious to have someone start at this managerial position right away as there is much initial work to do. Thus, relevant work experience may be a benefit. Typically, managers in compensation need to be high-energy, people-oriented individuals, who are not afraid to explore new directions.</td>
</tr>
</tbody>
</table>

## SALARY INFORMATION

Human Resources Department: $30,000 - $50,000
APPENDIX F

MATERIALS RELATED TO THE MAIN TRIAL
Goal Selection Sheet

Participant #: __________

DIRECTIONS: Based on past studies using this task, typical scores for this task range from 5 High Quality Matches to 22 High Quality Matches with an average performance of 10 High Quality Matches. The company has established performance standards it wants met for hiring of new employees which are represented by the range of acceptable performance levels shown below. Indicate the goal (i.e., the number of high quality matches) that you will be trying to achieve on the next trial by circling the goal of your choice from the list below. These are difficult goals but they are obtainable:

High Quality Match Goals consistent with FAS performance standards for hiring new employees:

13  14  15  16  17  18  19  20  21  22  23
INSTRUCTIONS: For this task there are a total of 46 applicants to select from and 23 open entry-level management positions across 8 different departments to fill. Furthermore, since there are 8 departments you will have 8 manager descriptions (1 for each department). Again, the format is exactly the same as the practice task. To assist you in making your hire/reject decisions, three pieces of information have been provided for you in separate packets.

 PACKET 1: CANDIDATE INFORMATION

The first packet labeled “Candidate Information” is a table containing information gathered from both the screening interview and the candidates’ application form. It contains information on 46 candidates.

 PACKET 2: MANAGER INFORMATION

The second packet labeled “Manager Information” contains descriptions of the 8 managers from their respective departments. Read this information carefully to find out their hiring preferences before making a placement decision.

 TABLE 1: OPEN POSITIONS AND SALARY INFORMATION

Table 1 below reveals information regarding the number of open positions for each department and the salary range. If you will look at the “Number of Open Positions” for Finance, for example, it indicates “1” meaning that only ONE candidate is needed for this position. The salary information is the same as the practice trial except that now you have FIVE different ranges. Do not go beyond the range provided when determining a new candidate’s salary.

<table>
<thead>
<tr>
<th>Department</th>
<th>Division</th>
<th>Number of Open Positions</th>
<th>Salary Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td></td>
<td>2</td>
<td>$35,000 - $50,000</td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td>1</td>
<td>$40,000 - $55,000</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Software</td>
<td>4</td>
<td>$35,000 - $60,000</td>
</tr>
<tr>
<td></td>
<td>Hardware</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Engineering</td>
<td>Product Testing</td>
<td>3</td>
<td>$40,000 - $70,000</td>
</tr>
<tr>
<td></td>
<td>Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Product Development</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Technical Writing</td>
<td></td>
<td>2</td>
<td>$25,000 - $38,000</td>
</tr>
</tbody>
</table>
**DECISION INFORMATION SHEET**

**Instructions:** On this page, please record your (a) hiring decision, (b) beginning salary, (c) placement decision, and (d) justification for the candidates. Regarding the hiring decision, you may hire the candidate (**accept**) or not hire the candidate (**reject**). For those candidates that you hire, use the given salary information as a guideline. Also, for each candidate hired, indicate which manager the new employee will work for. Finally, for each accept AND reject decisions, briefly explain why you made that decision.

<table>
<thead>
<tr>
<th>Computer Science Candidates</th>
<th>Hiring Decision (Accept / Reject)</th>
<th>Annual Beginning Salary</th>
<th>Manager Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heather Robbins</td>
<td></td>
<td></td>
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<tr>
<td>Frank Jansen</td>
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<tr>
<td>Susan Collins</td>
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<tr>
<td>Thomas Baxter</td>
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<tr>
<td>Charles D’Ammotto</td>
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</tbody>
</table>

Justification:
<table>
<thead>
<tr>
<th>Computer Science Candidates continued</th>
<th>Hiring Decision (Accept / Reject)</th>
<th>Annual Beginning Salary</th>
<th>Manager Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann Pickney</td>
<td>Justification:</td>
<td></td>
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<tr>
<td>Harrold Carmichael</td>
<td>Justification:</td>
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<tr>
<td>Richard Sloan</td>
<td>Justification:</td>
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<tr>
<td>Michael Thorndike</td>
<td>Justification:</td>
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<tr>
<td>Douglas Durrell</td>
<td>Justification:</td>
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<tr>
<td>John Loomis</td>
<td>Justification:</td>
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</tr>
<tr>
<td>Computer Science Candidates continued</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Paula Kendall</td>
<td>Justification:</td>
<td></td>
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</tr>
<tr>
<td>Accounting Candidates</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Michael Newman</td>
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<tr>
<td>Todd Colwell</td>
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<tr>
<td>Robert Farmer</td>
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<tr>
<td>Susan Orwell</td>
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<tr>
<td>Nora Walton</td>
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<tr>
<td>Candace Jones</td>
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</tbody>
</table>

Justification:
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<tr>
<th>Finance Candidates</th>
<th>Hiring Decision (Accept / Reject)</th>
<th>Annual Beginning Salary</th>
<th>Manager Assigned</th>
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</thead>
<tbody>
<tr>
<td>Jeffery Dawes</td>
<td>Justification:</td>
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<tr>
<td>Jonathan May</td>
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<tr>
<td>Allison Wilson</td>
<td>Justification:</td>
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<td>Robin Scott</td>
<td>Justification:</td>
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<tr>
<td>Cynthia Forbes</td>
<td>Justification:</td>
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<td>Daniel Reynolds</td>
<td>Justification:</td>
<td></td>
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<tr>
<td>Engineering Candidates</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Winston Brown</td>
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<tr>
<td>Linda Fisher</td>
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<tr>
<td>Andrea Landis</td>
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<tr>
<td>Jane Hutton</td>
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<tr>
<td>Gregory Warren</td>
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<td>Justification:</td>
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<tr>
<td>James Gooding</td>
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<td>Justification:</td>
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<tr>
<td>Engineering Candidates continued</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Bernard Cohen</td>
<td>Justification:</td>
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<td>Peter Venturi</td>
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<td>Debbie Macrae</td>
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<td>Gilbert Noland</td>
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<td>Janet Sumari</td>
<td>Justification:</td>
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<td>Karla Metzinger</td>
<td>Justification:</td>
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<td>Engineering Candidates continued</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Catherine Vigo</td>
<td>Justification:</td>
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<td>Pamela Aldren</td>
<td>Justification:</td>
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<td>Larry Maurer</td>
<td>Justification:</td>
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<tr>
<td>Technical Writing Candidates</td>
<td>Hiring Decision (Accept / Reject)</td>
<td>Annual Beginning Salary</td>
<td>Manager Assigned</td>
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<tr>
<td>Leigh Monroe</td>
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<td>James North</td>
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<td>Colleen Meriweather</td>
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<td>David Goodrick</td>
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<td>Gerald Moran</td>
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<tr>
<td>Sarah Brady</td>
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</tbody>
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Justification:
<table>
<thead>
<tr>
<th>Num</th>
<th>Candidate</th>
<th>Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heather Robbins</td>
<td><strong>Heather Robbins</strong> is 25 years old and is currently employed as a systems technician. She is going to graduate this spring with a double major in mechanical Engineering and Business Administration from Arizona State University. She has a 2.9 GPA in engineering and a 3.1 in business administration. Her ability to attend school while working full-time impressed the recruiter. However, it seemed that Heather's interpersonal qualities are not highly developed. Heather's supervisors have noted that she has had several heated arguments with co-workers and she is not always friendly to clients. However, she is relatively experienced in terms of installing computer systems. Her letters of reference place her as an average performer in her current duties.</td>
</tr>
<tr>
<td>2</td>
<td>Frank Jansen</td>
<td><strong>Frank Jansen</strong> is 24 years old and has a bachelor's degrees in Computer Science and Computer Engineering from the University of New Mexico. His overall GPA was 3.2, with a 3.4 in his majors. Since graduating, he has been employed for 2 years as a programmer, primarily programming in fortran. He is interested in moving into a management position and feels that the opening suits his qualifications. His references indicate that he is a good programmer. They state that he is very good at following directions to ensure that the final output is appropriate. However, his references hint at the fact that he is not a self-starter, and may not have the initiative and independence needed to manage a work group. The recruiter thought that Frank was somewhat reserved. He also seemed timid, and was visibly uncomfortable during the interview.</td>
</tr>
<tr>
<td>3</td>
<td>Susan Collins</td>
<td><strong>Susan Collins</strong> is 36 years old and graduated from the University of California-Davis in 1983 with an undergraduate degree in Mathematics (3.4 GPA). She re-located to the Phoenix area when her husband found employment at a local university. Susan went on to pursue a Master's in Electrical Engineering at Arizona State University, which she completed in 1986 with a 3.6 GPA. Subsequently, she has worked as a systems design engineer for Unix Computer Corporation. Her supervisory experience has progressed gradually over the last few years and she stated to the recruiter that she is eager to take on greater challenges and responsibilities. The recruiter was favorably impressed with Susan's maturity and ambition. Susan has no letters of reference from Unix, because she does not want to threaten her current position. However, if necessary, she is willing to provide them.</td>
</tr>
<tr>
<td>Page</td>
<td>Name</td>
<td>Details</td>
</tr>
<tr>
<td>------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Thomas Baxter</td>
<td>Thomas Baxter is 33 years old and graduated one year ago from San Diego State University with a Master's in Computer Science. He received his undergraduate degree in Computer Science and Math from the University of San Diego. His overall undergraduate GPA was 3.3, with 3.0 in this major. His graduate GPA was a 3.1. Thomas decided not to reenlist in the Navy a month ago, and has been actively seeking work in the private sector. He enlisted with the Navy right out of high school, and for most of his stint was stationed in San Diego. He pursued both his undergraduate and graduate degrees while enlisted. Thomas served in various capacities, including computer programming, computer monitoring and surveillance, and five years ago became an officer. Thomas indicated that the main reason that he has decided to leave the Navy is that he is tired of the regimentation. He would like to be employed in a company where he can take more initiative and not worry about following some inane rules or always following the chain of command. The recruiter felt that Thomas had the appropriate academic and work experience to fit the position. Moreover, Thomas was viewed as extremely motivated and confident about his abilities and goals in life.</td>
</tr>
<tr>
<td>5</td>
<td>Charles D’Ammotto</td>
<td>Charles D’Ammotto is 33 years old and graduated from the University of Houston with a degree in Electrical Engineering in 1989. He had an overall GPA of 2.7 with a 3.0 GPA in his major classes. He was employed with Texas Instruments as a computer programmer for approximately five years and has been a self-employed computer analyst for the last three years. He claimed that he would like to join a growing organization that is not excessively large to which he could contribute his technical expertise. His resume indicates that he has an extensive knowledge of computer languages, including, basic, fortran, cobol, and many specialized packages. He also has considerable experience in integrating hardware for various applications in businesses. The recruiter noted that while Charles had impressive credentials, he couldn't clearly articulate his thoughts during their brief interview. He does have strong letters of recommendation from two managers at Texas Instruments and a firm for which he consulted.</td>
</tr>
<tr>
<td>6</td>
<td>Ann Pickney</td>
<td>Ann Pickney is 26 years old and has an undergraduate degree in General Engineering from Stanford University and two master's degrees, one in Computer Science and one in Artificial Intelligence from MIT. She was a straight A student. She told the recruiter that she had considered pursuing a doctorate but had decided against this since she wanted to get out in the &quot;real world&quot; and put her knowledge to use. The recruiter thought she was somewhat domineering and aggressive, but she obviously knew her area and was extremely confident about her capacity to perform. During the interview, she stated that her greatest strength was her persistence and that she would keep on working—no matter what the hour, to complete a job.</td>
</tr>
<tr>
<td>7</td>
<td>Harrold Carmichael</td>
<td>Harrold Carmichael is 27 years old and recently graduated from California State at Long Beach with an MBA (3.3 GPA). His undergraduate degree was in Management Information System (3.0 GPA). Harrold has only limited work experience, but he has interned with both IBM and Wang Computers during different summer breaks. He had provided letters of recommendation that show him to be an above-average performer in both of these summer internships. The recruiter thought that he would be hard-working and capable of growing into a managerial position, but was concerned about the lack of supervisory experience. Harrold expressed a firm commitment to staying in the Southwest.</td>
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<tr>
<td>8</td>
<td>Richard Sloan</td>
<td>Richard Sloan is 25 years old and has just graduated from the University of Arizona with an MBA. He received his undergraduate degree in Computer Science from the same institution. His graduate GPA was a 3.2, with an undergraduate GPA of 3.4. Richard has also been employed for three summers as a computer programmer. His references indicate that he is an average programmer, but would not be expected to excel in the field. On the other hand, his references stress that he has wonderful interpersonal skills and leadership qualities, which would contribute to his effectiveness as a manager. The recruiter was very impressed with Richard. He felt that Richard was very attractive, personable, and had a presence that took command of the room. In general, the recruiter felt that Richard had the qualities of a born leader.</td>
</tr>
<tr>
<td>9</td>
<td>Michael Thorndike</td>
<td>Michael Thorndike is 37 years old and has worked for a small computer company in Phoenix for the past 10 years in a variety of positions, primarily programming related. Prior to working for this company, he attended school full-time. He has an undergraduate degree from the University of Texas at Austin in mathematics (3.6 GPA), and a Master’s degree in Computer Science from the University of Illinois (3.5 GPA). He is interested in this position because he feels that he has moved up as much as possible in his present company and foresees more growth possibilities at FAS. He has excellent references from former professors and people in the community. However, he would rather not provide you with references from his employer since he is afraid that they would be very upset if they knew that he was looking to move, and if this job did not work out, he does not want to make trouble with his present employer. The recruiter felt that Michael was very competent, and seemed extremely interested in this position.</td>
</tr>
<tr>
<td>10</td>
<td>Douglas Durrell</td>
<td>Douglas Durrell is 35 years old and has a bachelor's degree in Computer Science from Northern Arizona University. His overall GPA was a 3.5, with a 3.3 in his major. After graduation, Douglas was employed for 11 years as a programmer and systems analyst for Sperry-Rand. He has excellent references from this firm. He left his job two years ago to pursue a MBA at the University of Chicago. He will be graduating this semester with a 3.2 GPA. Douglas is originally from Scottsdale and is interested in returning to the area. He is an all-around athlete. During the interview, he expressed the desire to return to the sunny southwest and catch up on his golf game and penchant for rock climbing.</td>
</tr>
<tr>
<td>11</td>
<td>John Loomis</td>
<td>John Loomis is 23 years old and graduated from Brigham Young University with a degree in Computer Science. He had a 2.7 overall GPA, with a 2.9 GPA in his major. He has completed his degree while working full-time for Sperry-Rand Corporation as a hardware installation technician in both Provo, and Salt Lake City, Utah. The recruiter thought that John had a considerable breadth of current knowledge of computer information systems, but wondered about the extent of his managerial experience and maturity. John had two letters of recommendation, both of them indicating that he was an above average performer in his duties at Sperry-Rand.</td>
</tr>
</tbody>
</table>
**Paula Kendall** is 37 years old and has a bachelor's degree in Computer Science from the University of Arizona. Her overall GPA was 3.7, with a 3.9 in her major. After graduation, Paula joined IBM as a computer programmer in Tucson and rapidly moved up to a management position. She has excellent references from her time at IBM. She left IBM seven years ago to have a family. She has two children now, ages 5 and 7. Now that her children are starting school, she is interested in continuing her career. According to Paula, IBM is interested in re-employing her, but they have no openings in the Tucson facility. Paula desires to stay in the Tucson-Phoenix area, so she is looking for another computer firm that needs her expertise. She lives in Tucson, but says she has no problem working in Phoenix since her husband has a flexible schedule and can care for the children. The recruiter felt that Paula had the appropriate skills needed for this position. However, he is concerned with the length of the commute and her ambiguous response to her willingness to put in long hours. Paula did, however, strike the recruiter as a motivated, hard-working individual who is willing to do what is necessary to get the job done.
<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Michael Newman</td>
<td>Michael Newman is 35 years old and has just graduated from the University of California at Berkeley with a bachelor's degree in Accounting. His overall college GPA was a 3.2, with a 4.0 in Accounting. After high school, Michael did a two-year stint in the Army and then was employed for 10 years full-time as a bookkeeper. He then decided that he wanted to return to school and become an accountant. During his time in college he continued working part-time as a bookkeeper to help fund his education. Michael struck the recruiter as a real &quot;go-getter&quot;. He had a very outgoing personality and seemed extremely excited about and committed to a career in accounting and management. He already has a lot of ideas about how an accounting department should be run and what procedures would be appropriate. He also is very interested in being employed in the Phoenix area because his wife and three children would like to be closer to his wife's parents.</td>
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<tr>
<td>2</td>
<td>Todd Colwell</td>
<td>Todd Colwell is 22 years old and has just graduated from San Diego State University with a bachelor's in General Business, but he took a lot of accounting and management courses. His overall GPA was 2.75, with a 2.9 in general business and a 3.0 in his accounting and management courses. His prior work experience consists of working as a lifeguard in the summer. The recruiter felt that Todd had an engaging personality and would probably be very well-liked by the other employees.</td>
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<td>3</td>
<td>Robert Farmer</td>
<td>Robert Farmer is 22 years old and has just graduated from New Mexico State University with a bachelor's degree in Accounting. His overall college GPA was a 3.0, with a 2.5 in accounting. Although he doesn't have any full-time work experience, he has been employed for three summers at an accounting firm and seems to have good hands-on experience in accounting. He has two highly positive references from this firm which state that he would be an excellent candidate, and they would gladly hire him if they had an open position. The recruiter felt that Robert was very easy going, although somewhat nervous and quiet. It may be that his shyness and nervousness will dissipate as he gets older and gains more experience.</td>
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<tr>
<td>4</td>
<td>Susan Orwell</td>
<td>Susan Orwell is 28 years old and graduated 6 years ago from Dartmouth University with a bachelor's degree in Accounting. Her overall GPA was 3.5 with a 3.6 in Accounting. She has been employed for the last 6 years with a big eight accounting firm in New York. She is originally from Texas and is anxious to return to the climate and pace of the southwest. Susan has excellent work experience and her references from her current employers are good. She struck the recruiter as somewhat reserved and low-key. She was also seen as very competent and professional.</td>
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<td>5</td>
<td>Nora Walton</td>
<td>Nora Walton is 21 years old and has just graduated from Stanford with a bachelor's in Accounting. Her overall GPA was 3.8, with a 3.7 in her major. She has no prior work experience but has been very active in extracurricular activities, including being a member of the Accounting Club at Stanford. The recruiter felt that Nora was very serious and intelligent. She seemed to be interested in this position, and had done extensive research into the company. The references from her professors indicated that she is very hardworking, and if you give her a project with some direction she will be able to complete it well.</td>
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<td>6</td>
<td>Candace Jones</td>
<td>Candace Jones is 21 years old and has just graduated from Harvard University with a bachelor's degree in Accounting. She was a straight A student, graduating in the top of her class. Throughout her years in college she volunteered for the Battered Women's shelter in Cambridge, Massachusetts. She was also very active in extracurricular activities, including serving for 2 years as president of the Women in Business Association. Candace struck the recruiter as very self-confident, assertive and interested in a position of high responsibility. Being highly career oriented, she seemed to know exactly what she wanted out of a position and also confident that she could achieve her goals. The recruiter also felt that she was very attractive and intelligent. Her references confirmed her competence, indicating that she would be an excellent employee, although there was some mention that at times she is too aggressive and tends to take on too much responsibility for someone her age and with little practical experience.</td>
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<tr>
<td>1</td>
<td>Jeffery Dawes</td>
<td>Jeffery Dawes is 27 years old and graduated five years ago from the Wharton School at the University of Pennsylvania with a bachelor’s degree in Finance. He had straight A’s in college. Since graduating he has been employed as a finance officer in a large firm. He is interested in changing positions because he is not satisfied with his firm's philosophy of a slow career progression. He would like to move into a management position, with the goal of becoming a head of a department within the next five years. Jeffery struck the recruiter as being extremely motivated, self-confident and assertive. According to the recruiter, he appeared to be a man with a vision who intended to work hard to achieve his goals.</td>
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<tr>
<td>2</td>
<td>Jonathan May</td>
<td>Jonathan May is 32 years old and graduated three years ago with a Master's in Business Administration (MBA) from the University of Michigan. Prior to this, he obtained a bachelor's degree in Finance from Boston University. His graduate GPA was 3.8 and his undergraduate GPA was 4.0. Between his undergraduate degree and his graduate degree he was very successfully employed as a stock analyst for a Wall Street firm. He then decided that he didn't want to do that for a career, so after five years he went back to school for his MBA. Since obtaining this degree he has been employed as a financial analyst for one of your competitors in the Midwest. He applied for this position because he is interested in getting into management and would like to move to a warmer climate which would suit his lifestyle better. He is an avid golfer and enjoys bicycling and hiking. The recruiter felt that Jonathan was a very impressive individual. He is attractive, athletic and appears to be intelligent.</td>
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<td>3</td>
<td>Allison Wilson</td>
<td>Allison Wilson is 47 years old and has just graduated from Arizona State university with a bachelor's degree in Finance and Management. Her overall GPA was 3.2, with a 3.4 in her double major. The recruiter felt that she was a very competent, motivated individual. An example of this is the fact that she raised two children on her own and put them through college, before returning to school herself. Also, while going to school she continued to work part-time and was active in a number of volunteer organizations. She seems to have very good interpersonal skills, strong convictions, and her past personal and work experience suggests that she can balance a variety of duties and responsibilities well. Allison has indicated that she has a number of interviews with other firms, but that she is very interested in this position.</td>
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<td>Name</td>
<td>Background and Experience</td>
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<tr>
<td>4</td>
<td>Robin Scott</td>
<td>Robin Scott is 20 years old and has just graduated from Pima Community College with an associate's degree in Finance. Her overall GPA was a 3.0, with a 2.6 in her major. She is very interested in this position. Her career objectives are to work for a few years, and then go back to school part-time and obtain a bachelor's degree in finance or management. The recruiter felt that she somewhat immature and was not sure if she truly understood the responsibilities involved in this position. However, she seemed very anxious to have a chance to prove herself, and expressed confidence in her abilities.</td>
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<tr>
<td>5</td>
<td>Cynthia Forbes</td>
<td>Cynthia Forbes is 22 years old and has just graduated from UCLA with a bachelor's in Finance. Her GPA in Finance was 3.75, with an overall GPA of 3.5. She was active in organizations on campus, and was the vice-president of the Minority Student Business Association. She is originally from Phoenix and would like to settle down there. For the past two summers she was employed with a large manufacturing firm in Los Angeles in the finance department. She has an offer from this firm, but would rather not take it because she doesn't like their management practices. In particular, she does not like the way they treat their female and minority employees. The recruiter thought that Cynthia appeared to be professional, somewhat conservative and reserved. Nonetheless, this did not stop her from asking a lot of questions about the company and their management practices and promotion procedures.</td>
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<td>6</td>
<td>Daniel Reynolds</td>
<td>Daniel Reynolds is 29 years old and received a bachelor's in Finance from the University of Washington eight years ago. His overall GPA was 3.1, with a GPA of 2.6 in his major. Since obtaining his degree, he has held five positions which have all been in finance or related to finance. He has been unemployed for the last three months. He had to leave his last job due to an illness, but he assured the recruiter that he is now in good health. The recruiter felt that Daniel seemed very anxious to attain this position, almost too anxious--bordering on desperation. Of course, this is somewhat understandable since he volunteered the information that he has been actively looking for a job for the past month-and-a-half and the bills are piling up. The recruiter felt that Daniel did have relevant work experience, and given his situation, the recruiter thought that the company would be able to hire him at a bargain.</td>
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## Engineering Candidates

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<thead>
<tr>
<th></th>
<th>First Name</th>
<th>Last Name</th>
<th>Age</th>
<th>Education</th>
<th>Professional Experience</th>
<th>Skills and Achievements</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Winston</td>
<td>Brown</td>
<td>27</td>
<td>B.S. in Chemical Engineering</td>
<td>Part-time selling computers, strong interest in applying knowledge to various systems</td>
<td>Straight A's throughout college, superlative letters of recommendation, mature, strong grasp of computer engineering fundamentals</td>
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<td>2</td>
<td>Linda</td>
<td>Fisher</td>
<td>29</td>
<td>Bachelor's Degree in General Engineering, MBA</td>
<td>Worked for city of Fairfax, Virginia, active in various university clubs, strong technical skills</td>
<td>Polished, mature attitude, planned career path, good technical skills, National Outstanding Minority Student Award for two consecutive years</td>
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<td>3</td>
<td>Andrea</td>
<td>Landis</td>
<td>35</td>
<td>Bachelor’s Degree in Computer Engineering, Business Administration</td>
<td>Raised three children and going through a divorce, very interested in staying in the Phoenix area</td>
<td>Determined, intelligent, mature, independent study course, technical report outlining research, fits well with company culture</td>
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<td>4</td>
<td>Jane Hutton</td>
<td>Jane Hutton is 22 years old and will be graduating from California Polytechnical Institute with a bachelor's in Electrical Engineering (3.6 GPA). She has worked for the past two summers with a small Los Angeles high-tech firm. She has good recommendations from this firm. They would like to hire her, but Jane is interested in returning to her home in Phoenix, and also would like to work with a somewhat larger firm with more career possibilities. She seems to feel that FAS fits her needs. The recruiter felt that Jane had an excellent technical background. Interpersonally, she seemed somewhat cold and distant, but nevertheless competent.</td>
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<td>5</td>
<td>Gregory Warren</td>
<td>Gregory Warren is 50 years old and currently has his own engineering consulting firm. He graduated from the University of Michigan with a bachelor's degree in Electrical Engineering in 1969 (3.8 GPA). Since graduation, he has continued to take classes in order to keep his skills current. He has owned and operated his own consulting firm for the past 10 years and it has done very well. However, last year he had a mild heart attack and has since decided that he needs a less stressful job. That is, he would like to be employed by a company where his salary and benefits are secure; instead of having to worry day to day about the total operation of a business. He already has located a buyer for his consulting firm, and plans to sell it as soon as he locates a job. Gregory feels that this position is perfect for him. He is more than qualified for the position. He has a vast array of technical and management experience and the recruiter felt that he would be a great asset to the company. Additionally, he is very well hooked into the community, and seems to know what our clients’ needs are and what our competitors are doing.</td>
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<td>6</td>
<td>James Gooding</td>
<td>James Gooding is 26 years old and graduated from the University of Denver with an undergraduate degree in General Engineering (3.1 overall GPA, 3.3 GPA in major). He worked for approximately two years as an engineer for a firm in Colorado. He then decided to return to school for an MBA, because he decided that he would rather be a manager than a technician. He is about to graduate with his MBA from the University of Arizona (3.6 expected GPA). The recruiter thought that James was extremely charming, to the point of appearing too smooth. He was a good talker and came off as quite confident. However, his level of technical skills is unclear.</td>
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<td>7</td>
<td>Bernard Cohen</td>
<td>Bernard Cohen, a New York native, is 35 years old. He graduated from the State University of New York-Albany with an undergraduate degree in Biology (1985). He also received two Master's degrees from SUNY-Albany: one in Statistics (1988) and the other in Chemical Engineering (1989). While pursuing doctoral studies in Chemical Engineering, his wife re-located to Phoenix to work for a large retail outlet as a District Manager. Bernard finished his doctoral course work in 1992 and subsequently moved to Phoenix. He has yet to complete his dissertation, but he claims that it is awaiting only his committee's final approval. He has been employed as a chemist for a local pharmaceutical firm for the last two and one-half years, with a lapse in his employment for the years 1992-1994. When asked about this gap, he stated that his dissertation was occupying his time. The recommendation letters, provided by his present employer, suggest that he is highly capable and hardworking once he understands his job duties and responsibilities.</td>
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<td>8</td>
<td>Peter Venturi</td>
<td>Peter Venturi is 22 years old and is about to graduate with a bachelor's degree in Computer Engineering from the University of Utah. His overall GPA was 3.0, with a 2.7 in his major. The recruiter felt that Peter was very quiet and unassuming. His interpersonal skills seemed to be lacking. Peter indicated that he would like a position where he could be left alone to do his work. He is very interested in moving to the Phoenix area because his parents have just retired to Mesa, and he would like to be in close vicinity to them. Peter’s stated career goals are to become proficient in his technical expertise.</td>
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<td>9</td>
<td>Debbie Macrae</td>
<td>Debbie Macrae, a magna cum laude graduate of Stanford’s Electrical Engineering undergraduate program (class of 1989), is 30 years old. She has been employed by the city of Los Angeles for the last eight years, working her way through the computer data center, into systems planning and design, and is currently the engineering project manager for the Department of Public Safety (which includes all fire, police, and other municipal emergency planning, systems research and design). She has expressed an interest in moving to a smaller community where the quality of life is higher, and also desires a transfer into the private sector because she is tired of working in a large bureaucracy. She seems eager to take on a high level of responsibility and administer her duties to the letter. Her references indicate that, while her knowledge of the computer systems is unquestionably high, she has had problems getting along with her subordinates. There was also some concern in the recruiter’s mind that her systems knowledge has superseded her engineering background and that further updating of technical skills may be necessary.</td>
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<td>10</td>
<td>Gilbert Noland</td>
<td>Gilbert Noland is 28 years old and has a bachelor's degree in Electrical Engineering from Southern Methodist University. His overall GPA is 3.8, with a 3.4 in his major. Gilbert has been employed as an engineer for the city planning office since graduation, but is now looking to move into the private sector. He indicated that he was fed up with the city's bureaucracy and wanted a job where he could make things happen. He describes himself as a maverick and self-starter, who isn't afraid to take risks to get the job done. He has excellent references from the city. He has kept up to date on his skills by taking graduate courses at Arizona State University, and is confident that he knows the state-of-the-art in engineering. He also has relevant supervisory experience from working with the city, where he regularly supervised a small group of engineers.</td>
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<td>11</td>
<td>Janet Sumari</td>
<td>Janet Sumari, 33 years old, received her M.S. in Electrical Engineering from Colorado State University in 1995 after graduating with a 3.85 GPA from California State-Chico in Statistics and Actuarial sciences in 1992. Prior to and during her college education, Janet was employed by various companies as a systems technician and engineer. Janet stated that she was ready to settle into a growth-oriented firm where she could guide the research and development of new systems and supervise engineers and technicians. The recruiter was impressed by her poise, ambition, and educational background. She appeared to be a self-starter with highly relevant experience. The recruiter's main concern was whether Janet would be interested in staying in one place for any length of time, given that her resume showed that she had not previously held a job for more than two consecutive years.</td>
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<td>12</td>
<td>Karla Metzinger</td>
<td>Karla Metzinger, 26, is currently employed by your company in the Albuquerque facility as an engineer in the development area. She graduated four years ago from New Mexico State with a bachelor's degree in Electrical Engineering (3.1 GPA). After graduation she worked for two years at a firm in Las Cruces, New Mexico as an engineering assistant. She moved to your company two years ago because she felt that her career was going nowhere at the other firm. She is now interested in moving to the Phoenix facility because she would like to move in to a management position, and that is not possible right now at her present facility in Albuquerque. Her performance reviews indicate that she is an above average employee, although her manager seemed to feel that she was trying to move up to quickly. He felt that she needed a few more years training before she moved into management. He also felt that she needed to learn how to be more of a team-player, since in the past there had been complaints of her lack of cooperation with coworkers. The recruiter was impressed with Karla’s tenacious attitude. She seemed very goal-oriented and confident that she would achieve her career objectives.</td>
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Catherine Vigo is 29 years old and has a bachelor's degree in Civil Engineering (2.9 GPA) and a masters in Electrical Engineering (3.3 GPA) from the University of Tulsa. Since graduation, Catherine has been employed with a Tulsa engineering firm in various positions. Her references all indicate that she is technically competent. The recruiter thought that Catherine fit the typical stereotype of a technical person-- somewhat awkward interpersonally, shy, a bit of a wall flower, but was impressed with her knowledge and past work experience. Catherine seemed very interested in this position and said that she was excited about the idea of moving to Phoenix.

Pamela Aldren is 25 years old and is currently employed at FAS’s headquarters in Charlotte, North Carolina. Pamela is interested in transferring to the Phoenix facility because her husband has an excellent job opportunity in the area. Pamela’s current position is as an engineer in the development area. Her performance reviews have been consistently good and she shows excellent potential to move in to management. Her General Engineering degree is from Duke University (3.4 GPA). Her current manager states that she is a real go-getter, although sometimes her enthusiasm causes her to circumvent the chain of command. That is, in the past she has gone over her manager's head to discuss her ideas for development with higher executives. Besides this, her manager had no problems with her work and strongly encouraged us to hire her.

Larry Maurer, 43, is currently employed by Data Systems, a large computer manufacturing firm located in Houston, Texas. Larry graduated with honors in Psychology and Environmental Engineering from the University of Nebraska-Lincoln in 1981. He received an M.S. in Mathematics and an M.S. in Artificial Intelligence from Carnegie-Mellon in 1985, where he contemplated pursuing his doctoral degree. He decided that he would gain some practical experience and in the last dozen years has done exactly that. His work experience includes system analyst and designer, hardware consultant, systems designer, and other supervisory positions. He is interested in staying in the southwest, but has expressed some concerns about making some major life changes at this juncture in his career. The interviewer was highly impressed by his credentials, including very strong letters of recommendation from previous employers.
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<tr>
<td>1</td>
<td>Leigh Monroe</td>
<td>Leigh Monroe is 22 years old and has just graduated with a bachelor's degree from the University of Colorado with a major in English and a minor in Management. Her overall GPA was 3.2, with a 3.4 in her major. Leigh has no prior paid work experience, but she worked as a writer for the student newspaper during her schooling. The writing samples she has provided are quite good. Leigh struck the recruiter as down-to-earth, motivated, and interested in a position of this type. She indicated that the reason she minored in Management and took elective courses in business and technical writing was to pursue a career in technical writing and communication. The recruiter thought that she had excellent interpersonal skills and appeared to be more mature than would be expected for her years.</td>
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<td>2</td>
<td>James North</td>
<td>James North is 33 years old and graduated 11 years ago with a bachelor's degree in Communications from the University of Utah. His overall GPA was 3.5, with a 3.7 in his major. Since graduating, James has held two positions. The first was in the Public Relations department of the Salt Lake City Police Department. His responsibilities in this position were to send out press releases to the media concerning department investigations and to assist in dealing face-to-face with reporters. Similarly, his second position involved Public Relations for the Phoenix Police Department. The funding for the Public Relations department was cut two-months ago, and because of lower seniority, James was let go. He has excellent references from both of his previous employers. James has indicated that he is interested in moving into a position in a private sector organization. He feels that given his educational background and work experience, he is qualified for this position. The recruiter felt that James had excellent communication skills and his writing samples looked equally good. Additionally, in his previous jobs he worked quite independently, having to respond at a moment's notice to crisis situations which needed to be communicated to the press.</td>
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<td>3</td>
<td>Colleen Meriweather</td>
<td>Colleen Meriweather is 21 years old and has just graduated from the University of Washington with a bachelor's degree in English. Her overall GPA was 3.5, with a 3.6 in her major. Last summer, she was an intern for a company in Seattle in the technical writing department. As an intern her primary responsibility was to assist one of the senior technical writers on special projects. Basically, when he needed something done he would tell Colleen exactly what should be done and she would accomplish it. She told the recruiter that this was a wonderful experience and that she had learned a lot about the area and wanted to continue in it for a career. The recruiter thought that Colleen had a bubbly personality. She struck the recruiter as somewhat young and &quot;starry-eyed&quot;.</td>
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</table>
David Goodrick is 26 years old and graduated four years ago from the University of California at Long Beach. His major was General Business with a minor in communications. His overall GPA was 3.3, with a 3.0 in his major. Since graduating, David has been employed with one of your competitors in the computer industry in the Los Angeles area. He has had various positions in this company, having first started in the human resources department. His latest position has been in the technical writing area. David chose this area because he thought it would be more interesting than the work he had been doing, and he has always enjoyed writing. David has indicated that he would like to continue in the technical writing area. He would like to move to the southwest, and is particularly interested in your firm. Furthermore, he feels that he fits the position well, given his educational background and work experience. Also, from his various positions with this company he has learned quite a bit about computer systems. The recruiter thought that David had a variety of interests, and wasn't sure if he was truly committed to the area of technical writing. He appeared to be somewhat of a drifter in terms of job assignments, always looking for a new challenge.

Gerald Moran is 24 years old and has just graduated from the University of Hawaii with a major in Communication and a minor in English. His overall GPA was 2.9, with a 3.1 in his major. Gerald’s prior work experience consists of six years as a lifeguard on Waikiki beach while he went to college. The recruiter found Gerald to be very outgoing and friendly. He was like a “regular” guy. According to Gerald, his career goal is to start in management, with the eventual goal of being a vice-president or to own his own business. When asked specifically about his qualifications for this position, Gerald felt that his educational background had prepared him fully. He thought that as long as he was told exactly what to do, he could do it well. He also thought that his interpersonal and supervisory skills from lifeguarding would transfer easily into a job in the private sector.
Sarah Brady is 30 years old and graduated 9 years ago from Oregon State University with a major in English. Her overall GPA was 3.6, with a 3.5 in her major. After graduation, Sarah was employed for seven years with Boeing as a technical writer. Two years ago she resigned to pursue her Master's in Business Administration (MBA) at Oregon State. She has just finished her MBA, graduating at the top of her class. Sarah relocated to Phoenix a month ago to be with her significant other. She has just started job hunting and seems interested and serious about this position. The recruiter thought that Sarah was a vibrant, intelligent woman. She seemed very career oriented and appeared to have researched the company fully. She asked good questions and was very positive about the company. She also has good references from her manager at Boeing and professors at Oregon State. Her manager at Boeing stated that she was a very directed, capable woman who needed very little supervision. The manager summed up her reference by saying that she was a real "go-getter".
## MANAGER INFORMATION

### COMPUTER SCIENCE DEPARTMENT

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<tr>
<th>Num</th>
<th>Manager(Div)</th>
<th>Profile</th>
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<tbody>
<tr>
<td>1</td>
<td>Emma Filson (Hardware)</td>
<td>Emma Filson will be the head of the Computer Science - Hardware department. Emma has been employed by the company for 15 years and has the reputation of ruling with a firm hand (sometimes referred to as an iron grip). She is considered to be a tough, autocratic leader. It appears that her employees in the past have not liked her, but they did respect her and appeared to be fairly loyal to their department. Although she can be intimidating and unapproachable, it is thought throughout the company that if her employees are good, she will take better care of them (in terms of rewards) than any other manager. For instance her top employees consistently get the best pay increases in the company. Furthermore, she is known for giving credit where deserved, unlike some other department heads. On the other hand, Emma is very intolerant of below average or even average performance. She gives her all to the company and expects the same from her employees. Given this, you suspect that Emma will prefer to hire entry-level managers with experience. Although having experience is not a prerequisite for the job, you do not think she would be good at training and mentoring an inexperienced employee. On the other hand, you know that given the number of computer science managerial openings, the firm could not afford to hire too many entry-level managers with extensive experience. There are four entry-level management openings in Emma’s department.</td>
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<td>2</td>
<td>Jerry Firestone (Software)</td>
<td>Jerry Firestone will be the Computer Science – Software department head. Jerry has been employed by your company for 25 years. Jerry started in the company as a programmer, and after 8 years became supervisor. Since then, he has slowly moved up through the management ranks. He has been transferred from headquarters to the new position as head of the department. This promotion has been a long-time coming and Jerry is very excited about his new position. Jerry views this as a short-term appointment, for 5-7 years, until he can opt for early retirement and spend more time with his family. Jerry is extremely well-liked by his colleagues and subordinates. In the past, he has had very few problems in dealing with his employees. He is known as a kind, democratic manager who watches out for his employees’ best interests. Although you are not concerned about any personality problems between Jerry and his new managers, you are worried about finding competent, highly-skilled employees. In your assessment, Jerry's technical expertise is not what it once was. He has not kept up with the new developments that have occurred over the years; thus, you want to ensure that his managers can compensate for this. In this way, the company will remain at the cutting edge of software development. There are four entry-level management openings in Jerry’s department.</td>
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<td>Paul Hiese</td>
<td><strong>Paul Hiese</strong> will be the head of the <strong>Accounting</strong> department. He has been quite vocal in his requirements for candidates to fill the <strong>two entry-level management accounting positions</strong>. Paul only wants people from the top accounting schools in the country with little or no work experience. He also wants fairly young employees, basically just out of school so that he can mold them to his liking. Personally, you don't like Paul and do not agree with his requirements for candidates. You tend to think Paul is elitist and too aggressive and controlling. In the past, whenever Paul says jump, his employees do -- even if they know that what he is asking is not the best thing for the company. You think that Paul has his own agenda and is trying to build and control a little kingdom of his own so that he can keep moving up in the company. You don't feel that a candidate has to be from a top school to be good; in fact, some of your best employees have come from average schools -- but they know their area and work hard. Also, hiring someone with a proven track record as an accountant might actually benefit the company. If you can get someone who has already been trained and tested, why not? However, from past experience with Paul, you know that if you hire someone not to his liking he will make it awfully difficult for that new employee.</td>
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|   | Sheila Morgan | **Sheila Morgan** will be the head of the **Finance** department. Sheila has struck you as extremely professional, confident, and assertive. In the past, she has run her departments very smoothly and seemed to be highly respected by all her employees. However, during the last year she has had quite a few problems with her employees. It seems that many of her male employees resent having a female boss and have been giving her a hard time. You hope that this situation will not transfer over to the Phoenix site, but some of her more hostile male employees will have to move also to the Phoenix site because of the particular skills they possess. Currently, the situation has improved slightly, but your are not sure if things will totally improve without some major personnel changes. As for filling the entry level management position, you are not sure whether the sex of the candidate will affect the situation. That is, if you hire a female will that further alienate the male employees or will that provide more support for Sheila? Similarly, what effect will hiring a male for the position have? It might satisfy the male employees, or it might create a worse situation if the employees support a male manager but not Sheila. There is **one entry-level management Finance position**. |
Hugh Barber will be the Engineering — Product-Testing department head. Product-testing has traditionally been an area in which people start but then move on to systems or product development after gaining a few years of experience. Therefore, individuals possessing technical skills (e.g., circuitry, programming, application and evaluation of components) but little or no work experience tend to be hired. You are not very excited about having Hugh in the Phoenix facility and feel that it is going to be hard to hire enough managers who can deal with him. Hugh is being transferred from the Buffalo, New York site. The Buffalo site was just opened four years ago. From looking over Hugh’s personnel file, it seems that he is always transferred to the newest site. He is the son-in-law of the CEO, and it seems that it is much easier to just transfer him out of a site; rather than try to fire him and incur the wrath of the CEO. So you are stuck with him, until—if ever, the company opens a new facility. Hugh has a reputation of being very hard to work with. He has a bad personality and is very demanding of his employees. The major problem is that Hugh is a fairly competent engineer, but an incompetent manager. He is very insecure about his position and, therefore, is threatened by anyone who is good. He is always afraid that his position will be undermined and he’ll be made to look like a fool. Given this, Hugh has a tendency to take personal credit for his employees’ achievements. Furthermore, he is very bad about rewarding his top performers and seems to personally resent their achievements. You know that Hugh would like “drones” rather than superstars who want the spotlight. You also know that you need to have competent entry-level engineering managers if the product-testing department is going to function effectively. Now all you have to do is figure out how to reconcile these two demands—which will not be easy. There are three entry-level management openings in Hugh’s department.

Jane Monroe will be the Engineering — Systems department head. Systems requires both technical skills (i.e., computer language abilities, applications and evaluations) and a lot of paperwork (e.g., writing procedures, specifications and reports). It also helps to have a fairly good personality and appearance since there is a lot of ongoing communication between the system engineers, customers, and other departments. Jane has been on the fast track ever since she joined the company 10 years ago. She is one of the few department heads in the company with a Ph.D. (in computer science), and this has helped in her rapid rise through the corporate ranks. Besides being the most educated department head, Jane is the youngest—having just turned 40 this past year. Although because of her age she often finds that she has to prove herself, typically it only takes a brief time before colleagues and subordinates come to respect her. She is extremely knowledgeable in her technical area and has become a very good manager. She has been excellent at encouraging her employees to pursue advanced degrees, and to continue to take night classes to up-date their systems knowledge. In the past, her work groups have been one of the most productive and innovative in the company. Given her background and values, you know that Jane will want highly educated employees. As for experience, you don’t think that will be as high a priority for Jane, since she is vocal in stating that if an employee has the appropriate knowledge, with some training, they can do anything. There are three entry-level management openings in Jane’s department.
John Simpson will be the Engineering – Product Development department head. Product development traditionally needs innovative/flexible individuals who have both the creativity and expertise to develop new products. In most product development departments Masters or even Ph.D.s are desirable. Another important factor is personality and appearance, since once new products are developed, the design engineers have to sell their developments to the rest of the company before they are fully accepted. He has been with the company for thirty years. John is from the old-school, believing that book knowledge is of little value in the real world. What he feels employees need is to get their hands dirty and learn the business from the ground up. His views reflect his own experience. He started in the company straight from high school, working in the manufacturing department. With the help of other employees, he eventually taught himself how to program and moved into the computer science area. From there, he slowly was promoted upward through the management hierarchy. He is extremely proud of his achievements, and doesn’t like those “college boys” telling him that they know more than he does. He is very competent, and all of it was self-learned. He has been a department head for the past five years, primarily at the Albuquerque facility. John is a strict, demanding department head, but he is very well respected by his subordinates. His no-nonsense attitude has resulted in his department consistently achieving above average performance. There are four entry-level management openings in John’s department.

Edward Morrill will be the head of the Technical Writing department. He is very anxious to have the two entry-level management positions filled as quickly as possible. They expect to be overloaded with assignments during the first 6 months of opening and will need as much technical and managerial expertise as possible. In fact, it would be ideal, although not necessary, if the new employees had some knowledge of computer systems. Edward has struck you as very easy going and laid back. Moreover, he dislikes having to be controlling or autocratic with his employees. His philosophy is that all employees should be motivated and interested in challenging work. Therefore, he tends to have a hands-off approach and lets things flow naturally. Historically, his department had been composed of very skilled, independent individuals, so this management style was very successful.
APPENDIX G

QUESTIONNAIRE 1
(Questionnaire 1 – given after Practice Trial and Goal Manipulations)

**QUESTIONNAIRE 1**

1. Participant #: _______

**GENERAL INSTRUCTIONS**

This questionnaire is aimed at assessing your perceptions of the task, your supervisor, and the study in general. Please read each question carefully and **answer each question honestly**. There are no right or wrong answers. For each item, circle the number that best matches your thought or opinion. Remember that your name is not on this survey and that your responses will be kept confidential.

For the following questions, indicate the degree to which you were given the chance to provide your input in the goal setting process.

<table>
<thead>
<tr>
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<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not at all</td>
<td>Not very much</td>
<td>Neutral</td>
<td>To some degree</td>
<td>Very much so</td>
</tr>
</tbody>
</table>

2. Were you able to express your views and feelings during the goal-setting procedure?  

3. Have you had influence over the goal that was actually set during the goal setting procedure?  

For the following questions, indicate the degree to which you feel that the goal setting procedure was fair or unfair using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not at All Fair</td>
<td>Slightly Unfair</td>
<td>Neither Fair nor Unfair</td>
<td>Slightly Fair</td>
<td>Fair</td>
<td>Extremely Fair</td>
<td></td>
</tr>
</tbody>
</table>

4. How fair were the procedures used to set your goal?  

5. To what extent do you consider the goal-setting process to be fair?  

Next, indicate your agreement with each of the following statements concerning how knowledgeable you feel you are about the task using the scale below which is different from the previous questions.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td>Slightly Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

6. Compared to most I probably know more about this task.  

7. I do not feel very knowledgeable about this task.  

8. I probably know everything there is to know about this task.  

9. To be honest I am quite confused about what to do.  

10. I would consider myself as an “expert” on this task.
Indicate how strongly agree or disagree with each of the following statements about your supervisor using the scale below:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>11. My supervisor pays attention to what I am saying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. My supervisor encourages me to exchange ideas and opinions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. My supervisor is willing to listen to my task-related concerns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. My supervisor encourages me to develop new ways of doing things.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. My supervisor encourages those he supervises to work hard.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. My supervisor seems to be concerned about my welfare.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. My supervisor is helpful when it comes to getting the job done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX H

QUESTIONNIRE 2
(Questionnaire 2 – given after Main Trial and before Debriefing)

**QUESTIONNAIRE 2**

Participant #: 

---

**GENERAL INSTRUCTIONS**

Similar to the first questionnaire, this questionnaire is aimed at assessing your attitude regarding the task, the experiment in general as well as information about yourself. Please read each question carefully and **answer each question honestly**. There are no right or wrong answers. Unless instructed otherwise, for each item, circle the number that best matches your thought or opinion. Remember that your name is not on this survey and that your responses will be kept confidential.

Read each of the words below and, instead of circling your response, write your answer in the blank provided next to that word. For each word, indicate the extent to which **you currently feel that way**: that is, at the present moment. Use the following scale and write the number (1, 2, 3, 4, or 5) that best matches your feelings in the space next to each word (items 18 – 37).

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>very slightly or not at all</td>
<td>a little</td>
<td>moderately</td>
<td>quite a bit</td>
<td>extremely</td>
</tr>
</tbody>
</table>

- **interested**
- **distressed**
- **excited**
- **upset**
- **strong**
- **guilty**
- **scared**
- **hostile**
- **enthusiastic**
- **proud**
- **irritable**
- **alert**
- **ashamed**
- **inspired**
- **nervous**
- **determined**
- **attentive**
- **jittery**
- **active**
- **afraid**
Similar to the above, Indicate how strongly you agree or disagree with each of the following statements about your supervisor and the task using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

38. I feel a personal obligation to do whatever I can to help my supervisor by achieving my goal. 1 2 3 4 5 6 7
39. I owe it to my supervisor to give my 100% to achieve my goal. 1 2 3 4 5 6 7
40. I have an obligation to the supervisor to ensure that I produce high quality work. 1 2 3 4 5 6 7
41. I owe it to the supervisor to do what I can to help by doing well. 1 2 3 4 5 6 7
42. I would feel guilty if I did not meet my performance goal. 1 2 3 4 5 6 7
43. My only obligation to the supervisor is to do the minimum amount of work required. 1 2 3 4 5 6 7

Indicate how strongly you agree or disagree with each of the following statements regarding the Human Resource Staffing task using the same scale.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

44. I feel totally absorbed in the task. 1 2 3 4 5 6 7
45. I can feel myself getting into the flow of what I'm doing. 1 2 3 4 5 6 7
46. I can't seem to focus on the task. 1 2 3 4 5 6 7

People differ in the degree to which they find certain performance levels more or less attractive. Please indicate how attractive it would be for you to obtain the following scores on the next 30 minute trial of the staffing task. All things considered, how good would you feel about achieving these different levels of performance? For each item, write the number that best matches your feelings in the blank at the end of each item using the scale below.

<table>
<thead>
<tr>
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<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all Attractive</td>
<td>Slightly Attractive</td>
<td>Neutral</td>
<td>Fairly Attractive</td>
<td>Very Attractive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

47. How attractive is making 8 high quality matches to you? 
48. How attractive is making 10 high quality matches to you? 
49. How attractive is making 12 high quality matches to you? 
50. How attractive is making 14 high quality matches to you? 
51. How attractive is making 16 high quality matches to you? 
52. How attractive is making 18 high quality matches to you? 
53. How attractive is making 20 high quality matches to you?

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Next, indicate how confident you are of attaining those same various levels of performance on the next trial of the task. For each performance level, write down the number between 0 and 100 that best describes the probability of your obtaining AT LEAST that performance level. Use the anchors below to help you determine your answers.

<table>
<thead>
<tr>
<th>0</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>No chance at all</td>
<td>A slight chance</td>
<td>A 50/50 chance</td>
<td>A good chance</td>
<td>Completely certain</td>
</tr>
</tbody>
</table>

54. What are the chances in 100 that you will make 8 high quality matches?

55. What are the chances in 100 that you will make 10 high quality matches?

56. What are the chances in 100 that you will make 12 high quality matches?

57. What are the chances in 100 that you will make 14 high quality matches?

58. What are the chances in 100 that you will make 16 high quality matches?

59. What are the chances in 100 that you will make 18 high quality matches?

60. What are the chances in 100 that you will make 20 high quality matches?

Indicate how strongly you agree or disagree with each of the following statements concerning the goal you are trying to achieve on the next trial of the task (the same goal as the previous trial) by circling the number that best matches your feelings using the scale below:

<table>
<thead>
<tr>
<th>1</th>
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<th>3</th>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

61. It is hard to take this goal seriously.

62. Quite frankly, I don't care if I achieve this goal or not.

63. I am strongly committed to pursuing this goal.

64. It would not take much to make me abandon this goal.

65. I think this goal is a good goal to shoot for.
When performing the Human Resources Staffing task, people sometimes find it helpful to develop and use task strategies. A task strategy is essentially a “plan of attack” for performing the task. While performing the task during the previous trial, did you identify and try using one or more strategies? If so, we would like to hear about them.

To help you recall the strategies you actually used, the following list is provided. Place a checkmark (✓) next to the strategy that most closely matches the one (or ones) you actually used to perform the task.

If the list does not describe a particular strategy that you used, please use the blank spaces provided to list the strategy or strategies that you actually used to perform the HR Staffing task. If you need more space, feel free to use the back of this page.

- [ ] Write key notes down about each candidate.
- [ ] Read the manager information first, then, the candidate information.
- [ ] Read the candidate information first, then, the manager information.
- [ ] Look for personality information for both managers and candidates first.
- [ ] Look for the smallest number of positions to place the candidates to.
- [ ] Reject everyone first, then, go back and accept the ones that are qualified.
- [ ] When reading about the candidates, look for information that stands out.
- [ ] Take all sheets out of the binder to make it easier to refer to each description.
- [ ] Prioritize candidate description – e.g., experience, education, motivation.
- [ ] Time management: Reject the most obvious candidates first.
- [ ] See what the manager is looking for and focus on that information only.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Brief Description of the Strategies You Actually Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
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</tbody>
</table>
Indicate how strongly you agree or disagree with each of the following statements concerning the process that was used in determining your goal for the two Main Trials of the human resource staffing task.

<table>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

66. My supervisor gave me a chance to express my opinion regarding the goal that was set.  
1 2 3 4 5

67. Compared to my supervisor, I had complete control in deciding on the goal that was set.  
1 2 3 4 5

68. I feel that I really participated in setting the goal.  
1 2 3 4 5

This final set of questions is designed to gather general background information about yourself. Recall that your name is not on this questionnaire and that your responses will be kept completely confidential. Please fill in the blank or check the option that best describes you.

69. Have you ever performed a task similar to the HR Staffing Task in a real work-setting?  
No____ Yes____

70. Have you ever participated in a study involving a task similar to the HR Staffing Task?  
No____ Yes____

71. What is your Major? _________________________ (If undecided, please write “U”)

72. What is your cumulative GPA at Ohio State? __. __ __

73. What was your overall score on the SAT _____ ACT _____ (leave one or both blank if you did not take these tests or cannot remember).

74. When do you expect to graduate (Please indicate the year and quarter)?  
Quarter: Fall____ Winter____ Spring____ Summer____; Year: ______

75. Gender: Male_____ Female_____  

76. Age: _______

77. Were you born in the U.S.?  
No_____ Yes____ (if yes, ignore the remaining items).

78. If no, what is your home country? ________________________________

79. If no, for how many years have you lived in the U.S. _____ years

80. Is English your first language?  
No____ Yes____
APPENDIX I

DEBRIEFING FORM
Thank you once again for your participation!! The study you just completed examines the effects of participation in decision making on task performance. To study those effects, differing degrees of participation in goal setting will be compared to non-participation to see whether any differences result. Participation, in this study, was manipulated in terms of the degree of influence that you had in deciding your performance goal. There are thought to be a number of positive outcomes associated with allowing people to voice their opinions as well as actually giving them a choice in the decisions that affect them.

If you were in one of the six “participation” conditions, you were allowed to “give” your input to varying degree. If you were in the “non-participation” condition, however, you were simply given a performance goal without any input from you. The two questionnaires you filled out contained items related to (a) your emotional reaction, (b) the degree of fairness of the procedure, (c) your understanding of the task, and (d) whether you were able to formulate and use task strategies as a result of your participation. These are processes that are thought to result from participation and will help us understand how and why participation can affect performance. Once the data collection is complete, all of this information will be analyzed along with your performance on the task to see if participation actually makes a difference.

You are probably wondering why you were initially told that you would be performing THREE trials when in fact you only performed TWO trials. This minor “bluff” was necessary for two reasons. First, we couldn’t ask the things we did in the second survey if you did not think you would be performing the task again. For example, it would not have resulted in accurate responses had we asked about your commitment to a goal you were no longer trying to achieve. Asking all of our questions in one questionnaire between the Practice and Main Trials would have created other problems and reduced the validity of our findings. The other reason for creating the false impression that there would be another trial is that in some instances, knowing that the current trial is your last may influence how you approach and perform that trial and we did not want those effects to confound the effects of participation we are studying.

We didn’t think that you would mind finishing the study earlier than expected. Nonetheless, we hope that this procedure did not inconvenience you or make you feel uncomfortable in any way. If so, please feel free to bring it up to the experimenter. If knowing in advance that you would only perform TWO trials instead of THREE would have changed your willingness to participate in this study, please share that information with the experimenter.

We truly appreciate you taking the time to participate in this experiment. We hope that the above explanation was clear and complete. In closing we ask that you not share what you know about this study with anyone who may become a participant over the next twelve months as doing so would compromise the results and the conclusions that can be drawn from this study. If you think of any questions about this study after you leave, please feel free to contact the co-investigator [Steve Jeong] at (614) 571-6722 or Jeong.36@osu.edu. You may also call the Office of Responsible Research Practices at (614) 688-4792 if you have any complaints or questions about your rights as a participant. Thank you.