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By

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ABSTRACT

AN INVESTIGATION OF THE INFLUENCE OF SELF-OTHER FEEDBACK CONGRUENCE ON FEEDBACK ACCEPTANCE

By

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Performance feedback acceptance is generally considered an integral component in the performance feedback process. Little research has considered the factors that influence acceptance of feedback from an external source or the consequences of external feedback acceptance. The present research used a control systems perspective to investigate the influence of congruence between external feedback and self-assessments of performance on feedback acceptance. College students were given false feedback regarding their performance on an in-basket exercise. This feedback was varied in terms of feedback sign, feedback discrepancy and source credibility. Results showed that (a) feedback sign was positively related to feedback acceptance, (b) feedback discrepancy was negatively related to feedback acceptance, (c) self-confidence interacted with feedback discrepancy to influence feedback acceptance, (d) external feedback interacted with acceptance of external feedback to influence consensus judgments made regarding performance and (e) self-assessment of performance carried more weight than external judgments of

performance in influencing consensus performance judgments. Implications of these findings as well as future research needs and study limitations are discussed.

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My family has taught me that life is a series of choices and that I can choose to be whatever I would like. I thank them for their support in any decision I made and any direction I chose to pursue. I am sure that at times they had more confidence in me than I did in myself. They

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CHAPTER 1: INTRODUCTION

Problem Overview

Performance feedback is well established as an important determinant of effective performance (e.g. see Ilgen, Fisher and Taylor, 1979 for a review). Investigations of performance feedback have demonstrated its importance in areas such as job design (Hackman & Oldham, 1976), organizational development and motivation (Locke, 1968).

Ilgen et al. (1979) contend that the influence of feedback on behavior is a complex process. They propose several cognitive variables that intervene between feedback and performance. An important variable which mediates the feedback-performance relationship is feedback acceptance. Feedback acceptance refers to the recipients' evaluation of the accuracy of the feedback that is provided.

Ilgen et al. (1979) point out that feedback acceptance is influenced by characteristics of the feedback source, message and recipient. One issue that has not been addressed by feedback researchers is the influence of congruence of the message from different feedback sources. It is likely that incongruent feedback from different sources influences feedback

acceptance (perceived feedback accuracy).

The majority of organizational research investigating the influence of performance feedback has been concerned with the joint influence of feedback and goals on performance. Becker (1978) investigated the influence of goals and feedback on energy conservation. He found that participants with a difficult goal who were given information regarding the number of kilowatt hours they used, reduced their consumption significantly more than participants with difficult goals only. Other studies of the joint effect of goals and feedback have reached similar conclusions (Erez, 1977; Komaki, Barwick & Scott, 1978; Strang, Lawrence & Fowler, 1978). Upon reviewing the literature regarding the relationship between goals and feedback, Locke and his colleagues concluded that "neither knowledge of results nor goals alone are sufficient to improve performance" (Locke, Shaw, Saari & Latham, 1981, pg. 135).

Investigations of the influence of performance feedback from a goal setting perspective have generally overlooked the influence of variables which mediate the relationship between feedback and performance. One reason this issue has been overlooked is that these studies have primarily been conducted with tasks for which the criterion is quantifiable (Ilgen & Moore, 1987). Therefore, the feedback could be easily compared to goals in determining the adequacy of performance. As such, perceptual

processes on the part of the feedback recipient become less relevant. However, for many jobs, especially those for which few objective measures of performance exist, interpersonal feedback is relied upon (Larson, 1984). Much research attests to the fact that performance feedback from others is an important determinant of job performance and job-related attitudes (See Ilgen et al., 1979 for a review). The cognitive evaluation of the feedback, specifically feedback acceptance, becomes an important consideration when interpersonal feedback is considered and when objective information is not available (Festinger, 1954).

A main assumption of self-management theorists is that individuals evaluate their own performance with respect to standards and provide self-feedback (Manz, 1986). Investigations have found the self to be the most available, useful and trustworthy source of feedback (Greller & Herold, 1975; Hanser & Muchinsky, 1978; Herold, Liden, & Leatherwood, 1987). Self-assessments of performance have also been found to influence affective, cognitive and behavioral reactions to feedback from other sources (Brickman, 1972; Shrauger, 1975; Swann & Read, 1981).

The feedback individuals perceive at any given time will likely be a composite of information selectively obtained from a variety of sources and weighted by its perceived utility (Taylor, Fisher & Ilgen, 1984). The interaction between feedback provided by oneself and feedback provided

by other interpersonal sources could have important implications for the acceptance of performance feedback. A lack of congruence between these feedback sources could influence the relationships between the feedback itself, characteristics of the feedback source, characteristics of the feedback recipient and feedback acceptance.

The purpose of this study is to investigate the influence of self-other feedback congruence on feedback acceptance. The congruence between self-evaluations of performance and other evaluations of performance is expected to interact with source credibility and individual self-certainty to influence feedback acceptance and the ultimate judgment one makes regarding his/her performance.

The following section discusses the previous work which has been conducted on feedback acceptance. Limitations to this line of research are noted. Next, literature relevant to self-other feedback congruence is reviewed. Control theory is presented to provide a theoretical perspective for investigating the influence of feedback source congruence on feedback acceptance. A model is outlined which delineates the expected relationships and the predicted hypotheses are specified. Finally, the method, results and conclusions drawn from studying these relationships are presented.

Performance Feedback

Performance feedback is information regarding how well goals are being met (Ashford & Cummings, 1983). While performance feedback is a relatively simple concept, it can be thought of in different contexts. Performance feedback can be assessed in terms of its purpose, in terms of individual cognitive and behavioral reactions to the feedback or in a number of other ways.

The provision of performance feedback serves two primary functions. First, it provides information regarding the adequacy of performance. Informational feedback directs behavior toward a desired state or goal (Locke, et. al., 1981; Locke, 1968). According to Ashford and Cummings (1983) the informational value of performance feedback will vary as a function of the uncertainty an individual experiences about issues surrounding goal attainment.

The second function of performance feedback is motivational (Ilgen et al., 1979). From this viewpoint feedback can act as an incentive, reward or sanction. From the perspective of the organization the ultimate purpose of providing performance feedback is to enhance performance.

The simple provision of performance feedback may not lead to desired performance improvements. Ilgen et al. (1979) posit feedback acceptance as an important mediator of the performance feedback-performance relationship. The degree to which performance feedback has performance enhancing effects is fundamentally a function of its acceptance.

The following section discusses feedback acceptance outcomes and determinants. Although goal acceptance has received considerable attention as an important moderator of the goal setting-performance relationship (Earley, 1985; Erez & Zidon, 1984) feedback acceptance has received relatively little research attention as an important variable in the performance feedback-performance relationship. The research that has addressed feedback acceptance is discussed next and areas in need of more research attention are noted.

Performance Feedback Acceptance

Feedback acceptance refers to the feedback recipient's belief that the performance evaluation provided is an accurate portrayal of his/her accomplishments (Ilgen et al., 1979). Feedback acceptance is an important organizational objective in so far as it leads to goal attainment. Outcomes associated with feedback acceptance are discussed next. Once it has been established that feedback acceptance leads to important

organizational outcomes, determinants of feedback acceptance will be outlined.

Feedback Acceptance Outcomes

Ilgen et al. (1979) propose that feedback acceptance plays an integral role in the relationship between the provision of performance feedback and performance improvements. They also posit the desire to respond to the feedback and intention to respond to the feedback as two important mediators of the feedback acceptance-performance relationship. Organizational research has not investigated the cognitive outcomes associated with feedback acceptance (desire or intention to respond to the feedback) nor the behavioral outcomes of feedback acceptance (performance improvement). Stone and Stone (1984) suggested that greater feedback acceptance should result in more changes in self-perceptions and behaviors but did not empirically test this proposition.

Self-Evaluation Change. Social psychological research has demonstrated that evaluative feedback that is perceived as accurate influences many dimensions of self-perception (see Shrauger, 1975 for a review). For example, Harvey and Clapp (1965) asked subjects to describe themselves, how they expected others to rate them, and how they hoped others would rate them. They found that subjects with positive expectancies raised their self-ratings more following feedback that was

more positive than expected. Subjects expecting negative evaluations lowered their self-ratings more following feedback which was more negative than expected. Following strongly discrepant feedback, there were no differential changes in self-assessments. While feedback acceptance was not assessed in this study, their findings suggest that feedback acceptance can lead to changes in self-evaluations.

Self-assessment change may be desirable from an organizational perspective. If self-views were completely unchanging, people would never gain new knowledge about themselves. A primary function of performance feedback is to provide information. When performance feedback is accepted and changes in self-assessments occur, it is likely that the performance information will influence subordinates' future performance.

Behavior Change. Research has also overlooked the relationship between feedback acceptance and behaviors or behavioral intentions. Ilgen et al. (1979) suggest that once feedback is accepted, the intention to respond based on the feedback should be strong. The inclusion of the behavioral intention in their model recognizes the strong evidence that performance improvements are contingent on specific, difficult goals (Locke, 1968; Locke et al., 1981). If the feedback which has been accepted relates to specific, difficult goals, and the intention to improve

performance is evident, then barring any situational constraints, performance improvements should ensue. O'Reilly and Anderson (1980) reported that employees' perceptions about the accuracy of their performance appraisal evaluations directly moderated the relationship between the feedback received and subsequent performance.

Important organizational outcomes that can result from performance feedback acceptance have just been delineated. Since feedback acceptance can lead to cognitive and behavioral reactions by feedback recipients, the factors which stimulate feedback acceptance must be considered. There has been very little research attention identifying performance feedback acceptance determinants.

Feedback Acceptance Determinants

Feedback Sign. Much research on performance feedback has been concerned with feedback sign (e.g. DeNisi, Randolf & Blencoe, 1983; Stone & Stone, 1984). A well accepted finding is that positive feedback is more likely to be accepted and more accurately recalled than negative feedback (Ilgen et al., 1979).

For example, Stone, Guetal and McIntosh (1984) found sign of the feedback to be an important influence on feedback acceptance. They investigated the sequence of positive and negative feedback as it influences feedback acceptance. Their findings supported the hypothesis

that performance feedback conveyed in a positive-negative versus a negative-positive sequence is more accepted. They suggest that the defensiveness provoked by the initial provision of negative feedback (Kay, Meyer and French, 1965) blocks the likelihood of feedback acceptance.

Ilgen et al. (1979) suggest that the consistency of the feedback sign influences feedback acceptance. Consistency refers to whether the feedback presented in a performance evaluation session is all positive or negative (consistent) or a combination of the two (inconsistent). Ilgen et al. (1979) contend that when feedback is consistent, internal attributions are made and individuals are more likely to accept the feedback provided. This proposal, however, has not been empirically tested.

Source Credibility. Ilgen et al. (1979) also identified source credibility as an important determinant of feedback acceptance. Credibility can be broken down into a variety of dimensions but an important one for feedback acceptance appears to be expertise of the source (Giffin, 1967). Investigations of rater expertise which are described below, reveal relatively consistent findings.

Bannister (1986) carried out a study assessing the influence of performance outcome feedback on responses to feedback. One variable of interest in this study was credibility of the feedback source. Credibility was manipulated by telling undergraduate subjects that they were either

being evaluated by a 43 year old personnel vice president or by a college sophomore intern. Results indicated a small but significant difference between high and low source credibility on feedback acceptance, such that high credibility led to higher feedback acceptance ratings.

Stone et al. (1984) investigated the influence of feedback sequence and rater expertise on feedback acceptance. Source expertise was manipulated by varying the name, title and amount of experience possessed by the rater. Their findings revealed that when subjects believed ratings were provided by a high expertise source, greater feedback acceptance resulted than when subjects believed their rater had a low level of expertise.

Psychological Closeness. Research indicates that not only the credibility of the source but the psychological closeness of the feedback source influences reactions to performance feedback. (Greller, 1980; Greller & Herold, 1975; Hanser & Muchinsky, 1978; Herold, et al. 1987). Performance feedback can be provided from a variety of potential sources ranging from the company, supervisor, co-workers, task and self (Hanser & Muchinsky, 1978; Herold & Greller, 1977). The formal provision of supervisory feedback is the most prevalent approach for disseminating performance related information that is used in organizations (Cedarblom, 1982). This type of feedback is relied upon for many jobs, however other

feedback sources may be perceived as useful.

Studies have investigated the frequency or amount, consistency and perceived usefulness of feedback generated by a given source. Greller and Herold (1975) found that individuals relied most upon feedback sources that were psychologically close to them. According to Greller and Herold (1975), psychological closeness refers to the intrinsic nature of the feedback. Herold and Greller (1977) suggest that feedback sources can be arranged hierarchically according to psychological closeness from self, task, and co-worker to supervisor and organization respectively. Their findings suggest that individuals viewed feedback sources which were psychologically close as providing feedback that was more frequent, more consistent and more useful than psychologically distant sources of feedback.

In a related study, Herold et al. (1987) investigated how feedback recipients rate feedback sources on frequency or amount, consistency and perceived usefulness of feedback information. They found, consistent with previous research, that individuals viewed feedback from themselves (self-generated feedback) as more frequent, more consistent and more useful than any other source of feedback. Feedback from the task was next, followed by feedback from supervisors, co-workers and the organization respectively. As Herold et. al. (1987) note, little attention is paid to how

individuals can be their own sources of feedback because most organizational feedback systems are based on organizational and supervisory feedback. In addition, no research has yet looked at the influence of source of feedback on feedback acceptance.

Earley (1988) conducted one of the few studies assessing performance as a function of feedback source. Subjects in his study were telephone salespeople working for a magazine publisher. In this investigation he manipulated feedback source (self, supervisor) and feedback specificity (told exceeded or underproduced goal level, told exact number sold). The feedback source which Earley identifies as self-generated feedback would be better termed task feedback. It was computer generated feedback sought by salespeople which reports how many subscriptions they have sold. Earley (1988) found that feedback from the computer led to superior performance compared to feedback provided from a supervisor. This finding provides preliminary evidence that feedback from psychologically closer sources may lead to greater performance improvements than feedback from more distant sources.

The research on determinants of feedback acceptance leads to the following conclusions. Feedback acceptance is enhanced when the feedback provided is positive, when the feedback source is credible and when the source is psychologically close. These research findings leave

several issues unresolved. First, as Taylor, Fisher and Ilgen (1984) point out, organizations are most concerned with situations in which employees are performing below standard. Therefore, they should be most concerned with acceptance of negative feedback. Organizational research has not addressed how the acceptance of negative feedback can be enhanced. In addition, research has not addressed the possibility that feedback recipients may receive feedback regarding the same behavioral event from two or more sources. If this occurs, the potential for conflict exists.

The majority of organizational feedback systems are based on supervisory feedback, yet individual employees can and do assess their own performance. They also provide themselves with feedback regarding their performance which could potentially conflict with other feedback sources. The research by Herold, Greller and their associates indicates that individuals rely on self-feedback more than supervisory feedback. These investigations have found the self-feedback to be evaluated more positively than other sources of feedback (Greller & Herold, 1975; Hanser & Muchinsky, 1978; Herold, et al., 1987). Finally, the interaction of source credibility with other variables has received little attention. Ilgen et al. (1979) suggest that negative feedback may be more acceptable when the feedback source is credible but research has yet to be

conducted on this issue.

Self-Processes. Research conducted in social psychology may help us to address issues left unresolved by organizational research. Research in social psychology suggests that individuals are most willing to accept feedback which is similar to their own self-view. According to self-consistency theory (Secord & Backman, 1961) this tendency results from an individual's desire to maintain a consistent view of themselves. In fact, Swann and his colleagues (Swann & Read, 1981, 1982) have found that individuals bias their search of self-relevant information toward the acquisition of confirmatory data. In addition, they found that the retention of self-confirmatory information was longer than for disconfirmatory information. Finally, confirmatory information was viewed as more accurate (i.e. more acceptable) than disconfirmatory information.

Social psychologists have also identified self-certainty (Jones & Schneider, 1967; Marek & Mettee, 1972) as a potentially important determinant of feedback acceptance. Self-certainty refers to how confident an individual is in his/her self-assessment of performance. Jones and Schneider (1967) proposed that uncertainty regarding a particular ability results from unstructured cognitions about the ability. Therefore, individuals with low levels of self-certainty will be more receptive to

information (feedback) about their own competencies.

Jones and Schneider (1967) induced subjects to adopt low self-appraisals of performance on a social sensitivity task. Certainty was manipulated by either providing subjects with detailed negative feedback (high certainty condition) or limited negative feedback (low certainty condition). They found that desire to receive self-confirmatory information was higher for those in the high certainty group than for those in the low certainty group. Implications from this study are limited as the manipulation of certainty used in this investigation is confounded with specificity of feedback, so it is unclear whether subjects preferred feedback because it was specific or because they were more self-certain.

Maracek and Mettee (1972) also investigated the influence of self-certainty on reactions to feedback. They conducted a study in which subjects were asked to complete self-esteem questionnaires and to indicate their level of certainty about their responses. Individuals were then provided with success feedback. Subjects with low self-esteem who were certain about their self-assessment rejected or minimized success feedback and avoided future success while subjects who were uncertain accepted the success feedback. This finding suggests that self-certainty may differentially influence individuals' receptivity to feedback which is incongruent with their self-views.

Summary. A consideration of the research findings in the organizational sciences and social psychology leads to several conclusions. First, characteristics of the feedback message, especially the influence of feedback sign, are well established as influencing feedback acceptance, but the acceptance of negative feedback has received little attention. The influence of both feedback recipient and source characteristics on feedback acceptance has received scant empirical investigation. In addition, the abundant evidence regarding superior and subordinate disagreements in performance assessment (See Fisher & Russ, 1987 for a review) suggests a need for studying the joint influence of source and recipient characteristics on feedback acceptance.

Social psychology research suggests that disagreement between self and other sources may be a function of preference for self-confirmatory information (Swann, 1982). This preference is influenced by the certainty with which an individual holds his or her self-view (Marek & Mettee, 1972). Research has shown that feedback which is discrepant from one's own self-view is less likely to be accepted than feedback which is congruent with one's self-view (Crary, 1966; Shrauger, 1975). A lack of consensus between self and other feedback sources should significantly influence the positive relationship traditionally found between feedback and performance. An understanding of the causes of feedback source

incongruence is needed to make predictions regarding the joint influence of the feedback recipient's self-feedback and feedback provided by another.

Feedback Source Congruence

This section considers the issue of self-other congruence in assessing and evaluating performance. First, the need for an inquiry into self-other feedback congruence is described. Second, several theories that may provide explanations for a lack of congruence are noted. Finally, the influence of self-other feedback congruence on outcomes such as feedback acceptance is discussed.

Congruence Deficiency

Information regarding the adequacy of one's own performance can be acquired in a variety of ways. The most common assumption is that performance information derives from the reaction of others to one's own behavior. A critical component of an individual's self-definition is the response of others to an individual's actions. This is the premise upon which most organizational feedback systems are based. This presumption is also the concept from which symbolic interactionism (Cooley, 1902; Mead, 1934) derives. Symbolic interactionists contend that individuals' self-perceptions develop from how <u>others</u> view them (the looking glass self).

While self-definition may derive from the responses of others, this does not necessarily mean that the self and any other single individual will agree. In organizational settings, agreement between superior and subordinate perceptions of subordinate performance is critical (Taylor, Fisher & Ilgen, 1984).

Research indicates that these individuals often do not agree. For example, Ilgen, Peterson, Martin & Boeschen (1981) assessed the correspondence between supervisors and subordinates reactions to performance feedback sessions. They found that supervisor and subordinate perceptions of these feedback sessions show little agreement. Supervisors' evaluations of the session were much more favorable than those of subordinates. In addition, their results demonstrated that overall written descriptions completed by superiors and subordinates immediately after the feedback session of how the appraisal session had progressed were significantly different.

Other evidence of self-other rating discrepancies comes from the self-appraisal literature. Levine, Flory and Ash (1977) found that self-appraisals have less variability than supervisor-based assessments. Numerous studies have also found that self-ratings tend to have higher mean values (leniency) than other appraisal methods (Prien & Liske, 1962; Thornton, 1968, 1980). In addition, self-assessments appear to

exhibit less halo error (defined as the intercorrelation among dimensions) than superior ratings of performance (Lawler, 1967; Parker, Taylor, Barrett & Martens, 1959). Harris and Schaubroeck (1988) recently conducted a meta-analysis of the relationship between self- and superior ratings of performance. Their results revealed only a moderate (.35) correlation between self- and superior assessments of performance.

In summary, these studies demonstrate that self- and superior ratings of performance are only somewhat related (Harris & Schaubroeck, 1988). If self-assessments are not solely based on the viewpoints of others, it would be useful to explore other bases for making self-evaluations.

Causes for Congruence Deficiency

Several theories have been proposed as explanations for the low congruence between self- and other assessments of performance (See Fisher and Russ, 1986 for a review of superior-subordinate agreement). The following section briefly describes several theories of self-assessment. The purpose of this discussion is not to identify which theory provides the "true" explanation for a lack of congruence between self and other feedback sources. Instead it lays the groundwork for understanding the joint influence of self- and other feedback on outcomes such as feedback acceptance.

The basic premise underlying the theories of self-assessment is that individuals utilize either self-protective strategies (Strube & Roemmele, 1985) or make self-serving attributions for their performance (Bradley, 1978). The cause of this egocentric bias have been ascribed to either motivational or cognitive processes. In either case, this bias influences the nature of self-evaluations which are made.

Motivational Theories. Self-consistency theorists contend that individuals attempt to maintain a fixed self-view (Korman, 1970). According to Korman (1970) individuals' self-assessments of performance are based on their level of task related self-esteem. If they have high task related self-esteem people will be motivated to seek feedback which indicates success. If individuals have low task related self-esteem they will be motivated to seek feedback which indicates failure, thereby confirming their initial self-view.

Dipboye (1977) questions this strong consistency point of view. He suggests that research purported to support the self-consistency view can also support a self-enhancement view of work motivation. A crucial test of self-consistency predictions would involve persons who would seek consistency even at the cost of failure or other negative consequences.

Some research evidence supports the view that individuals desire feedback which confirms initial self-expectancies (Shrauger, 1975). Swann

and Read (1981) found that people are more likely to attend to, encode and retrieve information if it is self-verifying. In addition, Swann and Read (1981) gave subjects an opportunity to seek feedback from interaction partners that would either confirm or disconfirm their self-conceptions. Subjects displayed a clear preference for feedback that would confirm their self-perceived emotionality and assertiveness. Traditional conceptualizationss of self-enhancement theory (Smith, 1968) have suggested that people have a basic desire to think of themselves favorably. Self-consistency theory is a similar theoretical position which posits that people are motivated to sustain their self-conceptions (Swann, 1982). The difference between these two positions can best be demonstrated in a negative feedback situation. Consistency theory states that negative feedback is accepted if an individual has negative expectancies (confirms expectancy of failure). Self-enhancement theory contends that negative feedback is not readily accepted because individuals are motivated to think of themselves favorably.

Research also demonstrates that individuals may avoid evaluative information about ability if this information is damaging to one's self-esteem. Subjects who believed that they were high in task related ability chose to engage in highly diagnostic tasks, but people who believed that they were low in ability avoided the opportunity to gather diagnostic

information (Meyer & Starke, 1982). In another study, subjects who were led to doubt their ability to maintain high scores similarly avoided diagnostic test items (Sachs, 1982).

Cognitive Theories. Another theory that may help to explain the differences between self- and other ratings of performance is attribution theory. Self-attributional bias is the tendency to attribute positive outcomes to oneself and negative outcomes externally to aspects of the situation beyond the individual's control. Jones and Nisbett (1971) provide evidence that "actors" and "observers" differ in their perceptions of the causes of behavior, therefore their evaluations of behavior will differ. They assert that "there is a pervasive tendency for actors to attribute their actions to situational requirements, whereas observers tend to attribute the same actions to personal dispositions" (Jones & Nisbett, 1971 p. 2). Actors are likely to emphasize situational constraints, conflicting pressures and role limitations while observers are more inclined to personalize the cause for success or failure.

Miller (1976) tested this proposition. Subjects were asked to take a social perceptiveness test. After testing was completed, subjects were either told that the test was a valid well established test or that it was a new, experimental and unvalidated examination. The experimenter then provided subjects with false feedback indicating that they had either done

well or poorly on the test. The results of the study indicated that successful outcomes were attributed more to internal factors and unsuccessful outcomes more to external factors. In addition, these tendencies were greater under high than under low ego involvement conditions. That is, high-involvement failure subjects (when test was presumably valid) made greater attributions for their performance to luck and less to ability and effort than did low-involvement failure subjects (when the test was presumably unvalidated). Similarly, high-involvement success subjects made greater attributions for their performance to ability than did low-involvement success subjects.

Finally, investigations of the role of self-schemas in self-assessments also reveal a rationale for differences found between self-assessment and external assessments of behavior. Markus (1977) takes a cognitive perspective postulating that an individual utilizes "self-schemata" (cognitive generalizations of information about the self) to organize personal data. These schemata are thought to bias the type of information attended to and encoded into memory. In her study, some subjects were chosen who had well-developed schemas of themselves as being dependent or independent (schematic) and others who had not articulated self-schema on either of these dimensions. Those possessing schemas for independence processed schema relevant information (independence

related adjectives) more quickly than information that was unrelated to the schema (dependence related adjectives). Subjects with schemas for dependence showed exactly the opposite effect. Aschematics did not differ in their processing of either type of information.

Rogers, Kuiper and Kirker (1977) also investigated the existence of self-schemas and the capacity of self-schemas to influence the encoding process. He asked some subjects to determine whether or not a series of sentences were self-descriptive and to use that decision as an aid to memory, while other subjects were not given those instructions. Subjects with these instructions had greater recollection of the sentences than those without the instructions. In a related study, Kuiper and Rogers (1979) investigated the processing of self- and other-referential information. Subjects in their study were presented with adjectives and asked to rate whether or not they were self-descriptive or descriptive of another. Their study demonstrated the self-referential adjectives were more quickly and easily recalled than other-referential adjectives. They concluded that self-referential data may be more cognitively available than other-referential information.

The previous review of these theories suggests that the reason self-other feedback may differ can be explained in motivational or cognitive terms. First, individuals may wish to protect or enhance their own self-

esteem. Therefore, their self-evaluations would tend to be higher than those provided by other sources. This conclusion is supported by research which has found self-assessments to be more lenient that other assessments. A second explanation for self-other feedback differences may be due to information processing differences. Self-relevant information has been found to be easier to encode and recall than other information. There are clearly many explanations for the lack of congruence between self- and other assessments. Given this information we now turn our attention to outcomes associated with the lack of congruence between self and other feedback sources.

Outcomes of Congruence Deficiencies

Research supports the view that people prefer events that are predictable and consistent with their expectations (Snyder & Swann, 1978). Of greatest interest here are data suggesting that the preference for information which confirms individuals' view of themselves, influences reactions to self-relevant feedback from others. Shrauger (1975) reviewed numerous studies which showed that individuals accept information which confirms their self-views much more than disconfirmatory information. External evaluations consistent with an individuals' self-view were also more accurately retained and given more credence than inconsistent feedback. It is interesting to note however, that affective reactions to

feedback did not necessarily indicate a preference for confirmatory feedback. Individuals showed higher levels of satisfaction with positive feedback than negative feedback even if initial self-evaluations were low.

Feedback which confirms individuals' self-perceptions is not only viewed as more accurate when received, but is actually sought after. Swann and Read (1981) conducted a study in which subjects assessed their own assertiveness and emotionality. They hypothesized that self-assertive individuals would solicit assertive feedback and self-unassertives would solicit unassertive feedback. Similarly, those who viewed themselves as emotional would seek consistent feedback, while those who believed they were unemotional would seek self-unemotional feedback. Consistent with these predictions subjects were more likely to seek social feedback which confirmed their own view of themselves than information which disconfirmed their view. Follow-up investigations (Swann & Read, 1981) revealed that individuals were even willing to pay for self-confirmatory feedback and regarded this type of information as especially informative.

Taken together, the research which has investigated individuals' responses to feedback which is incongruent with self-views suggests that this type of feedback may be rejected. People expect to receive feedback which confirms their self-expectancies. In fact, individuals seek

confirmatory feedback and may go to great lengths, such as paying for such information, in order to receive it. Swann and Hill (1982) found that if feedback confirmed self-conceptions passive acceptance of the feedback resulted. However, if the feedback disconfirmed self-conceptions, they fervently resisted the feedback by demonstrating they were not as the feedback made them out to be. The fact that individuals tend to reject feedback that does not coincide with the feedback they provide for themselves has important implications for organizational feedback systems. This implies that subordinates will reject performance feedback that is inconsistent with how they believe they have performed. From an organizational perspective it may be desirable for subordinates to accept and act upon the feedback which is received from superiors.

The next section presents the control theory model of self-regulation. Control theory is presented to provide an integrative framework for viewing message congruence among feedback sources. First, the basic tenets of control theory are presented. Then, organizational applications of control theory are discussed. Finally, control theory concepts are used to develop a model of individual reactions to self-other feedback congruence.

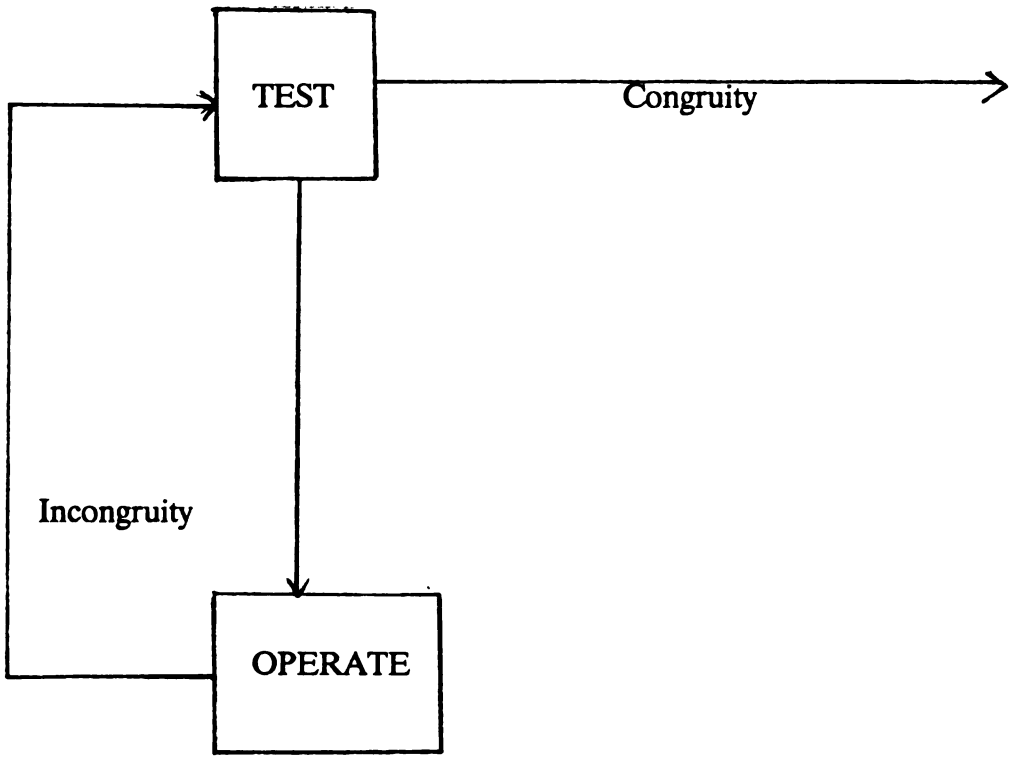
Control Theory

Cybernetics (Wiener, 1948) or control theory is a general approach to the understanding of self-regulating systems. It is based on the premise that regulation occurs between a standard and external feedback. The application of control theory to psychological issues has been slow in coming (Miller, Galanter & Pribaum, 1960; Powers, 1973). Only recently has control theory been utilized in the organizational literature (Campion & Lord, 1982; Hollenbeck & Brief, 1987; Klein, 1988; Lord & Hanges, 1987; Taylor, et al., 1984) to provide an explanation for the motivating influence of goals and performance feedback.

Primary Components of Control Theory

The negative feedback loop is the fundamental element of control theory. Miller et al. (1960) present the TOTE unit to describe the functioning of the negative feedback loop (See Figure 1). TOTE is an acronym for Test-Operate-Test-Exit. This model suggests that determining the appropriateness of an existing state is achieved by first testing for this condition. Testing is accomplished by comparing the current state with a referent state or goal. If a discrepancy exists then some operation is required to bring the current state in line with the referent. Testing is repeated until the test is passed. When the test is passed, control is no longer needed so control exits from this system.

Figure 1. The TOTE Unit. Adopted from Miller, Galanter and Pribaum (1960).



The feedback loop described above is said to be a negative feedback loop because the response to an error is an attempt to reduce the discrepancy (Powers, 1973). A positive feedback loop is a response to an error that attempts to increase the perceived discrepancy. Taylor et al. (1984) suggest that investigation of self-regulating systems in the workplace focus on discrepancy reducing systems. They point out that when considering the attainment of a performance goal, being above standard is desirable, however being below standard is undesirable.

The typical illustration utilized to portray the logic of control theory uses a thermostat. A thermostat is a device which controls the temperature in a given environment. The thermostat is set by its operator at a specific temperature such as 68 degrees. This temperature serves as the referent. The thermostat then senses the environment to determine if the temperature is consistent with the previously set standard. If a discrepancy is detected between the referent or standard and the sensed temperature, the thermostat operates by turning on the heat.

When a discrepancy is eliminated, control of the system is not relinquished as could be deduced from the examination of a single TOTE sequence. The environment is continually monitored or "sensed" to determine if conditions have changed resulting in additional discrepancies.

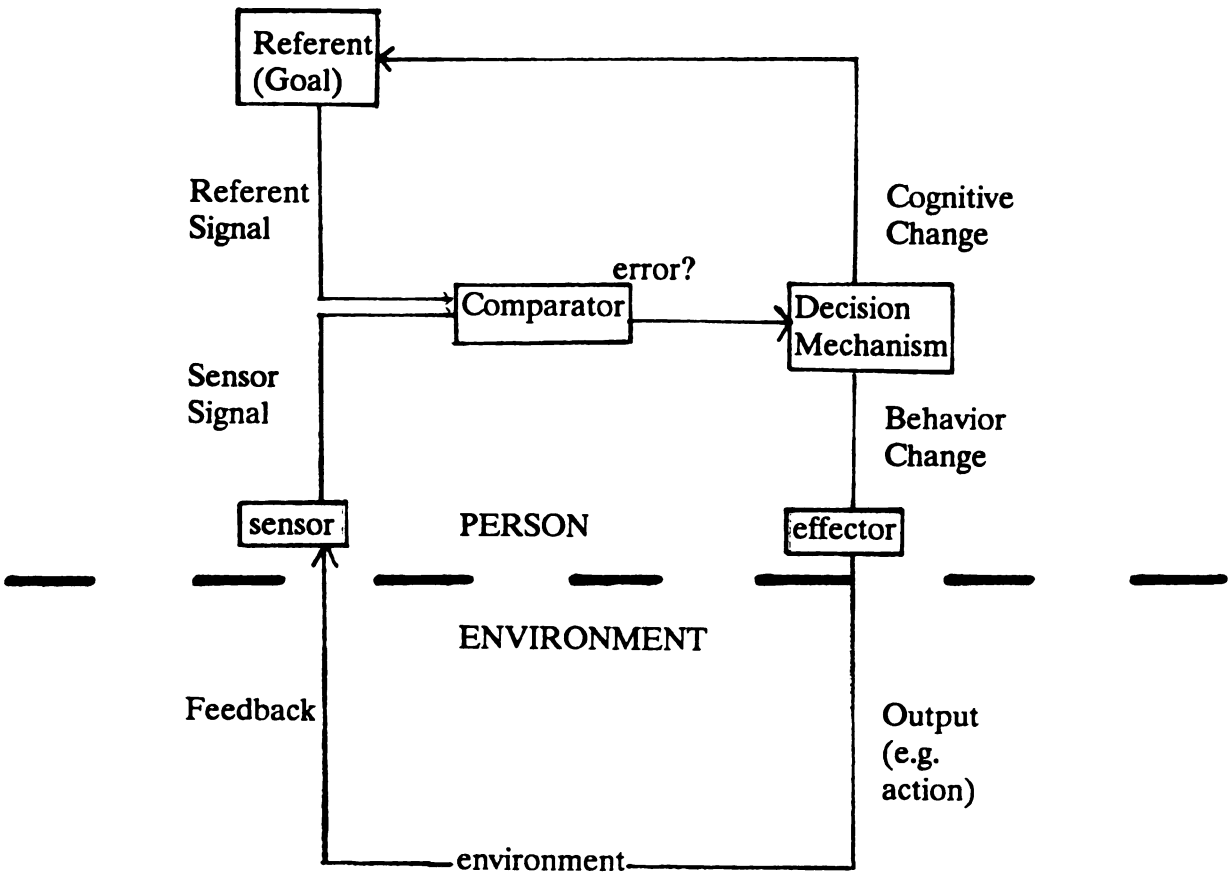
Carver and Scheier (1981) term these changes to the existing environment "disturbances". For instance in the thermostat example, assume the thermostat operated and brought the room temperature in line with the previously set standard of 68 degrees. Then someone opens a window which cools the room off considerably. This disturbance reactivates the control system to reduce the discrepancy between the sensed environment and the referent.

Organizational Applications of Control Theory

Organizational research utilizing control theory as a framework has been primarily concerned with control theory applications to motivation. Specifically, control theory has been presented as an explanation for the motivational properties of the interaction of goals and feedback (Campion & Lord, 1982; Lord & Hanges, 1987). Campion and Lord (1982) suggest that people regulate their own behavior by monitoring the environment (See Figure 2). Individuals compare referents or goals with sensed environmental (task) feedback. Any discrepancy perceived between the sensor and referent leads to self-correction.

They identify two potential responses to goal-feedback discrepancies. A behavioral response would most likely result in increased effort or potentially a change in the strategy used to attain the goal. A cognitive response would be lowering the goal. The recognition that discrepancies

Figure 2. Control systems model of motivation (adopted from Campion and Lord, 1982).



can be reduced by altering the goal suggests that goal commitment is a necessary precursor to the performance enhancing effects of the interaction of goals and feedback. If goal commitment is present, a cognitive change or change of goal is unlikely.

Campion and Lord (1982) investigated a control theory model of the relationship between goals and feedback. In their study they asked students to set goals for performance on five tests throughout the course of a term. Their findings indicated that the comparator was a key component in triggering changes in behavior or cognitions. Magnitude and number of failures were associated with behavioral changes such as increased effort and number and consistency of failures were associated with cognitive changes such as goal reduction.

Their investigation incorporated control theory in it's simplest form. The primary goal of the study was to test the viability of a negative feedback loop for explaining the relationship between goals and feedback. However, some of their findings cannot be explained by this elementary perspective. Specifically, a number of students raised their goals after initial failure suggesting that lower level goals may fulfill strategic functions in attaining more important higher level goals. This finding suggests the existence of a hierarchy of control. The notions of goal hierarchies, multiple goals and controlled quantity status are crucial to the

understanding of control theory. A discussion of these additional components to control theory is next.

Additional Control Theory Components

Control Hierarchies. Complex control sequences can be described by hierarchies of feedback loops. Control theory research should attend to the hierarchical level at which behavior is operating. The combination of feedback loops can be illustrated by an example which uses the terminology set forth by Powers (1973) (See Figure 3).

Consider attempting to turn on a lamp which will not light. The standard, or desired state, is for the light to be on. In determining how to "operate", to turn the light on, one may go through a series of tests. The first step in the sequence may be to test the light bulb in a different lamp. If the bulb works, one proceeds to another possibility. The second step could be to test the electrical outlet to determine if it is working properly. This could be done by testing a lamp in this outlet that you are certain works. If the working lamp lights then one moves on to the next possibility and so forth. It is apparent from this example that simple decisions can be linked in an lengthy chain of potential operations.

The interconnection of feedback loops also suggest that a single behavior may aid in achieving a variety of referents. Powers (1973)

Figure 3. Hierarchy of control for lighting a lamp. Adapted from Powers (1973).

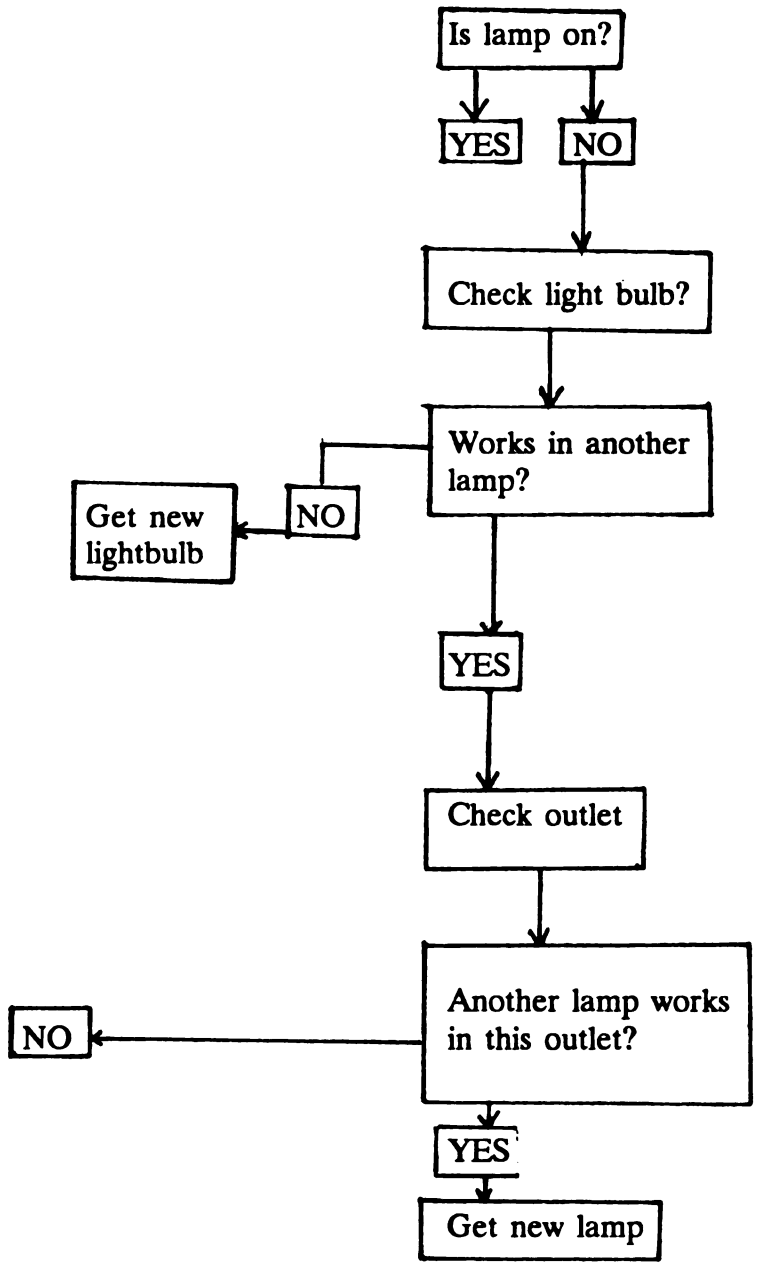


Figure 4. Power's hierarchy of control. Adapted from Powers (1973).

GOAL	
	Systems - Organized entities; models; beings.
Becoming Educated	Principles -Generalizations drawn from many different examples of lower-order perceptions; facts, heuristics, laws, beliefs.
Reading a Book	Programs - A network of choice-points characterized by tests at the nodes.
Turning the Light Switch	Relationships - A regularity in the simultaneous space-time behavior of two or more independent lower-order elements.
Hand on Switch	Sequence or - A fixed succession of lower-order Event elements; ordering.
Turn of Switch	Transition - Time and space changes; partial derivatives.
Hand Grasps Switch	Configuration- An object, pattern, arrangement, or invariant of the present moment.
Grasping	Sensation - Quality of intensity; vector.
Muscle Tensions	Intensity - Magnitude of stimulation of sensory receptor; energy flow.

hierarchy provides the standard for the next lower level in the hierarchy.

That is, turning on the lamp could be a standard in the middle range of a hierarchy of standards. A subordinate standard at the lowest level would be the muscle tension required to turn the switch. At higher levels, turning the lamp on could be part of a plan of operation to achieve a superordinate standard such as reading a book. Similarly, reading a book could be part of an operation designed to achieve an even higher order goal of becoming educated. At each level in the hierarchy, the outcomes of behavior are assessed by monitoring input information and comparing it with the referent which derives from the level above. At the lowest level the sensors indicate the present level of muscle tension and the comparator assesses whether the desired muscle tensions (referent) are being created. Similar processes occur at successively higher levels.

Controlled Quantity Status. The notion of controlled quantity status concerns the issue of what discrepancy behavior is attempting to reduce. That is, attention should be paid to the level in the hierarchy of control at which behavior is operating. Behavior geared toward lighting a room will have no influence on the room temperature. The controlled quantity status (that which is being controlled) of the actor must be identified to explain behavior in control theory terms. Campion and Lord (1982)

assumed that the controlled quantity for subjects in their study was individual test score not overall course grade. This assumption led to the unexpected finding that subjects who failed to achieve individual test goals actually raised their subsequent goals. It may be that the controlled quantity for these individuals was overall course grade.

While Campion and Lord (1982) were primarily concerned with the initial application of control theory to organizational issues, Hollenbeck and Williams (1987) addressed the issue of control quantity status in their investigation of control theory. They identified six facets of work which could serve as controlled quantities for department store salespeople. These facets were: 1) base pay, 2) job security, 3) the nature of the work itself, 4) co-worker relations, 5) job performance and 6) supervisory practices. Their findings indicate that the influence of goal level on performance was significantly higher for individuals with high performance control. That is, when job performance was the controlled quantity, the relationship between goal and performance was strengthened. These results support the view that not all perceptions require behavioral control, therefore it is necessary to consider the performance control variable which is operating.

This finding suggests the possibility of expanding the control theory perspective to organizational issues outside of motivation. The research

by Hollenbeck and Williams (1987) suggests that standards other than performance can be controlled quantities. For example, individuals receiving performance feedback may wish to control the discrepancy between self-generated feedback and feedback received from external sources.

Taylor et al. (1984) discuss the effects of feedback on individual reactions from a control theory perspective. They consider discrepancies between personal and organizational goals, the causes for these differences and potential ways of reducing these differences. They contend that performance feedback must closely correspond with the goal for performance feedback to result in desired performance improvements. In addition, the feedback recipient and feedback provider must agree on the goal or desired behavior. Taylor et al. (1984) posit that any incongruity between the goal of the feedback recipient and the goal of the feedback provider could result in feedback which is perceived by the recipient as inaccurate. However, an issue left unaddressed is the existence of self-other feedback congruence and the influence of congruence on feedback acceptance issues.

Note that the model and proposed hypotheses presented next, do not attempt to provide a test of control theory. Instead, control theory is utilized as a framework for examining the performance feedback process.

The fundamental position of control theorists is that individuals regulate their behavior in relation to standards (Powers, 1973). They determine their match to standards through external feedback. Discrepancy reducing mechanisms are posited by control theory to operate between behavioral standards and external feedback. Individuals may also attempt to reduce discrepancies which exist between self-assessments of performance and external assessments of performance. This can be accomplished through the acceptance or rejection of external feedback.

Lord and Hanges (1987) posit feedback acceptance as a boundary condition to a control theory model of the relation between goals and feedback. However, it may be that feedback acceptance is controlled at a lower level in the hierarchy of the control system operating to reduce the discrepancy between performance goal and performance feedback control. Control theory explanations of behavior are still applicable when considering the discrepancy between self-generated feedback and other generated feedback as that which behavior attempts to reduce. The perceived discrepancy between these two feedback sources will influence feedback acceptance and potentially cognitive and behavioral reaction to feedback. In control theory terms, self-feedback is the referent against which feedback from other sources is compared. Instead of concentrating on the regulation between a standard and feedback, the controlled

quantity in this utilization of control theory is the feedback itself.

The following section describes a model which utilizes control theory to view the performance feedback process. External feedback is compared to self-feedback in this control system. The model details individual responses to incongruence between self and other feedback sources. Finally, this model will be used as a basis for advancing hypotheses regarding responses to feedback incongruence.

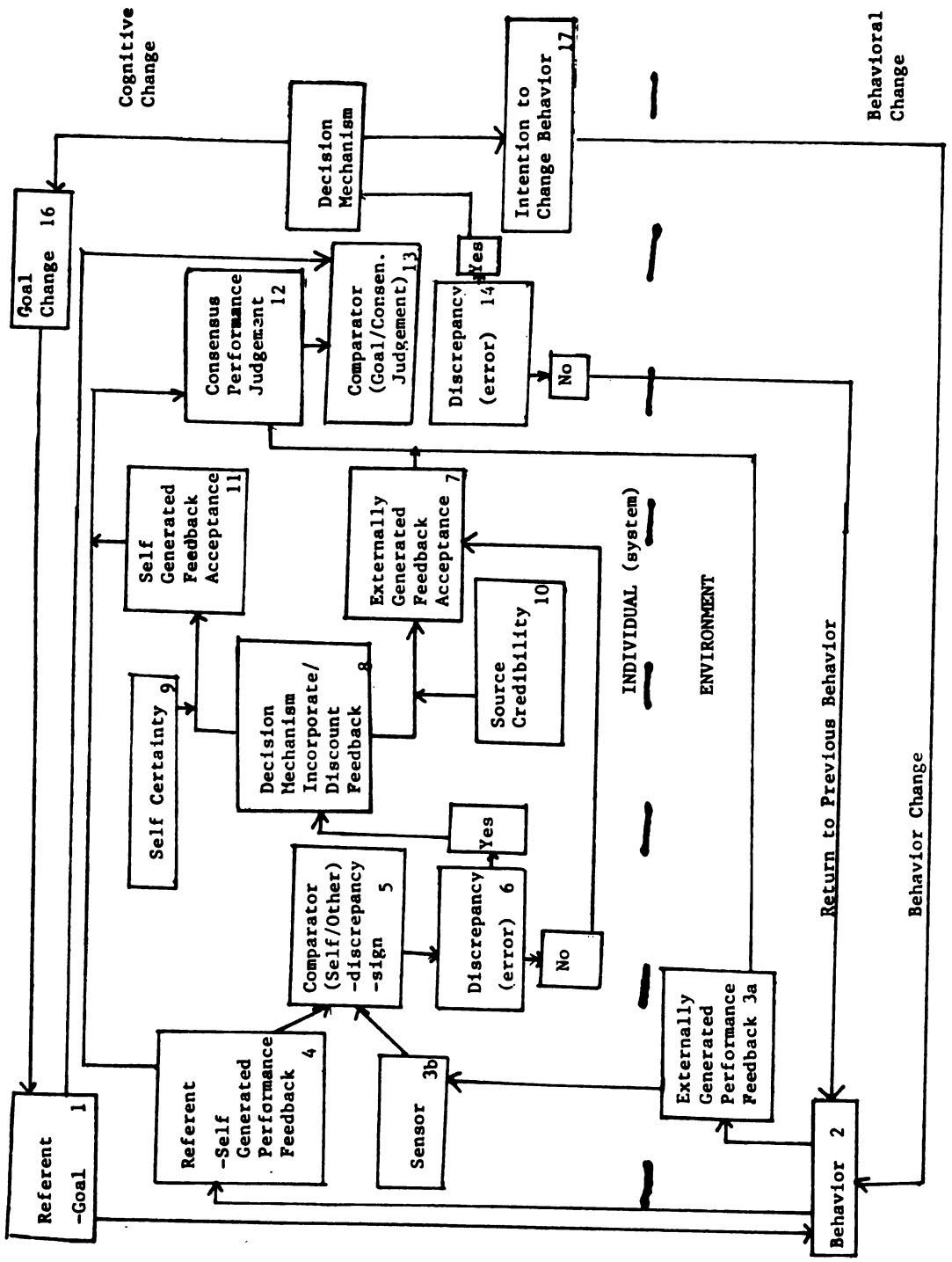
CHAPTER 2: MODEL AND HYPOTHESES

Figure 5 represents a conceptual model illustrating the relationships among variables relevant to self-other feedback congruence. In line with a control theory perspective this model suggests that individuals regulate their behavior (box 2) in relation to a goal (box 1). In Campion and Lord's control theory formulation, performance judgment or feedback from an external source (box 3a) is perceived at the sensor (box 3b).

A unique contribution of the control system model of self-other feedback congruence is the explicit addition of a self-generated performance judgment or self-feedback (box 4). The self-generated performance judgment can be thought of as a standard or referent in control theory terms. People strive to maintain a consistent view of themselves and often bias search for self-relevant information toward self-confirmation (Swann & Read, 1981). Individuals often believe that their self-evaluations are the correct ones, therefore their attention to self-relevant information is biased.

Feedback provided by an external source is compared with the referent of self-feedback through the comparator function (box 5). The feedback is compared in terms of discrepancy and sign of the feedback. If no discrepancy is detected (box 6) between the self-feedback and external feedback and external feedback is positive, feedback acceptance

Figure 5. Self-other feedback congruence model.



will be more likely to result (box 7). If a discrepancy between the external and self-generated feedback is detected, feedback acceptance is less likely to occur.

The decision of whether to incorporate external feedback or not (box 8) will be influenced by self-certainty (box 9) and source credibility (box 10). If self-certainty is high, acceptance of self-generated feedback (box 11) should be high. Similarly, if source credibility is high acceptance of externally generated feedback (box 7) should be high. The extent to which self-generated feedback (box 4) and externally generated feedback (box 3a) influence consensus performance judgment (box 12) is a function of self-generated and externally generated feedback acceptance. Consensus performance judgment is a clinical combination of the information which is received from oneself and an external source of feedback. It is this consensus performance judgment that is compared to the goal through a comparator function (box 13) to determine the adequacy of performance.

It is at this point where the controlled quantity changes. The system is no longer controlling for a self/other feedback discrepancy, but controls for a goal/consensus performance judgment feedback discrepancy. This comparison represents the traditional way control theory has been applied in organizations. A goal is compared to the feedback (consensus

performance judgment) to determine if a discrepancy (box 14) exists. If no discrepancy exists, previous behavior is continued. If a discrepancy exists, a decision mechanism (box 15) is engaged and the individual makes either a cognitive (goal change box 16) or behavioral change (intention to change behavior box 17).

A complete understanding of the preceding formulation requires a detailed explanation of the proposed relationships among the variables which have been presented. The focus of this study is on the control theory formulation of self-other feedback discrepancy, because traditional control theory applications of goal/feedback discrepancy have been previously studied (e.g. See Campion & Lord, 1982; Hollenbeck & Williams, 1987; Klein, 1987). The following section provides descriptions of each of the components to be assessed. The unique contribution of each of the variables is discussed. Hypotheses regarding the proposed relationships among these variables are then presented.

Goals and Performance

Previous research has clearly established the positive relationship between goals and performance (Locke, et al., 1981). Goals which are specific and difficult direct behavior toward a desired outcome, such as task performance.

Feedback

After a task has been performed, feedback is provided. Feedback is a message an individual receives from a source, which provides information regarding the adequacy of task performance (Ilgen et al. 1979). Feedback can originate from a variety of sources, the task, other individuals or from the individual him/herself (Greller & Herold, 1975).

Self-generated feedback is a primary component in self-assessment. Theories of self-regulation (Bandura, 1977) suggest that individuals observe and evaluate their own behavior. Self-generated feedback is a personal judgment regarding performance. This self-evaluation of performance serves as a referent against which all other assessments of performance are compared.

External feedback is the type of feedback which is generally discussed in the literature. It is feedback which is not intrinsic to the performer. External feedback can come from supervisors, co-worker, subordinates or from the task itself. Research has focused on interpersonal sources of feedback, specifically supervisory feedback. While feedback is always present in some form, all sources of feedback are not perceived equally. Self-feedback is the standard against which other forms of feedback are compared. Feedback which is not perceived as accurate will be rejected (Ilgen et al., 1979; Taylor et al., 1984).

Feedback Discrepancy

Feedback discrepancy refers to the lack of agreement among feedback sources. While much research has investigated the influence of various sources of feedback (organizational, self, supervisor, co-worker, subordinate and task), little research has addressed the effect of disagreement among feedback sources.

Fisher & Russ (1987) discuss several reasons why self-superior feedback disagreements occur. Stone and Stone (1985) addressed the issue of whether consistent feedback from multiple sources is more effective in altering self-perceptions than the provision of consistent feedback on multiple occasions by a single feedback source. In addition, they investigated the effects of single versus multiple feedback sources on self-perceived task competence. However, no research has investigated the influence of agreement among the two most common feedback sources, self- and supervisory feedback.

Agreement can be assessed in absolute terms and in terms of feedback sign. External feedback can be similar or dissimilar to self-feedback and can be above (positive sign) or below (negative sign) self-feedback. Both of these variables will influence feedback acceptance.

Feedback Acceptance

A variable identified by Ilgen et al. (1979) as an important mediator between objective feedback and performance is feedback acceptance. Feedback acceptance is defined as the perceived accuracy of the feedback. Whether or not the feedback is actually an accurate portrayal of performance is insignificant to feedback acceptance. Since feedback acceptance can be linked to key organizational outcomes, its study is important.

Individuals are often unwilling to accept information about themselves which is inconsistent with what they know about themselves (Shrauger, 1975; Swann & Read, 1982). Individuals tend to reject information that is inconsistent with their own self-view.

Another aspect of acceptance which has not been discussed in the literature is acceptance of or perceived accuracy of self-generated feedback. Self-generated feedback derives from the performance judgment that one makes regarding his/her own performance. Therefore, the following hypotheses regarding factors affecting feedback acceptance are posited:

H1: Feedback sign will be positively related to acceptance of externally generated feedback.

H2: Feedback discrepancy will be negatively related to acceptance of externally generated feedback.

H3: There will be an interaction between feedback sign and feedback discrepancy on acceptance of external feedback, such that the relationship between feedback sign and feedback acceptance will be stronger when self-other discrepancy is high.

Source Credibility

A characteristic of the feedback source that can influence the relationship between objective feedback and feedback acceptance is the credibility of the source. Source credibility is defined as the perceived expertise of the feedback source. While a direct relationship between source credibility and feedback acceptance has been established (see e.g. Halperin, Snyder, Shenkel & Houston, 1976; Stone, et al., 1984), no research has addressed the interactive effect of source credibility and feedback discrepancies. In addition, Ilgen et al. (1979) suggest that acceptance of external feedback that is negative will be moderated by source credibility. However, research to date has not investigated this issue. The present research hypothesizes that:

H4: The relationship between the feedback comparator function (feedback discrepancy, feedback sign) and acceptance of externally generated feedback will be moderated by source credibility. The relationship will be stronger when source credibility is high.

Self-Certainty

Self-certainty refers to the confidence one has in his/her self-view. When one is certain about possessing an attribute, the perceived accuracy of self-generated feedback should be high (Swann & Read, 1981).

Markus (1977) compared schematics (those who had well developed self-views) to aschematics (those who did not have well developed self-views) on the attribute of assertiveness. She found that schematic individuals were likely to reject feedback that was inconsistent with their self-schema. Those who believed they were assertive rejected feedback indicating they were not assertive and those who believed they were unassertive rejected feedback indicating they were assertive.

When self-certainty is low individuals accept information about themselves whether it be discrepant from their own self-view or not. This suggests that when individuals do not have a well established self-view they will be less likely to perceive their self-generated feedback as accurate, therefore acceptance of self-generated feedback should be diminished. New employees prefer feedback from others as opposed to self-generated feedback (Hillery & Wexley, 1974). Acceptance of self-relevant information is also dependent on its information value, i.e.; the incremental increase in knowledge about the self that the information provides (Ilgen et al., 1979). When people are not self-certain, self-generated feedback may be perceived as less valuable. Therefore, the following hypothesis is proposed:

H5: The relationship between the comparator (feedback discrepancy, feedback sign) and acceptance of self-generated feedback will be moderated by self-certainty. The relationship will be stronger when self-certainty is high.

Consensus Performance Judgment

Consensus performance judgment refers to a clinical combination of performance relevant feedback from varying sources. In this study, we are interested in the combination of feedback from oneself and feedback from an external source. The importance placed on these two sources of feedback will be influenced by the acceptance (perceived accuracy) of feedback from each source:

H6: The relationship between self-generated feedback and consensus performance judgment will be moderated by acceptance of self-generated feedback. The relationship will be stronger when acceptance of self-generated feedback is high.

H7: The relationship between externally generated feedback and consensus performance judgment will be moderated by acceptance of external feedback. This relationship will be stronger when acceptance of external feedback is high.

No specific hypotheses are proposed to predict the interaction of self-and other generated feedback on consensus performance judgment. This relationship will be investigated in an exploratory fashion. No basis exists for predicting the weight that either self or other generated feedback will be given in such an analysis.

CHAPTER 3: METHOD

Prior to conducting the main study of this project it was necessary to conduct two pilot studies. These pilot studies addressed several key issues. This study was interested in assessing reactions to feedback discrepant from one's own self-view. The provision of highly discrepant feedback requires that self-ratings are neither too low nor too high. Therefore, it was necessary to choose a task for the main study that would not result in either a self-assessment floor or ceiling effect. The primary purpose of Pilot Study I was to test two tasks and choose the one resulting in a moderate mean self-assessment rating. In addition, the strength of the credibility and feedback congruence manipulations were checked. Finally, the reliabilities of some of the dependent measures were assessed in this pilot study.

Due to the results of Pilot Study I, a second pilot study was conducted. In this pilot study, the strength of the manipulations were checked and the reliabilities of the measures assessed.

Pilot Study I

Subjects

Subjects in the first pilot study were 33 undergraduate students enrolled in an introductory psychology course Fall term, 1988. Students received course credit in return for their participation.

Task

The first pilot study was conducted in a laboratory setting. Two tasks were developed for this study. The first task was a sales task in which subjects were asked to role play selling a nutritional supplement to a confederate. Subjects were provided with a detailed description of a fictitious nutritional supplement. They were also given information regarding the steps to an effective sale as well as fabricated testimonials from satisfied customers. They were given 15 minutes to familiarize themselves with the material and 15 minutes to sell the product to the confederate.

The second task was an in-basket exercise. The in-basket exercise used in this study was developed for use in an assessment center for a large midwestern computer organization. The original in-basket was designed for salespeople who were allowed 75 minutes to complete it. The in-basket was shortened for the purposes of this study. Subjects were allowed 20 minutes to complete the in-basket exercise. This shortened version of the in-basket was piloted to determine the amount of time needed to complete the exercise.

Procedure

Pilot study I subjects arrived at the experimental session individually. Subjects were escorted to the room where the experimental session was to take place. They were asked to read and sign an informed consent form. The task in which they were engaging (sales or in-basket) was then explained to them

and the rater credibility manipulation was given. This manipulation consisted of telling subjects they would be evaluated by either an undergraduate student who was also participating in the study for course credit or by a graduate student. Subjects were given 20 minutes to complete the task.

After completion of the task the experimenter returned and asked the subject to fill out a self-assessment form and a self-certainty questionnaire (These questionnaires are described in greater detail in the section to follow titled "Variables and Measures"). These items were collected from the subject and a filler task consisting of attitude and personality questionnaires was given. In the meantime the rater ostensibly rated the subjects' performance. Subjects were shown the rater's evaluation and asked to complete a feedback acceptance questionnaire. Subjects were debriefed and thanked for their participation.

Results

The first pilot study was conducted before a determination was made to include both positive and negative feedback in the study. Therefore, the sales and in-basket tasks were pre-tested to determine which was least likely to result in a self-rating floor effect. A floor effect would prevent the possibility of providing feedback which was negatively discrepant from self-assessments. The sales task resulted in mean self-assessments of 4.3 (on a 10-point scale), while the average self-rating for in-basket exercise performance was 5.0. In addition,

subjects displayed a great deal of resistance to participating in the sales task. Therefore, the in-basket exercise was chosen as the task to be completed in this study.

Comments from subjects who completed the in-basket exercise indicated that the time allowed to complete the exercise was insufficient. Therefore, it was decided that subjects would be allowed 45 minutes to complete the exercise rather than 20 minutes.

The results of the rater credibility manipulation indicate that the manipulation was not strong enough. A chi-square statistics was calculated to be 10.51 df = 10 and the significance level was .40. Due to these results, the credibility manipulation was made stronger in pilot study II. Not only were subjects informed that the rater was either an undergraduate or industrial/organizational graduate student, but they were told that the undergraduate had absolutely no experience in rating performance while the graduate student had extensive experience in rating in-basket exercise performance. In addition, the manipulation was presented after completion of the task to make it more salient and to eliminate any influence the manipulation might have had on performance.

The reliabilities of the feedback acceptance and the self-certainty scales were also assessed. It was determined that the feedback acceptance scale was reliable (alpha = .83; n=33) but the self-certainty scale needed slight

modifications (alpha = .72; n=33). Also, the variance on self-certainty was relatively low (Mean = 4.36 SD = .61).

Pilot Study II

Subjects

Subjects in the second pilot study were 33 undergraduate students enrolled in a psychology course winter term, 1988. Students received extra credit in return for their participation.

Task

The second pilot study was also conducted in a laboratory setting. The task subjects were asked to complete was an in-basket exercise. Subjects were allowed 45 minutes to complete the exercise. The in-basket was a modified version of one used to select salespeople at a large midwestern computer organization.

Procedure

Pilot study II subjects arrived at the experimental sessions individually. They were escorted to the room where the experimental session was to take place. Subjects were asked to read and sign an informed consent form. The in-basket exercise was then explained to them and they were allowed 45 minutes to complete the exercise.

After 45 minutes the experimenter collected the in-basket materials and asked the participants to complete a self-evaluation and self-certainty questionnaire (Questionnaires are described in greater detail in the section to follow titled "Variables and Measures"). At this time, the subjects were given the credibility manipulation. They were told that their performance was either being evaluated by an undergraduate student with no previous experience in performance assessment or in-basket exercises, or that they were being evaluated by an industrial/organizational psychology student with much experience in the evaluation of in-basket exercise performance. The participants were asked to complete an attitude questionnaire while the rater ostensibly rated their performance.

The experimenter returned 15 minutes later and showed the participant the evaluation that the rater had provided. The ratings were manipulated to be 0, 10 or 20 points (based on pilot study I data) below the participants' self-rating, depending on the feedback congruence condition to which the subject had been assigned. The subject was then asked to complete a questionnaire including the feedback acceptance, perceived credibility and perceived feedback congruence scales. Finally, they were asked to complete a second self-evaluation and indicate whether or not they intended to change their behavior in a second in-basket exercise. Subjects were debriefed, and thanked for their participation.

Results

The results of the manipulation checks on source credibility and feedback discrepancy, indicated that there were statistically significant differences in subjects perceptions of 1) the credibility of the feedback source $F(1,31)=12.39$, $p<.001$ and 2) feedback congruence $F(2,30)=27.48$, $p<.001$. A post-hoc Scheffe test indicated that the high, moderate and low feedback congruence conditions were significantly different and in the expected direction (See Table 1).

Another purpose of the second pilot study was to test the reliabilities of the dependent measures. Descriptive statistics, intercorrelations and reliabilities for these scales are provided in Table 2. It was determined that the reliabilities of the dependent variable scales were adequate.

Primary Study

Subjects

Subjects were non-freshman undergraduate students enrolled in psychology courses in March and April of 1989. Subjects received course credit in return for their participation. A power analysis was conducted to determine the sample size needed with a statistical power of .80. The analysis requiring the greatest statistical power attempts to explain a variance of .4 and the effect size associated with the interaction term explains an incremental increase of at least 2.5% of the variance. The number of subjects needed to detect this

Table 1. Means and Standard Deviations for Manipulated Variables.

DV	Source Credibility			
	(High Cred)		(Low Cred)	
	Mean	SD	Mean	SD
Perceived Source Credibility	5.47	1.14	3.90	1.41

DV	Feedback Discrepancy					
	(High Disc)		(Low Disc)		(No Disc)	
	Mean	SD	Mean	SD	Mean	SD
Perceived Feedback Congruence	2.63	.97	4.95	1.19	6.30	1.38

Table 2. Descriptive Statistics, Intercorrelations and Reliabilities of Dependent Measures.

	DV	Mean	SD	1	2	3	4
1)	Perceived Source Credibility	4.71	.49	(.89)*			
2)	Perceived Feedback Congruence	4.51	.92	.27	(.96)		
3)	Feedback Acceptance	4.31	.53	.39	.74	(.79)	
4)	Self Certainty	4.61	.10	-.01	-.17	-.14	(.79)

*Values in parentheses indicate alpha reliability coefficients. Correlations less than -.28 or greater than .28 are significant at the .05 level.

effect with a desired statistical power of .80 at the .05 level was calculated to be 194.

Data was collected from 280 subjects who were assigned to one of three feedback discrepancy conditions (high, low, no), one of three feedback sign conditions (positive, neutral, negative), and one of two source credibility conditions (high, low). It was discovered that one of the research assistants participating in this project was providing subjects with incorrect instructions. It was therefore decided that the data from the 24 subjects who received the erroneous information would be deleted from the study. The final sample size was reduced to 256.

The design appears to be a 3 x 3 x 2 factorial design but this is not the case. Feedback discrepancy is defined as feedback which is discrepant from one's own self-view and feedback sign is defined as being above (positive), below (negative) or the same as (neutral) one's self-rating. Therefore, whenever non-discrepant feedback was provided, this feedback was also neutral in sign. Similarly, feedback discrepant from self-ratings could not have a neutral sign (See Figure 6 for the experimental design).

Due to an error in subject assignments to experimental conditions, data collection occurred in two stages. The first group of subjects were randomly assigned to one of six conditions. These were conditions 1, 3, 5, 7, 9, and 10 as depicted in Figure 6. Subjects in the second group were then randomly

assigned to the remaining four conditions. These were conditions 2, 4, 6, and 8 (See Figure 6).

To assess the similarity between subjects in the first and second phases of the study, comparisons were made between these two subject groups on individual difference variables of self-esteem, need for achievement, need for autonomy, need for affiliation, need for dominance and locus of control. Subjects in these two groups did not significantly differ on any of these individual difference variables.

Task

The task used in this study was the in-basket exercise described above (See Appendix A). An in-basket exercise represents a simulation in which subjects are presented with a variety of in-basket items (memos, reports and notes) which might be found in a typical manager's in-basket. It has been suggested that the skills subjects display in analyzing and evaluating the data is representative of how they will resolve similar tasks on the job (Bray & Grant, 1966).

Procedure

Upon arrival at the experimental session, subjects were asked to read and sign an informed consent declaration (See Appendix B for measures used in this study). Subjects were read a preliminary script that introduced the task.

Figure 6. Experimental Design.

		Feedback Discrepancy Condition		
		High	Low	None
Feedback Sign	+	1 n=26	3 n=29	
	0			5 n=29
High Credibility	-	2 n=22	4 n=22	
Low Credibility	+	6 n=23	8 n=22	
Feedback Sign	0			10 n=27
	-	7 n=28	9 n=28	

The in-basket evaluation procedure and an explanation of the performance dimensions to be used for evaluation was then explained to subjects. Subjects were given 45 minutes to complete the in-basket exercise. When time had expired, they were asked to assess their own performance and to complete the self-certainty and acceptance of self-generated feedback measures both of which are described below. The self-assessment and self-certainty/self-generated feedback acceptance questionnaire were collected and subjects were given the credibility manipulation (See Appendix C) and asked to complete a series of personality questionnaires while the rater ostensibly evaluated their performance.

Subjects were given false feedback regarding their performance according to the feedback discrepancy and feedback sign conditions to which they were assigned. Subjects then completed a questionnaire assessing their reactions to the feedback. This measure included the external feedback acceptance perceived credibility of the feedback source and perceived feedback congruence scales. Subjects were then told they would be completing a second in-basket exercise. They were asked to again assess their own performance after careful consideration of the previously completed self- and rater's evaluation of performance. Subjects were debriefed and thanked for their participation.

Variables and Measures

Provided below is a detailed description of the variables which were assessed in this study. See Appendix B for the actual measures which were used.

Feedback Sign. Feedback sign was operationalized in a way that is unique to this study. Traditional performance feedback studies have used a goal as the referent against which the evaluator's performance feedback is compared. However in this study, the referent against which the evaluator's performance feedback is compared is self-feedback not a performance goal. Sign of the feedback is defined as whether the feedback provided by the evaluator is above, below or equal to the referent of self-feedback. Feedback sign was manipulated in this study resulting in three levels of feedback sign (positive, negative, neutral). Positive feedback was above the referent, negative feedback was below the referent and neutral feedback was exactly equal to the referent of self-feedback.

Feedback Discrepancy. Feedback discrepancy was defined as the degree of disagreement between one's self-assessment and an evaluator's external assessment of performance. This variable was manipulated resulting in three levels of feedback discrepancy (high, low, no). In the high feedback discrepancy condition, the evaluator's external assessment was 20 points above or below the subject's self-assessment. In the low feedback discrepancy

condition the evaluator's external assessment was 10 points above or below the subject's self-evaluation.

The point values for the high and low discrepancy conditions were based on pilot study data. These values represented feedback that was approximately two standard deviations away from the average self-assessment in the high feedback discrepancy condition, or approximately one standard deviation away from the average self-assessment in the low feedback discrepancy condition.

In the no feedback discrepancy condition the evaluator's external assessment exactly matched the subject's self-assessment. This discrepancy condition is confounded with the neutral feedback sign condition. When the evaluator's feedback matches self-feedback (no discrepancy), feedback sign MUST be neutral (See Figure 6).

Perceived Feedback Congruence. The perceived degree of congruence between self- and external assessments of performance, was assessed with a self-report measure developed specifically for this study. This measure assessed the effectiveness of the discrepancy manipulation. A sample item from this scale is, 'The evaluation I received was similar to my self-evaluation'. Subjects were asked to indicate, on a 1 - 7 scale, the extent to which they agreed with the statements presented.

Source Credibility. Source credibility has been defined as the rater's expertise in evaluating performance. This variable was manipulated resulting in

two levels of source credibility (high, low). In the high credibility condition, subjects were told they were being evaluated by an industrial/organizational psychology graduate student with 3 years of previous experience in evaluating in-basket exercises. In the low credibility condition, subjects were told they were being evaluated by an undergraduate student also participating in the study for course credit, with no experience with in-basket exercise evaluation. See Appendix C for the complete script of the source credibility manipulation.

Perceived Source Credibility. The perceived source credibility was assessed with a self-report measure. This measure was used to determine the effectiveness of the credibility manipulation. A sample item from this scale is, 'The rater who evaluated my performance was knowledgeable'. Subjects were asked to indicate, on a 1 - 7 scale, the extent to which they agreed with the statements presented.

Self-Rating. Subjects were asked to provide one overall rating of their in-basket exercise performance. They were asked to recall the performance goal of 70, prior to making their self-ratings. The form subjects used to evaluate their performance appears in Appendix B.

External Rating. False feedback from an external rater was provided to subjects. This feedback provided one overall rating of the subjects' in-basket exercise performance. The rating was provided on a form that was essentially identical to the self-rating form (See Appendix B).

Consensus Performance Judgment. Subjects were led to believe they would be participating in second in-basket exercise. Prior to completing this exercise they were asked to complete a second self-assessment measure. This measure was identical to the first except, subjects were asked to consider both their self-evaluation of performance as well as the rater's evaluation of their performance in providing a second assessment of their previous performance. The weight subjects assigned to either their self-rating or the external rating was left to them.

External Feedback Acceptance. External feedback acceptance is the perceived accuracy of the feedback provided by an external source. This variable was assessed with a modified version of the feedback acceptance measure used by Stone, Guetal and McIntosh (1984). A sample item from this scale is 'The feedback did not truly depict my performance on the sales task.' Subjects were asked to indicate, on a 1 - 7 scale, the extent to which they agreed with the statements presented.

Self-Feedback Acceptance. Acceptance of performance feedback provided to oneself was assessed in a manner similar to acceptance of externally generated feedback. The same measure was used but subjects were asked to consider the feedback they provided for themselves when they rated the perceived accuracy of the feedback. One item from the external feedback acceptance scale had to be eliminated from the self-feedback acceptance scale

because when the item was converted from acceptance of another's feedback to acceptance of self-feedback it no longer made sense. Subjects were asked to indicate, on a 1 - 7 scale, the extent to which they agreed with the statements presented.

Self-Certainty. Self-certainty refers to the faith one has in his/her self-evaluation of performance. This variable was assessed by a scale developed for the purposes of this study. A sample item from this scale is, 'I am confident about the self-evaluation I provided.' Subjects were asked to indicate, on a 1 - 7 scale, the extent to which they agreed with the statements presented.

Self-Confidence. The self-certainty and the self-feedback acceptance scales were so highly correlated that a decision was made to combine the two scales and call it self-confidence. The basis for this combination is described in detail in the results section.

CHAPTER 4: RESULTS

Prior to testing the proposed hypotheses, descriptive statistics were calculated for the variables of interest in this study. The means, standard deviations and reliabilities for the variables assessed in this study are provided in Table 3.

First, these data reveal a mean self-rating of approximately 58 with a standard deviation of approximately 15. This indicates that there was neither a floor nor a ceiling effect for self-ratings of performance. Perceived rater expertise was strongly correlated with manipulated rater expertise. Similarly, perceived congruence between self- and external ratings of performance was strongly negatively correlated with the manipulated discrepancy between these two ratings.

Note the strong correlation between self-certainty and self-feedback acceptance. Both self-certainty and self-feedback acceptance were measured using a single questionnaire. Due to the strong correlation between these scales, a factor analysis was completed for this questionnaire. The rotated factor loadings indicated that the two factors extracted, with eigenvalues greater than one, corresponded to one factor for positively worded items and one for negatively worded items (See Appendix D). Upon examination of the items from the two scales, it was determined that they were quite similar. An examination of the intercorrelations between the items of these scales also

Table 3. Descriptive Statistics, Intercorrelations and Reliabilities of Measures.

Name	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1) Feedback Sign	1.00	0.88												
2) Feedback Discrepancy	2.16	0.76	-.006											
3) Perceived Feedback Congruence	4.58	1.68	.163	-.785	(.92)									
4) Source Credibility	1.50	0.50	.097	-.026	.036									
5) Perceived Source Credibility	4.76	1.17	.264	-.071	.218	.587	(.83)*							
6) Self-Rating	58.36	14.76	.032	-.050	.096	.103	.155							
7) External Rating	58.32	20.51	.669	-.046	.168	.133	.271	.733						
8) Consensus Perf. Judgment	59.84	16.57	.307	-.048	.153	.173	.227	.870	.841					
9) External Feedback Acceptance	4.50	1.38	.383	-.353	.506	.185	.446	.212	.418	.283	(.86)			
10) Self-Feedback Acceptance	4.53	1.24	-.005	-.043	.139	.045	.059	.362	.277	.351	.405	(.75)		
11) Self-Certainty	4.47	1.15	.044	.006	.141	-.002	.092	.393	.327	.367	.299	.675	(.79)	
12) Self-Confidence	4.50	1.09	.027	-.016	.153	.018	.086	.414	.335	.392	.370	.873	.949	(.85)

*Values in parentheses indicate alpha reliability coefficients. Correlations greater than .100 are significant at the $p<.05$ level ($n=256$).

indicated a significant correspondence between these two scales. The scales were therefore combined resulting in one scale representing self-confidence in self-ratings. The reliability coefficient for this combined scale was .86 which was higher than the reliability for either of the scales separately (See Table 3).

Self-ratings were positively correlated with self-certainty, self-feedback acceptance and with the combined self-confidence scale. This indicates that the higher subjects self-ratings, the higher their faith or confidence in those ratings.

Alpha reliability coefficients were calculated for scales used in this study when possible. The coefficients for the scales measured were well within acceptable ranges (.75 - .92).

Manipulation Checks

Descriptive statistics were analyzed to determine the effectiveness of the source credibility and feedback discrepancy manipulations. First, the correlation between source credibility and perceived source credibility was positive and significant (r=.587). This correlation indicates that high credibility sources of feedback were perceived as significantly more expert than low credibility sources of feedback. Note, however that subjects in the low credibility condition still perceived their feedback source as somewhat credible. The mean perceived credibility rating for the low credibility group was 4.08 on a 7-point scale (See Table 4).

Table 4. Means and standard deviations for manipulated variables.

Dependent Variable =	Source Credibility			
	(High Cred)		(Low Cred)	
	Mean	SD	Mean	SD
Perceived Source Credibility	5.44	.94	4.08	.95

Dependent Variable=	Feedback Discrepancy					
	(High Disc)		(Low Disc)		(No Disc)	
	Mean	SD	Mean	SD	Mean	SD
Perceived Feedback Congruence	3.22	1.09	4.73	1.18	6.74	.54

A one-way ANOVA was also computed to determine the effectiveness of the feedback discrepancy manipulation. Manipulated feedback discrepancy (high, low, no) served as the independent variable and perceived congruence between self- and external feedback served as the dependent variable. This analysis revealed statistically significant differences in subject's perceptions of congruence between self- and external performance feedback $F(2,252)=206.38$, $p<.001$ dependent upon the discrepancy condition to which they had been assigned. A post hoc Scheffe test indicated that all three feedback discrepancy conditions were significantly different from each other (See Table 4).

Hypotheses

Hypothesis 1

The first hypothesis posited a positive relationship between feedback sign and external feedback acceptance. A zero-order correlation coefficient was calculated between feedback sign and external feedback acceptance to test this hypothesis. In support of the hypothesis, the correlation coefficient between feedback sign and external feedback acceptance was positive and statistically significant ($r = .383$, $p<.001$).

To determine the mean differences which occurred in external feedback acceptance at positive, negative and neutral sign levels, a post-hoc Scheffe test was conducted. The result of this analysis indicated, as expected, positive feedback was more accepted than negative feedback and neutral feedback

(feedback identical to self-ratings) was more accepted than negative feedback. A significant difference in external feedback acceptance was not found between positive and neutral feedback. Descriptive statistics for this analysis appear in Table 5 and the relationship between feedback sign and external feedback acceptance is portrayed in Figure 7.

Hypothesis 2

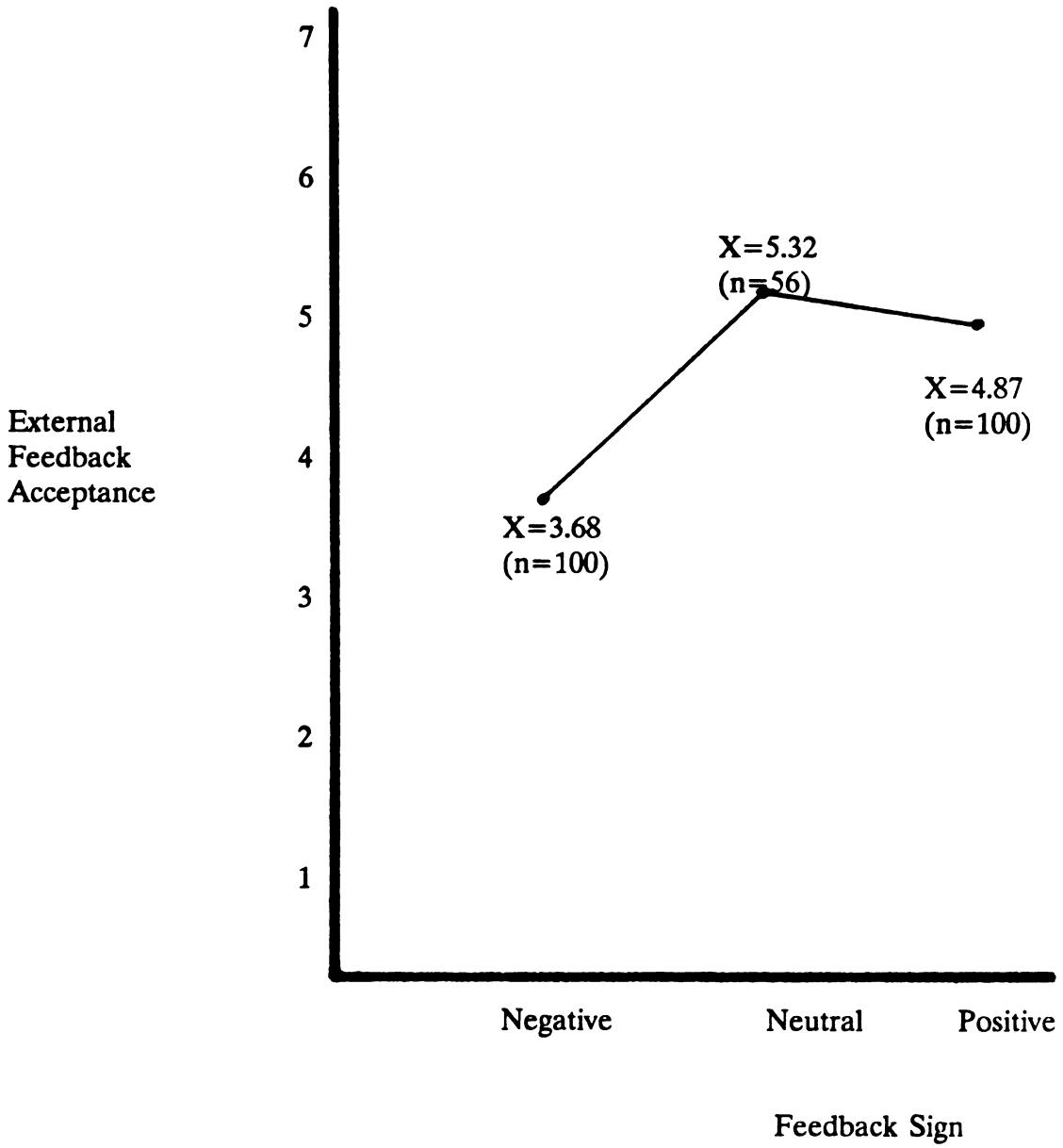
The second hypothesis suggested a negative relationship would exist between feedback discrepancy and external feedback acceptance. The zero order correlation coefficient between feedback discrepancy and external feedback acceptance was negative and significant ($r = -.353$, $p<.001$). A partial correlation coefficient was also calculated between feedback discrepancy and external feedback acceptance, controlling for the effects of feedback sign. The partial correlation coefficient between feedback discrepancy and external feedback acceptance partialling out feedback sign was $r = -.383$ ($p<.001$). This partial correlation indicates that feedback discrepancy had a unique influence on external feedback acceptance, over and above the influence of feedback sign.

A post-hoc Scheffe test was completed to determine mean differences in external feedback acceptance at the three feedback discrepancy levels (none, low, high). This test indicated that external feedback acceptance significantly differed across all three feedback discrepancy conditions. That is,

Table 5. Means, standard deviations and cell sizes for external feedback acceptance by feedback sign, feedback discrepancy and source credibility.

	External Feedback Acceptance		
Independent Variable	Mean	SD	N
External Feedback Sign			
Positive	4.87	1.10	100
Neutral	5.32	1.37	56
Negative	3.68	1.22	100
External Feedback Discrepancy			
High	4.01	1.40	99
Low	4.54	1.14	101
None	5.32	1.37	56
Source Credibility			
High	4.76	1.37	128
Low	4.25	1.35	128

Figure 7. Plot of relationship between feedback sign and external feedback acceptance.



non-discrepant external feedback was significantly more accepted than feedback which was slightly discrepant from self-feedback, which was in turn significantly more accepted than highly discrepant feedback (See Table 5). The relationship between feedback discrepancy and external feedback acceptance is illustrated in Figure 8.

Hypothesis 3

Hypothesis three stated that feedback discrepancy would moderate the relationship between feedback sign and external feedback acceptance. To test this hypothesis, moderated regression analysis was used. The analysis involved regressing external feedback acceptance on a) feedback sign, b) feedback discrepancy and c) an interaction of feedback sign x feedback discrepancy. Feedback sign was entered first followed by feedback discrepancy. The cross-product of these two terms was then entered.

Table 6 shows the standardized regression coefficients and significance levels for each of the independent variables in the equation. The results revealed an overall R-squared for external feedback acceptance of .277, $F(3,252) = 32.18$, $p<.001$. Hypothesis three stated that feedback discrepancy would moderate the relationship between feedback sign and external feedback acceptance. However, as can be seen in Table 6, the regression coefficient representing the interaction of feedback sign and feedback discrepancy was not significant. Post-hoc analyses confirmed these results. The plot of the

Figure 8. Plot of the relationship between feedback discrepancy and external feedback acceptance.

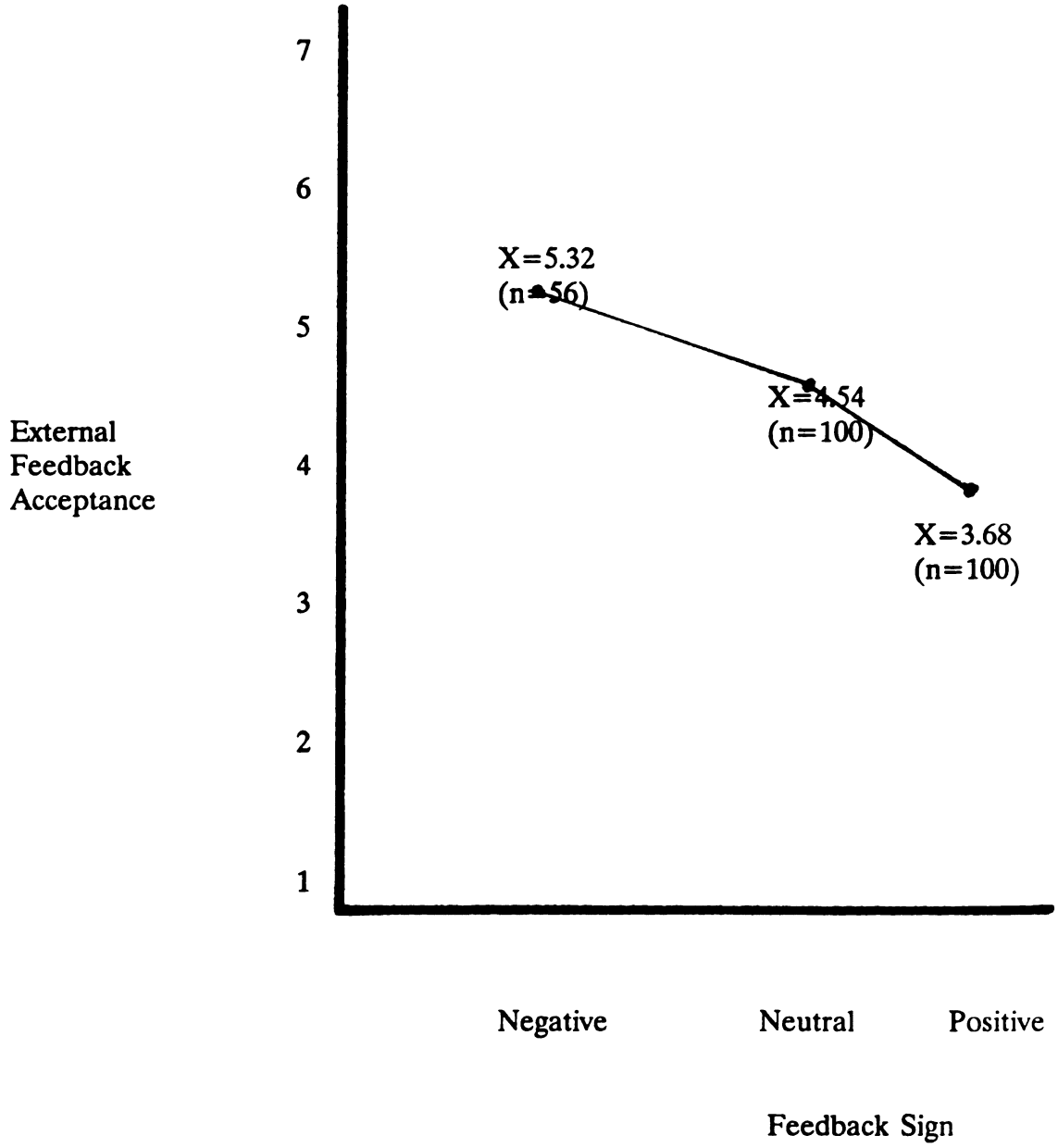


Table 6. Regression of External Feedback Acceptance on Feedback Sign and Feedback Discrepancy.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
Feedback Sign	.3829	.3829	.1466	.1466	.000
Feedback Discrepancy	.3511	.5195	.2699	.1233	.000
Feedback Sign x Feedback Discrepancy	.4513	.5263	.2770	.0071	.117

N=256

relationship between feedback sign, feedback discrepancy and external feedback acceptance appears in Figure 9.

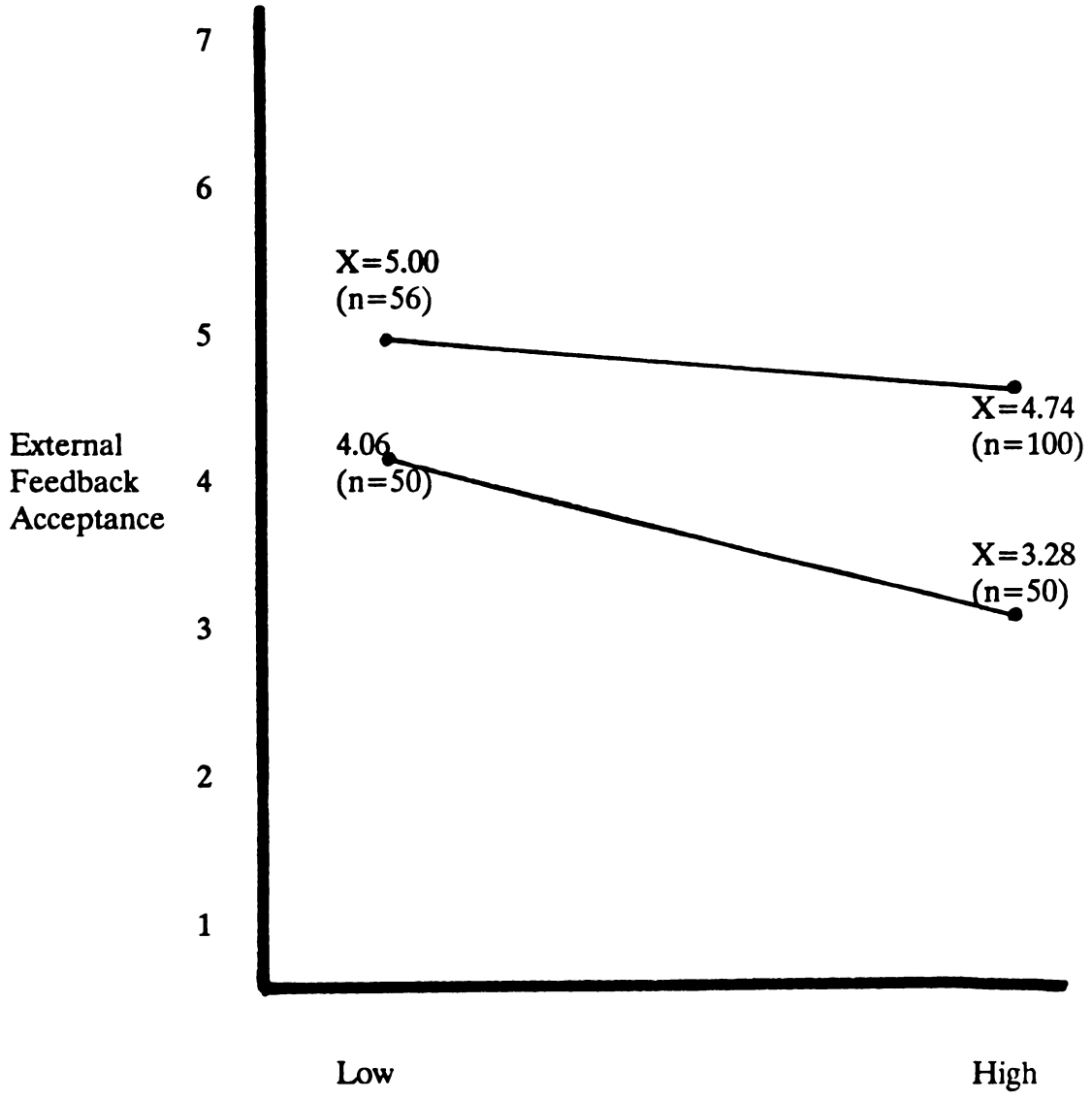
Hypothesis 4

Hypothesis four suggested that the relationship between the comparator (feedback discrepancy and feedback sign) and external feedback acceptance would be moderated by source credibility. Moderated regression analysis was used in which feedback sign, feedback discrepancy and source credibility were entered into the regression equation. The cross products of feedback sign x feedback discrepancy, feedback sign x source credibility, feedback discrepancy x source credibility and feedback sign x feedback discrepancy x source credibility were then entered respectively.

Results revealed an overall R-squared for external feedback acceptance of .301, $F(7, 248) = 15.29$ $p<.001$. No significant interactions were found. Main effects for the independent variables of feedback sign, feedback discrepancy and source credibility were found. Table 7 shows the standardized regression coefficients and significance levels of each of the independent variables in the equation.

These findings suggest that in addition to feedback sign and feedback discrepancy, source credibility made a significant independent contribution to the prediction of external feedback acceptance. The main effect for source credibility indicates that high credibility sources were associated with higher

Figure 9. Plot of the relationship between feedback sign, feedback discrepancy and external feedback acceptance.*



*When feedback sign and feedback discrepancy are crossed, subjects in the no discrepancy/no feedback conditions are eliminated. This is because sign and discrepancy are completely confounded in these conditions.

Table 7. Regression of External Feedback Acceptance on Feedback Sign, Source Credibility and Feedback Discrepancy.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
Feedback Sign	.3829	.3829	.1466	.1466	.000
Feedback Discrepancy	.3511	.5195	.2699	.1233	.000
Source Credibility	.1401	.5379	.2893	.0194	.009
Sign x Discrepancy	.4640	.5448	.2968	.0075	.103
Sign x Credibility	.0727	.5452	.2972	.0004	.693
Discrepancy x Credibility	.1083	.5458	.2979	.0007	.630
Sign x Discrepancy x Credibility	1.0749	.5490	.3014	.0035	.264

N=256

levels of external feedback acceptance than low credibility sources. Plots of the relationship between feedback sign, feedback discrepancy, source credibility and external feedback acceptance appear in Figure 10.

Hypothesis 5

Hypothesis five suggested that the relationship between the comparator and self-feedback acceptance would be moderated by self-certainty. The self-certainty and self-feedback acceptance scales were combined, therefore this hypothesis was not tested. However, a test of the moderating effect of self-confidence on the relationship between the comparator and external feedback acceptance was conducted. Moderated regression analyses were used in which feedback sign, feedback discrepancy, self-confidence and their interactions were regressed on external feedback acceptance.

This regression analysis revealed significant main effects for each of the independent variables of feedback sign, feedback discrepancy and self-confidence. The main effects for sign and discrepancy have already been discussed. The main effect for self-confidence suggests a positive relationship between self-confidence and external feedback acceptance such that when self-confidence is high, external feedback acceptance is higher than when self-confidence is low. In partial support for Hypothesis 5, a significant feedback discrepancy x self-confidence interaction on external feedback acceptance was found. Regression coefficients for this analysis appear in Table 8.

Figure 10. Plots of the relationship between feedback sign, feedback discrepancy, source credibility and external feedback acceptance.

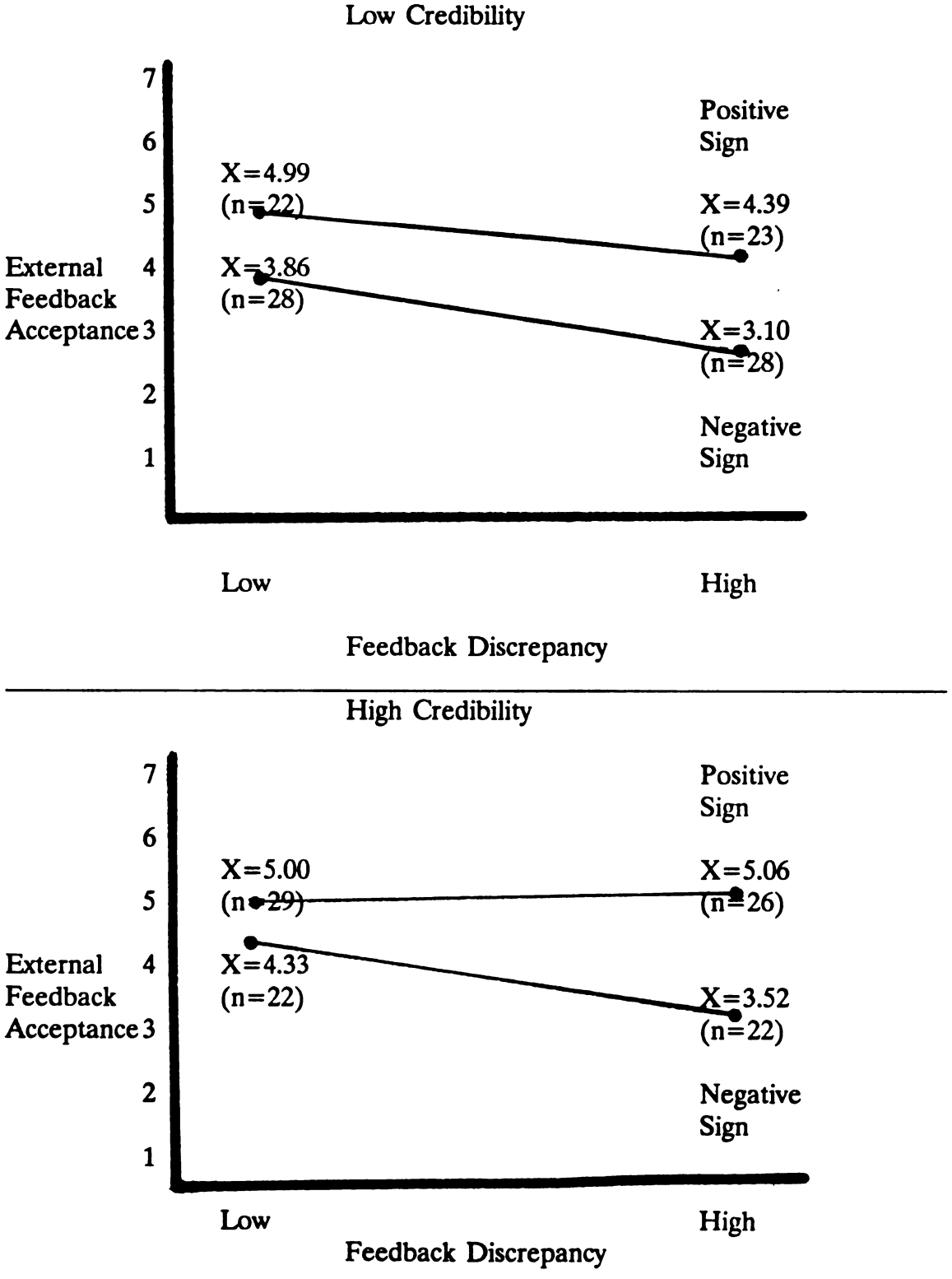


Table 8. Regression of External Feedback Acceptance on Feedback Sign, Feedback Discrepancy and Self-Confidence.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
Feedback Sign	.3829	.3829	.1466	.1466	.000
Feedback Discrepancy	.3511	.5195	.2699	.1233	.000
Self-Confidence	.3549	.6290	.3957	.1258	.000
Sign x Discrepancy	.2857	.6313	.3985	.0028	.279
Sign x Self-Confidence	.3503	.6362	.4047	.0062	.108
Discrepancy x Self-Confidence	.7590	.6522	.4253	.0206	.003
Sign x Discrepancy x Credibility	1.8094	.6562	.4306	.0053	.129

N=256

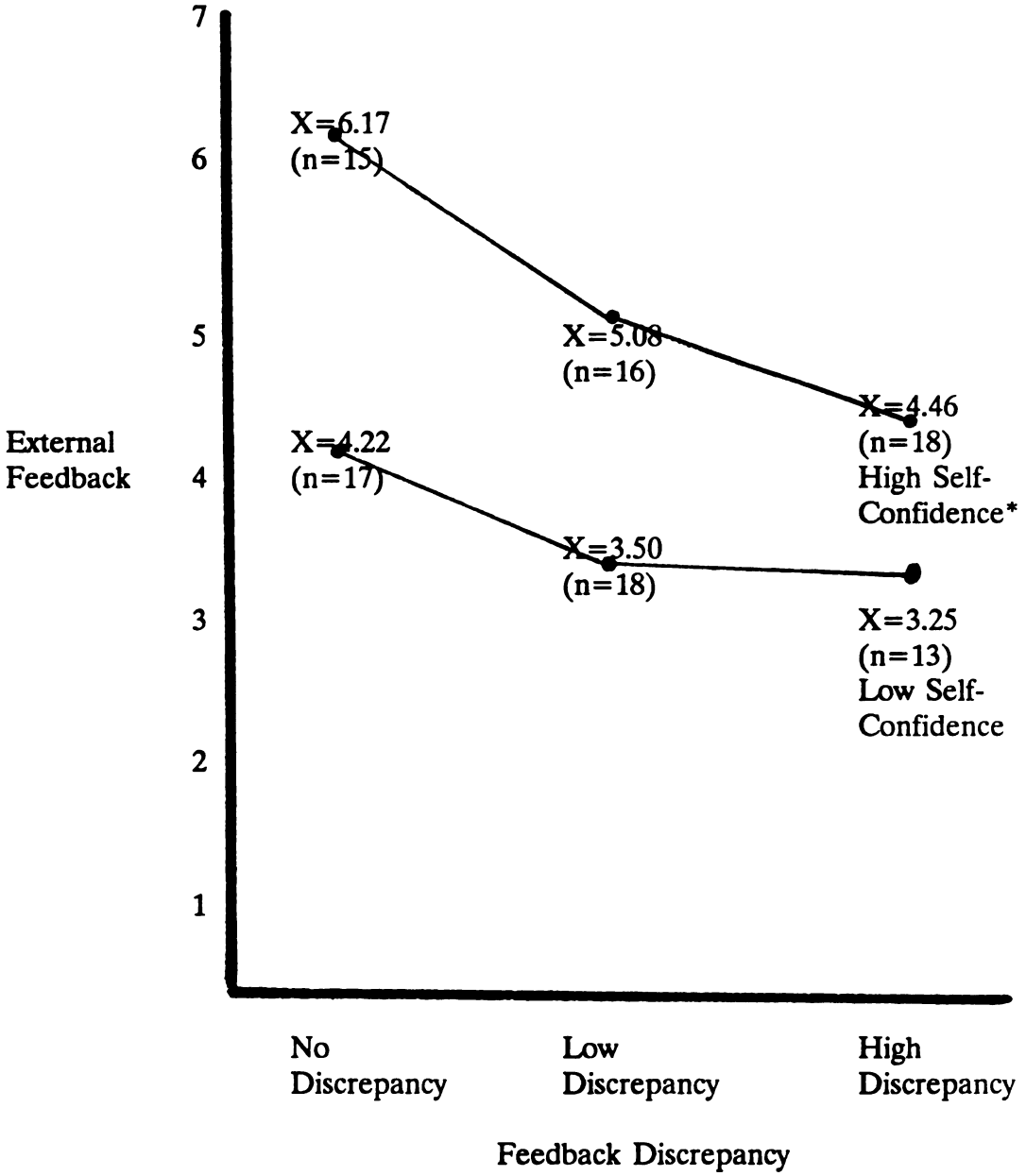
Post-hoc analyses were completed to determine mean differences which occurred in external feedback acceptance when feedback discrepancy was crossed with self-confidence. These analyses revealed mean differences between high and no, and low and no feedback discrepancy groups when self-confidence was high. However, no mean differences occurred in external feedback acceptance when self-confidence was low. Figure 11 portrays the interaction of self-confidence and feedback discrepancy on external feedback acceptance.

Hypothesis 6

Hypothesis six stated that an interaction would exist between self-feedback and self-feedback acceptance on consensus performance judgment. Since self-feedback acceptance and self-certainty were combined into a self-confidence scale, self-confidence was used as the second independent variable. To test the hypothesis that self-feedback and self-confidence would interact to influence consensus performance judgment, moderated regression analysis was used. Self-feedback and self-confidence were entered, followed by their cross product with consensus performance judgment serving as the criterion.

A main effect for self-rating on consensus performance judgment was found. However, neither a main effect for self-confidence nor an interaction of self-rating and self-confidence was revealed. The beta weight for self-rating was positive, indicating a positive relationship between an individual's self-rating and

Figure 11. Plot of the interaction of self-confidence and feedback discrepancy on external feedback acceptance.



*Low self-confidence is defined as one standard deviation below the mean self-confidence rating. High self-confidence is defined as one standard deviation above the mean self-confidence rating.

the consensus performance judgment. That is, when self-rating was high consensus performance judgment tended to be high. The beta weights for self-confidence and the cross product term representing the interaction between self-rating and self-confidence were not significant (See Table 9). Figure 12 provides a representation of the relationship between self-rating, self-confidence and consensus performance judgment.

Hypothesis 7

Hypothesis seven suggested that external feedback and externally generated feedback acceptance would interact to affect consensus performance judgment. To test this hypothesis, moderated regression analysis was used. External feedback and externally generated feedback acceptance were entered with consensus performance judgment serving as the criterion. In the third step the cross product of external feedback and externally generated feedback acceptance was entered.

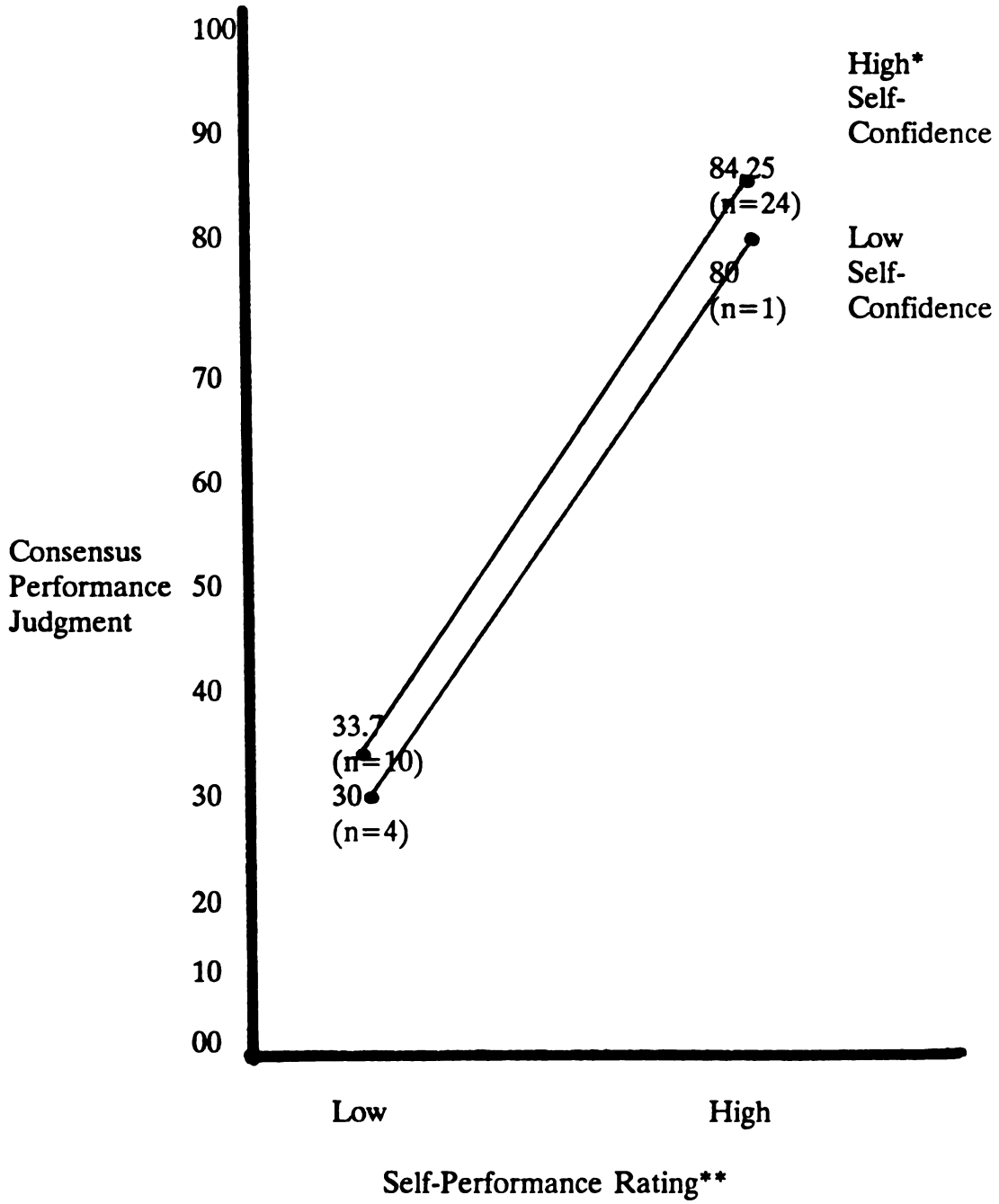
The data from the present study support the prediction. A significant main effect for external feedback on consensus performance judgment was revealed. The beta weight for the external rating was positive indicating a positive relationship between external rating and consensus performance judgment. That is, when external rating was high, consensus performance judgment tended to be high.

Table 9. Regression of Consensus Performance Judgment on Self-Rating and Self-Confidence.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
Self-Rating	.8703	.8703	.7575	.7575	.000
Self-Confidence	.0385	.8710	.7587	.0012	.258
Self-Confidence X Self-Rating	.0064	.8710	.7587	.0000	.976

N=256

Figure 12. Plot of the relationship between self-rating, self-confidence and consensus performance judgment.



* High self-confidence is defined as one standard deviation above the mean self-confidence rating. Low self-confidence is defined as one standard deviation below the mean self-confidence rating. **High self-rating is defined as one standard deviation above the mean self-rating. Low self-rating is defined as one standard deviation below the mean self-rating.

In addition, a significant main effect was found for external feedback acceptance on consensus performance judgment. The beta weight for the external feedback acceptance was positive indicating a positive relationship between external feedback acceptance and consensus performance judgment. That is, when external feedback acceptance was high, consensus performance judgment tended to be high. Finally, a significant interaction was found between external rating and external feedback acceptance on consensus performance judgment. Table 10 presents the regression coefficients for this analysis.

Post-hoc comparisons revealed significant differences occurred in consensus performance judgment between high and low external ratings, when external feedback acceptance was high but not when it was low. Figure 13 displays the interaction between external feedback and external feedback acceptance on consensus performance judgment.

Additional Results

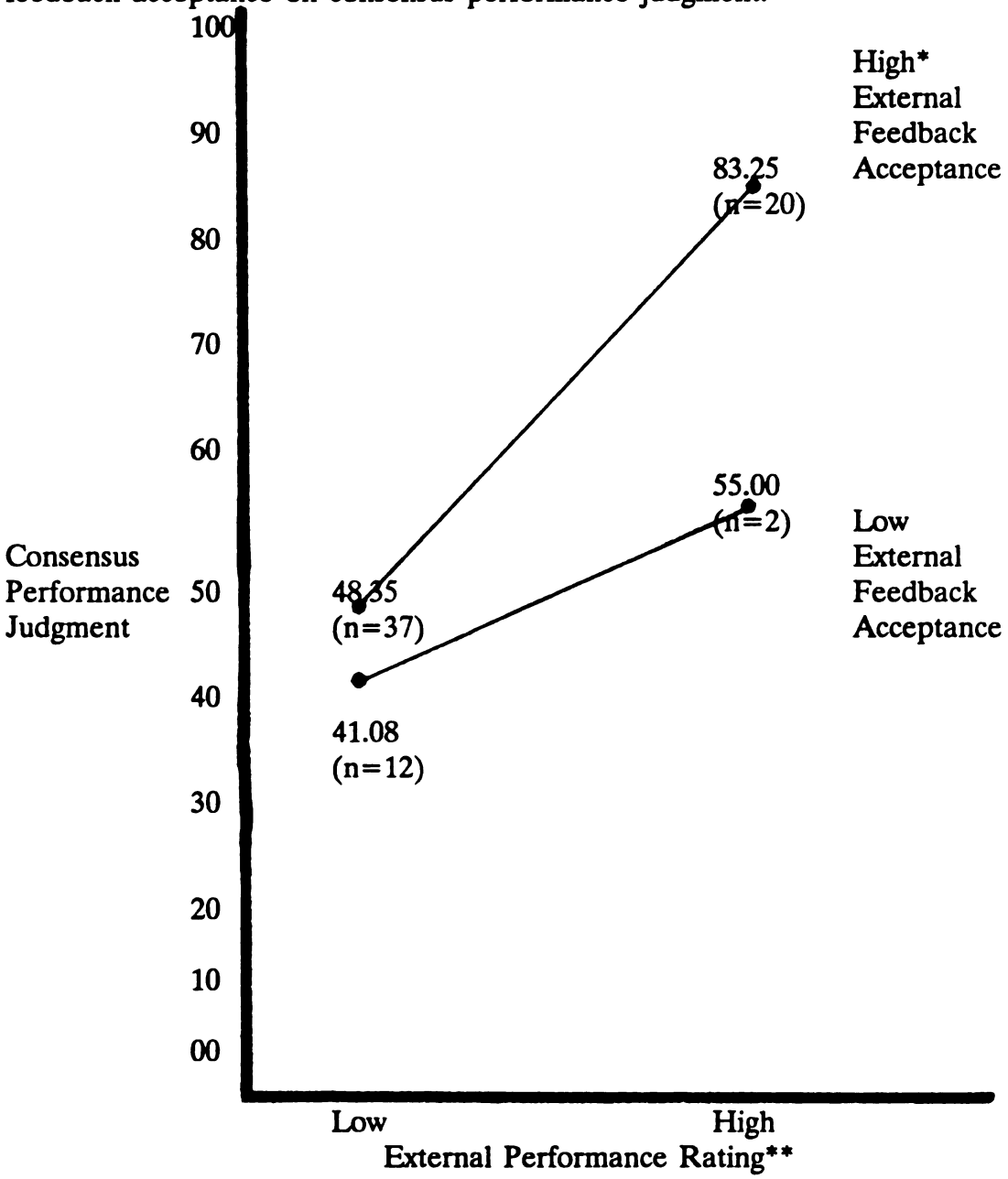
Exploratory analyses were conducted to determine the relative influence of self-feedback and external feedback in predicting consensus performance judgment. A hierarchical regression analysis was completed to determine the results. Self-feedback and external feedback were allowed to enter the regression equation based on which variable contributed the most variance to the prediction of consensus performance judgment. Results revealed that self-

Table 10. Regression of Consensus Performance Judgment on External Rating and External Feedback Acceptance.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
External Feedback	.8413	.8413	.7077	.7077	.000
External Feedback Acceptance	.0827	.8446	.7134	.0056	.027
External Feedback x External Feedback Acceptance	.6669	.8548	.7307	.0173	.000

N=256

Figure 13. Plot of the interaction between external feedback and external feedback acceptance on consensus performance judgment.



* High external feedback acceptance is defined as one standard deviation above the mean external feedback acceptance rating. Low external feedback acceptance is defined as one standard deviation below the mean external feedback acceptance rating.

**High external rating is defined as one standard deviation above the mean external rating. Low external rating is defined as one standard deviation below the mean external rating.

feedback entered the equation first, accounting for more than 75% of the variance in consensus performance judgment. However, external feedback did account for a significant amount of additional variance in consensus performance judgment. (See Table 11).

Table 11. Regression of Consensus Performance Judgment on Self- and External Ratings of Performance.

Independent Variable	Beta	Multiple R	R-Square	R-Square Change	Significance of Change
Self-Rating	.8703	.8703	.758	.758	.000
External Feedback	.4396	.9203	.847	.090	.000

N=256

CHAPTER 5: DISCUSSION

The purpose of this study was to investigate the influence of discrepancies between self-assessments of performance and other assessments of performance on performance feedback acceptance. A model of self-other feedback congruence was proposed within a control theory framework. Hypotheses derived from this model were tested and partial support for the model was found.

The model of self-other feedback congruence suggested that feedback from an external source is compared to self-feedback on the dimensions of feedback sign and feedback discrepancy. The results of the present study revealed that both the direction of the feedback discrepancy (sign) and the magnitude of the discrepancy influenced acceptance of feedback provided by an external source. The first two hypotheses that feedback discrepancy would be negatively related to external feedback acceptance, and feedback sign would be positively related to external feedback acceptance, were supported. The third hypothesis that feedback discrepancy and feedback sign would interact to influence external feedback acceptance was not supported.

The model proposed that source credibility would play an important role in the decision to accept or reject feedback provided by an external source. Further, source credibility was hypothesized to interact with feedback sign and feedback discrepancy to influence external feedback acceptance. A direct

relationship was revealed between perceived credibility of the feedback source and acceptance of externally generated feedback. However, source credibility did not moderate either the relationship between feedback sign and external feedback acceptance or feedback discrepancy and external feedback acceptance.

The model further suggested that self-certainty would influence the decision to accept or discount feedback provided to oneself. The hypotheses regarding the influence of self-certainty and that of self-generated feedback acceptance were modified. This change was necessary due to the strong relationship between these two variables. In retrospect, the constructs of self-certainty and self-feedback acceptance both refer to faith or confidence in one's own assessment of performance. These variables were therefore combined into one scale called self-confidence.

The first modified hypothesis proposed that the relationship between the comparator (feedback sign, feedback discrepancy) and external feedback acceptance would be moderated by self-confidence. Findings demonstrated that in partial support of this hypothesis, self-confidence modified the relationship between feedback discrepancy and external feedback acceptance. Individuals high in self-confidence accepted external feedback which was not discrepant from their self-view significantly more than feedback which was highly discrepant. However, no significant mean differences in external feedback

acceptance occurred for those who were less confident in their self-ratings at any level of discrepancy.

This finding suggests that when individuals have relatively little confidence in self-ratings, they may view themselves as low credibility sources of feedback. When external sources of feedback agree with individual self-assessments, external sources of feedback are perceived as less credible. Therefore, externally-generated feedback is less accepted. In essence, the comparison between self-feedback and external feedback is less meaningful for individuals who lack confidence in their self-assessments.

The final group of hypotheses derived from the model of self-other feedback congruence relate to the final judgment individuals make regarding their performance. The model suggested that the relationship between self-feedback and consensus performance judgment would be moderated by self-confidence. This hypothesis was not supported. Self-feedback was only found to have a direct influence on consensus performance judgment. A parallel hypothesis indicating that external feedback acceptance would moderate the relationship between external feedback and consensus performance judgment was supported.

The model suggested that self- and external feedback would both contribute to the consensus judgment made regarding performance. However, no specific hypotheses regarding the relative weight given to these factors could

be gleaned from the model. Therefore, exploratory analyses were conducted to determine the relative influence self-generated feedback and externally generated feedback had on consensus performance judgment. Results revealed that self-feedback contributed to the variance in consensus performance judgment more than externally generated feedback. However, external feedback made a significant contribution to the variance in consensus performance judgment above the influence of self-feedback.

The findings of this study are discussed in more detail below. First, results relevant to the first part of the model identifying determinants of feedback acceptance are elaborated. Results related to the second part of the model identifying determinants of consensus performance judgments are then discussed. A modified model of self-other feedback congruence is presented. Implications of this investigation for application in organizations as well as for future research are detailed. Finally, limitations to this inquiry are outlined.

Determinants of Feedback Acceptance

Ilgen et al. (1979) describe the concept of feedback sign as feedback indicating that performance was either above or below some standard. A unique contribution of this study to the performance feedback literature is it's atypical operationalization of feedback sign. What makes the definition of feedback sign distinct is that the standard of comparison in this study was one's own self-assessment of performance not an externally set goal. So while the

finding that positive feedback leads to higher levels of external feedback acceptance is consistent with previous literature (e.g. DeNisi, et al., 1983; Stone & Stone, 1984; Stone & Stone, 1985), it also provides additional information that previous studies do not. The present results suggest that no matter if the standard of comparison is defined as a goal or as one's self-assessment of performance, sign is positively related to external feedback acceptance. One might suggest that feedback above the standard of self-feedback is generally positive and therefore more accepted than feedback below self-feedback. However, the average self-rating in this study was 58.36 when the assigned goal was 70. So, feedback which was slightly discrepant (10 points above self-rating) and in the positive direction, could still be considered negative in the traditional sense. This finding adds to the generalizability of the proposal that feedback indicating performance is above a standard leads to higher levels of feedback acceptance than feedback indicating one's performance is below standard.

The findings of this study are also consistent with previous work which found that the credibility of the feedback source directly influenced reactions to performance feedback (Bannister, 1986; Halperin et al, 1976; Stone et. al, 1984, Podaskoff & Fahr, in press). The results show that when feedback sources were perceived as more credible, greater acceptance of the feedback provided by these sources occurred. An interesting yet unexpected finding was that source credibility did not interact with feedback sign to influence acceptance of

externally generated feedback. Ilgen et al. (1979) have suggested that negative feedback from a credible source would be more accepted than negative feedback from a less credible source. Our findings do not support this proposal however, this could have partly been due to the manipulation of credibility in this study. While high credibility sources were perceived as significantly more credible than low credibility sources of feedback, both feedback sources were viewed as credible. That is, the average perceived credibility rating was above the midpoint of the scale for both the high and low credibility groups.

In addition, restriction of range occurred on the source credibility scale which was used. Perceived source credibility was assessed using a 7-point scale. The standard deviation of perceived source credibility at both high and low credibility was just less than one. This may have limited the possibility of finding significant relationships. These findings regarding source credibility are consistent with that of Podaskoff and Fahr (in press) who found no sign x credibility effect on feedback acceptance but did find a sign x credibility effect on performance.

This study also investigated the influence of the magnitude of self-other feedback discrepancies on acceptance of externally generated feedback. The results clearly demonstrate that the extent to which performance feedback from an external source is incongruent with self-generated feedback regarding

performance influences acceptance of external feedback. The negative relationship between feedback discrepancy and external feedback acceptance supports the prediction that more discrepant external feedback is less likely to be accepted than feedback similar to self-feedback.

This finding supports the view that individuals prefer self-relevant information which is consistent with self-assessments (Korman, 1970; Shrauger, 1975). Even after the influence of feedback sign was partialled out, the negative relationship between feedback discrepancy and acceptance of external feedback remained strong. These results appear to counter the self-enhancement view of work motivation (Baumeister, 1982) which suggests that individuals prefer to see themselves in the most favorable light. However, these findings may in part be due to the unique operationalization of feedback sign used in this study. Even when sign was negative, it may not have threatened self-esteem, therefore the results do not necessarily contradict the self-enhancement view.

Influences on Consensus Performance Judgment

The relationship between feedback from an external source and one's judgment about performance was moderated by the acceptance of externally generated feedback. This finding directly addresses the significance of feedback acceptance in the performance feedback process. In support of propositions by Ilgen et al. (1979), feedback acceptance played an integral role in the

relationship between externally generated feedback and one's final assessment of the adequacy of performance. It seems likely that feedback acceptance would also be important to an individual's motivation to change his/her behavior based on the feedback that was provided.

Feedback provided to oneself about the adequacy of performance was also found to significantly influence one's overall evaluation of performance. This finding is consistent with work by Podaskoff and Fahr (in press) which suggests that self-processes are important to the performance feedback process. In addition, this finding supports previous work by Greller and his associates (Greller, 1980; Greller & Herold, 1975; Herold et al., 1987) indicating that feedback provided to oneself is perceived to be the most available and useful source of feedback. This proposition is further supported by the finding in the present research that self-feedback contributed more to one's overall assessment of performance than external feedback did. These results are consistent with recent work by Earley (1988) which revealed that feedback from psychologically closer sources was more acceptable and was more likely to influence later performance than feedback from psychologically distant sources.

In summary, the results of this study provide some support for the model of self-other feedback congruence. The results suggest that self-assessments are an important component of the performance feedback process. Self-evaluations serve as a standard against which feedback from external sources is compared.

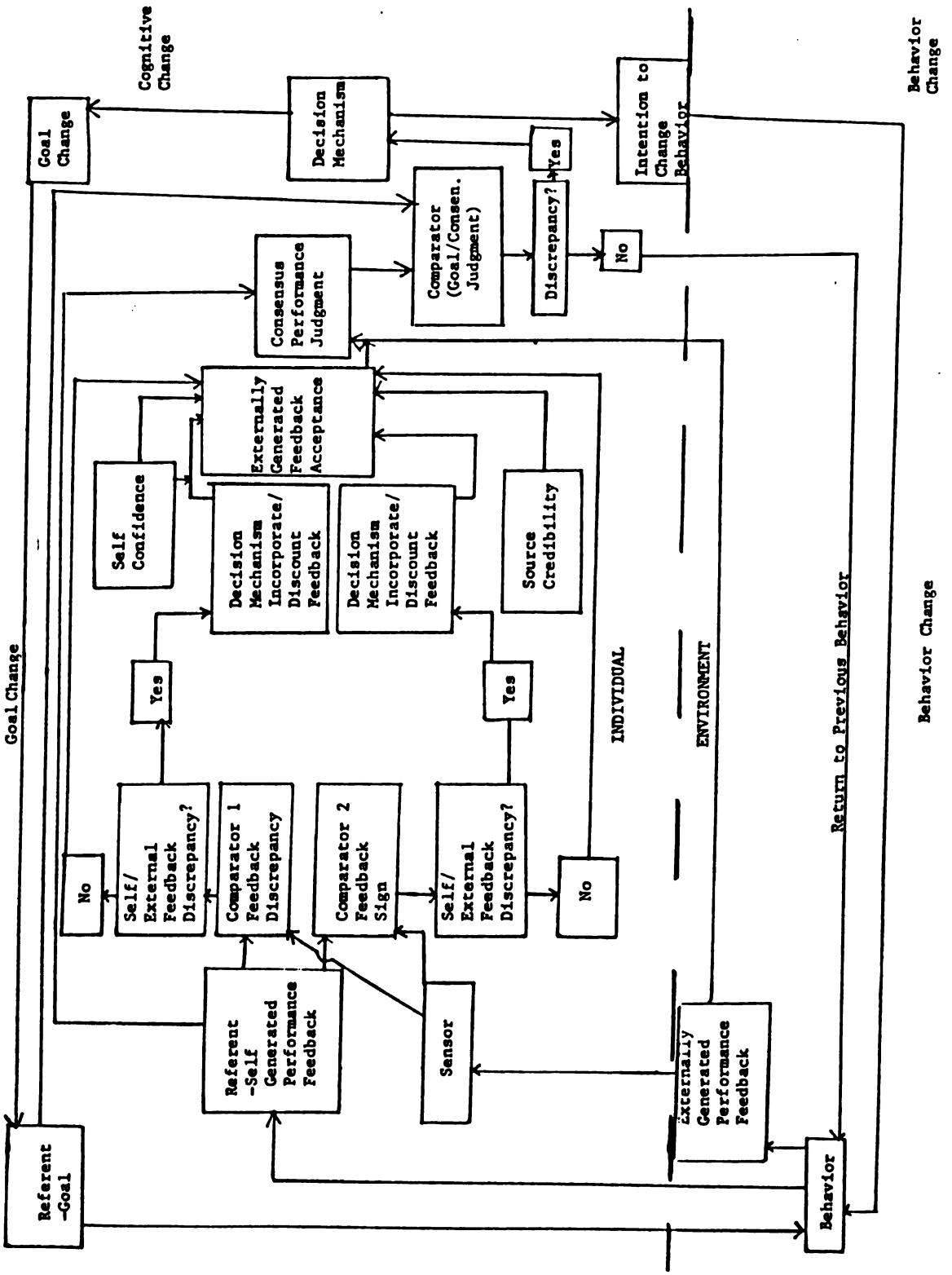
These comparisons were found to influence the feedback recipient's determination of feedback acceptance.

One unexpected yet interesting finding was that self-feedback regarding the adequacy of performance influenced the overall judgment of performance made, regardless of self-confidence in those ratings. This finding supports the view that self-feedback represents a potent standard that is important to individuals. On the other hand, the findings indicate that feedback from an external source must be accepted before it is incorporated into one's overall judgment of performance. Therefore, confidence or faith in the ratings provided appears to be an important factor when the feedback source is external but not when it is internal.

Finally, self-generated feedback was shown to influence consensus performance judgment more than external feedback. This outcome provided further support that while external feedback influenced final assessments, self-evaluation plays an essential role in the performance feedback process.

The model of self-other feedback congruence proposed in this study has been revised (See Figure 14). The changes that have been made in this model do not completely reflect the results of this study. Methodological difficulties occurred in the measurement of a few variables, therefore, it was not considered appropriate to modify the model to reflect the results relevant to these variables. Revisions to the self-other model of feedback congruence are

Figure 14. Modified Model of Self-Other Feedback Congruence.



discussed in detail below.

First, feedback sign and feedback discrepancy should be regarded as two distinct ways of comparing self- and other-generated feedback. They did not interact in influencing external feedback acceptance, but each had a unique effect on this dependent variable. In control theory terms, each can be thought of as a comparator, or a dimension of comparison between self- and external feedback. Feedback discrepancy and feedback sign independently influenced the decision to accept or discount feedback from an external source. As such, each uniquely influenced external feedback acceptance. These results are most likely due to the unique conceptualization of feedback sign. Since sign did not necessarily reflect an evaluation of being above or below standard, it did not interact with feedback discrepancy as predicted. Future research should investigate the influence of traditional feedback sign and feedback discrepancy on feedback acceptance.

Second, neither self-confidence nor source credibility interacted with both feedback sign and feedback discrepancy to influence external feedback acceptance. Source credibility did not interacted with either of these variables and self-confidence only interacted with feedback discrepancy. Restriction of range occurred for both of these variables and the self-confidence variable was developed post-hoc. Therefore, the model has not been modified to directly reflect these results.

A change has been made to indicate the direct influence of self-confidence and source credibility on external feedback acceptance. The moderating effects of self-confidence and source credibility on the relationship between feedback discrepancy and external feedback acceptance and feedback sign and external feedback acceptance remain in the model. The problems which occurred in this study, in measuring source credibility and self-confidence may have significantly influenced the results. Changes made in the model related to these variables should therefore be considered tentative, and in need of replication.

Note that the variable of self-confidence replaced self-certainty in the revised model. In retrospect, self-confidence appears to reflect the faith one has in self-ratings and in one's own ability to rate performance. Self-confidence can be thought of as a variable that parallels source credibility. Source credibility indicates the feedback recipient's faith in and perceived ability of, the external source of feedback. Therefore, self-confidence should moderate the relationship between self-feedback and feedback acceptance just as source credibility should moderate the relationship between external feedback and feedback acceptance.

In an attempt to better understand the influence of self- confidence and source credibility in the model, post-hoc hypotheses were proposed regarding these variables. First, the possibility that self-confidence moderated the

relationship between self-feedback and consensus performance judgment was tested. This hypothesis suggested that self-feedback would influence the final judgment made regarding performance more for those high in self-confidence, than for those low in self-confidence. Similarly, the possibility that source credibility moderated the relationship between external feedback and consensus performance judgment was tested. This hypothesis suggested that the external feedback would influence the final judgment made regarding performance more when source credibility was high, than when source credibility was low. No support was found for either of these suppositions. Self-feedback was found to directly influence consensus performance judgment and as hypothesized, external feedback was moderated by external feedback acceptance in influencing consensus performance judgment.

The final change made in the model was the elimination of the variable of self-feedback acceptance. If one has faith in the performance ratings he/she has provided, as reflected by self-confidence, self feedback acceptance becomes a moot issue. Therefore, this variable does not appear in the revised model of self-other feedback congruence.

Research Implications

Results of the present study demonstrate the importance of feedback discrepancy for acceptance of external feedback. Note however that feedback acceptance is not an end in and of itself. According to Ilgen et al. (1979)

feedback acceptance acts as a mediator in the relationship between the provision of feedback and the intention to act based on the feedback. The present research can be extended by investigating the influence of feedback discrepancy on the motivation to act based on the feedback.

In addition, the relationship between feedback discrepancy and performance deserves further attention. Earley (1988) has found that feedback acceptance is related to performance improvements and has demonstrated the importance of self-generated feedback. No research has yet looked at the effects of feedback discrepancy on performance. Due to the influence of feedback discrepancy on feedback acceptance and the importance placed on self-feedback, feedback discrepancy should be negatively related to motivation to improve and to actual performance improvements.

Feedback discrepancy was manipulated in the present research. Future research should be conducted in real work settings to determine the extent to which discrepancies actually occur between self-feedback and feedback generated by an external source. A review by Fisher and Rusk (1987), proposed that self-superior disagreement occur relatively frequently. They also reviewed literature which provide explanations for these disagreements. Future research should utilize these theories in an attempt to identify methods of reducing discrepancies between self- and superior assessments of performance. Such research should avoid the assumption that feedback provided by a

superior is "correct". Both self- and superior assessments should be compared to more objective sources of feedback (e.g. task feedback) to determine their respective validities.

Previous research related to self-assessments in organizational settings has focused on outcome issues such as the validity or accuracy of self-assessments. Some researchers report that individuals are not skilled at provided self-assessments which are accurate (e.g. Levine, Flory & Ash, 1977) while other researchers suggest individuals have limited capabilities for accurate self-assessments (Mabe & West, 1982; Shrauger & Osberg, 1981). Results of the present research indicate that self-assessments are key components to overall evaluations people make regarding their performance. Results also reveal that differences between self- and other assessments influence acceptance of external feedback. Therefore, future research is needed which investigates methods of making self-assessments more accurate.

One way of enhancing the accuracy of self-assessments is by ensuring a similar frame of reference with regard to the standards of performance. Taylor et al. (1984) suggest that superiors and subordinates should have a clear understanding of the criteria for effective performance. They should also agree that these criteria are valid. This can be accomplished through encouraging participative communication between the two parties (O'Reilly & Anderson, 1980). In addition, feedback should be provided by a credible source. Taylor

et al. (1984) further recommend frequent feedback sessions which would increase the perceived accuracy of performance feedback or feedback acceptance.

This study supports the view that individuals are more willing to accept feedback which is consistent with their self-view than feedback which is inconsistent with self-perceptions (Shrauger, 1975; Swann & Read, 1981, Swann & Hill, 1982). From an organizational perspective, these findings imply that any incongruity between the feedback provider's and feedback recipient's perception of the adequacy of performance would be detrimental to acceptance of external feedback and should be reduced.

Finally, the results of this study have important implications for the performance feedback process which takes place in organizations. First, it suggests that self-processes, specifically self-feedback, influence individual reactions to performance feedback provided by others. This finding is consistent with models of self-regulation.

The integration of the control theory and self-management perspectives suggests that individuals attempt to regulate behavior in relation to a standard based on feedback from multiple sources (e.g. self, other). The control theoretic perspective suggests that discrepancies between perceived environmental feedback and standards (in this case self-feedback) are regulated (Powers, 1973). Previous studies utilizing control theory as a framework have

not addressed the possibility that individuals provide self-feedback, however control theory can be applied in these situations.

Self-management theorists recognize the fact that individuals observe and evaluate their own behavior (Bandura, 1977, 1978; Kanfer & Karoly, 1982). They further believe that individual attempt to regulate their behavior in relation to a standard. Our findings indicate that self-evaluations of performance strongly influence judgments made regarding the adequacy of performance. These results suggest that self-feedback can serve as a standard against which feedback from other sources in compared.

Limitations

The limitations of this study deserve mention. First, due to an error in assignment of participants to experimental conditions, the design was not completely randomized. Data was collected in six out of ten conditions, after which, data was collected in the remaining four conditions. An analysis of individual differences between the two groups was completed and revealed no significant differences between them. Any differences which may have occurred in experimenter behavior from early to late in the study were indeterminable. Participants who were assigned to the final four experimental conditions received instructions from experimenters who over time became more experienced in the experimental procedure.

An issue which is often advanced in discussing experiments conducted in laboratory settings in the generalizability of findings. Clearly this study lacks what has been termed "mundane realism" which is the degree to which the experimental setting matches things which occur in organizations (Berkowitz & Donnerstein, 1982). No study is completely generalizable (Fromkin & Struefert, 1976) but the strength of laboratory investigation lies in it's ability to control irrelevant variables and test causal hypotheses.

Ilgen (1986) points out that high fidelity (physical similarity between laboratory and field settings) can increase the generalizability of laboratory findings. However, he further suggests that if laboratory subjects attribute the same meaning to the variables of interest as subjects in organizations would, high "psychological" fidelity is achieved. The purpose of this study was to determine how individuals react to performance feedback. The process individuals undertake in determining the acceptability of feedback was of primary interest. Therefore, high psychological fidelity was considered more important than high physical fidelity.

One issue related to the generalizability of the findings is that the feedback recipient typically has an ongoing relationship with the feedback provider in real work settings. Since there was no one actually providing feedback in this study, the influence of this type of relationship was not assessed. Research conducted in an organizational setting could ascertain the

influence of the quality and length of the feedback recipient/feedback provider relationship on reactions to performance feedback.

The lack of experience subjects had with the task they were asked to complete also limits the generalizability of this study. The task was chosen to maximize variance on self-certainty. Future research should assess self-assessments of performance on familiar tasks to determine if they influence consensus performance judgments more than that found in the present study.

Appendices

Appendix A

IN-BASKET EXERCISE

Your name is Lee. Your work for the Bennett Corporation. You will be transferred in one week to replace John Quitt who left suddenly. Your employer, the Bennett Corporation, has decided to send you to the Midwest office to go through John Quitt's (your predecessor's) in-basket. It is Sunday evening April 13th, and no one else is in the office. In 45 minutes you must catch a plane to a training center where you will be for one week and cannot be contacted.

Read through the information, memos and reports. Respond to each item in writing. Responses to these items may include letter writing, memos to others or to your self and scheduling meetings. You may write your response on the same memo you received or no the memo pad provided writing paper is also provided for letter writing. Be sure to attach any letters or memos to the appropriate item.

An organizational chart is provided for your reference. You have 20 minutes to go through your in-basket.

IT IS ADVISABLE TO READ THROUGH THE ENTIRE IN-BASKET BEFORE TAKING ANY ACTION.

BENNETT CORPORATION

Organization Chart for Midwest Branch

Fred Waters
Branch Manager

Betsy Ferris
Secretarial

Tom Smith
Zone Sales Manager

Carla Dwyer
Manager,Computer
Install/Repair

Lee Stanley
Sales

Tina Merloff
Sales

Susan Krane
Sales

Dan Larson
Sales

Roy Turner
Sales

Mary Shop
Sales

Dave Thompson
Repair

Cathy French
Repair

Vince Turen
Repair

Phyllis Whipple
Secretarial

Approximate Time Required for Various Types of Sales Calls

Initial Sales Call		Time
Regular calculators		2 hrs.
Programmable calculators		2 hrs.
Computer system		4 hrs.
Demonstration		
Regular calculators		2 hrs.
Programmable calculators		3 hrs.
Computer systems B10-B20		4 hrs.
	B40-B55	6 hrs.
	B70-B90	8 hrs.

Price List

	Model No.	Cost
Regular Calculators	B2	200.00
Deluxe Calculator	B3	290.00
Regular Programmable Calculator	X-R.5	1400.00
Deluxe Programmable Calculator	X-R.7	1850.00
Programs - pre-packaged		125.00
Programs - tailor made		200.00

Computers	Model No.	Basic Cost
Mini Computers		
	B10	26,000
	B12	28,000
	B15	36,000
	B19	41,000
Medium Size Computers		
	B40	75,000
	B44	80,000
	B48	97,000
	B50	102,000
	B55	110,000
Large Computers		
	B70	375,000
	B74	390,000
	B75	450,000
	B77	470,000
	B80	725,000
	B84	810,000
	B88	915,000
	B90	1,325,000

Bennett Corporation

Lee 4/7

Here is a list of some of John's customers that I found in his desk. I am not sure of his rationale for having only about half of his customers on the list. I'm sure it will be a guide for planning your first week's visits. By the time you return from training I will have a complete list for you.

Tom

From... T. SMITH

CUSTOMER	CONTACT PERSON	LAST VISIT	TYPE OF EQUIPMENT	COMMENTS
AXA TRON	MARK CLASS	MARCH 7 1990	LARGE COMPUTER SYSTEM B-80, ALL EQUIPMENT IS BENNETT	BEST CUSTOMER, ALL EQUIP IS BENNETT. LIKES TO GO FISHING ON HIS BOAT. GO OUT WITH HIM AT LEAST ONCE A MONTH FISHING.
ABLE ACCOUNTING	JACK LEDGER	MARCH 1 1990	X-R-7 PROGRAMMABLE CALCULATORS.	NEW OFFICE. REQUIRES COMPLETE FACILITIES OUT HAS NOT AGREED TO BUY FROM US YET.
DATA TREND	BILL GRUMBLE	MARCH 10 1990	B-75 COMPUTER, OTHER EQUIP IS FROM VARIOUS COMPETITORS.	VERY PROFESSIONAL ORGANIZATION, MR GRUMBLE IS EASILY UPSET. DIFFICULT TO SELL TO, GOOD LONG ORGANIZATION.
HARGROVE MANUFACTURING	RAY JOSE	NOV 3 1989	15 HAND CALCULATORS	SMALL COMPANY, VERY THRIFTY INDIVIDUAL. OUR X-R-7 COULD REALLY SAVE HIM SOME MONEY IF HE WOULD PURCHASE THEM. HE IS A VERY DIFFICULT CUSTOMER TO CONVINCE, COULD USE 15 X-R-7's, WILL ONLY SEE PEOPLE ON FRIDAYS
KLINGON INDUSTRIES	KATHY CORMAN	MARCH 30 1990	MBI EQUIPMENT ABOUT 10 YEARS OLD	MS. CORMAN IS A VERY PRACTICAL PERSON. IF SHE'S BE SHOWN OUR EQUIP. IS SUPERIOR, SHE WOULD BUY REQUIRES A B-90.
MORTON MANUFACTURING	MARY MORTON	FEB 10 1990	ALL EQUIP IS BENNETT, BUT VERY OLD.	EXPANDING AND REMODELING. WILL NOT SEE ANYONE UNTIL CONSTRUCTION IS COMPLETE WHICH WILL BE APRIL 1ST. WILL SEE DEMONSTRATIONS OF COMPUTER EQUIP FROM APRIL 1ST TILL APRIL 22, BUY ON APRIL 26TH ANALYSIS OF HER NEEDS BASED ON EXPANSION INDICATE SHE WOULD REQUIRE A B-50.
NEWTON CHEMICAL	ROD CAMERON	JAN 19 1990	NO COMPUTERS, ASSORTMENT OF OLD CALCULATORS (ABOUT 50)	SEEMS INTERESTED IN PURCHASING SOME NEW CALCULATORS. HIS OLD ONES ARE ALWAYS BREAKING DOWN.
POINT INDUSTRIES	KEITH ROGERS	NOV 15 1989	FULLY COMPUTERIZED OUT OUT OF DATE EQUIP FROM DATAPACK COMPUTR	LIKES TO SOCIALIZE WITH THE SALESPERSON. TAKE HIM TO LUNCH OR DINNER. MUST SPEND MONEY ON HIM TO MAKE SALE. NO INTREST IN BUYING NEW
VISTA CORPORATION	CARLA MORSE	MARCH 15 1990	B-90 COMPUTER SYSTEM MOSTLY OUR CALCULATORS	JUST PURCHASED OUR COMPUTER SYSTEM SIX MONTHS AGO VERY HAPPY WITH IT.
ZOAR MEDICAL INSTRUMENTS	DIANE KASTER	FEB 13 1990	B-70, CALCULATORS ARE OLD, EVERYTHING IS BENNETT	VERY FRIENDLY INDIVIDUAL. LIKES BENNETT EQUI MAY EXPAND SOON WILL SEE SALES PEOPLE ONLY ON TUESDAY AND FRIDAYS. (AFTERNOONS ONL

Bonnett Corporation

April 11

Lee

Attached is your weekly planner. This is a form we use in this area to plan the following week's visits. Please complete it for the week of the 21st of April and leave it with Phyllis. You begin work at 8:00.

TOM

From... T. SMITH

	April 21 MONDAY	22 TUESDAY	23 WEDNESDAY	24 THURSDAY	25 FRIDAY
8:00					
9:00					
10:00					
11:00					
12:00					
1:00					
2:00					
3:00					
4:00					
5:00					
6:00					

Klingon Industries
1444 Spock Street
Resteen, MI
March 21

Bennett Corporation
1555 15th Street
Resteen, MI

Mr. Quitt:

Regarding our conversation of March 20, I have been considering your offer to demonstrate the B90 and would like to set up an appointment. I will be at a conference for the next two weeks, but as soon as I return I would like to see the demonstration. I have, therefore, set aside the morning of April 21 for the demonstration.

I am looking forward to seeing you at that time.

Yours truly,

Kathy Corman

Kathy Corman
Vice President

Lee

Tom

I usually like to ride with each of my salesp on a sales call once a month. Let me know what day you think would be the best during your first week. The only day I cannot make it is Friday. Any other day is fine with me.

SPEED-O-LETTER

WITT CORPORATION — INTER-OFFICE CORRESPONDENCE

		Dept.
ALL SALES PEOPLE		Date April 9
m Morrison, Plant Superintendent	Dept. & Location Stratton Assembly Plant	

Gen. — C.C.

B80 Printer Malfunctions
Serial numbers 10-5755 through 12-1755

We have received reports of problems with the line printer for the B80. On checking we realised one of our new technicians has been assembling the printer in an incorrect manner, which results in continuous malfunctioning. The technician was responsible for assembling the printers with the above mentioned serial numbers.

If you have any reports of problems with these printers, please replace them and return the malfunctioning printer to us.

Bennett Corporation
1555 15th St
Resteen, MI

7501

Customer Data Trend
6565 Sixty-Fifth Street
Address Resteen, MI

Date March 10

Buyer B Crumble
(Signature)

Qty	Model No	Description	Unit Price	Total
1	B-75	Computer	$390,000	$390,000

Sub Total $390,000
Sales Tax 17,000
Total $407,000

B Crumble
(Authorized Signature)

PRESIDENT
(Title)

Appendix B
MEASURES COMPLETED
INFORMED CONSENT DECLARATION

The purpose of this project is to examine the determinants of sales performance. In order to comply with professional standards as well as those established by Michigan State University, it is essential that you be made aware of the nature of this research and the rights and responsibilities incurred by both you and the researcher.

The nature of this projects involves the investigation of what qualities a good salesperson has and what behaviors lead to effective selling. You will be asked to complete an in-basket exercise and will be provided with an evaluation of your performance. You will also be asked to evaluate your own performance. Finally, you will be asked to react to the evaluation you have given yourself as well as the evaluation which will be provided.

The study will take approximately 1.5 hours of time for which you will receive course credit. Please note that the information you supply will be kept completely confidential. The principal investigator, MaryBeth DeGregorio will assume complete responsibility for maintaining the anonymity of all you responses.

It should be stressed that you can decline to participate or terminate your participation in this project at any time without recrimination. In return for your participation, you will be given course credit as outlined by the Psychology Department Human Subjects Committee and your instructor. If you wish to receive this credit, but do not wish to participate in this study, or decide to terminate your participation prior to the study's completion, an alternative activity requiring similar commitments of time and effort is available. At the end of the study, a more complete written description of this investigation and its findings will be available from the researcher. Along with the rights listed above, you also incur certain responsibilities. Primarily among these responsibilities is that you must provide information that is, as far as possible, accurate and complete. We also ask that you DO NOT disclose any information related to this project to any other persons until this project is completed (e.g., until the end of Spring Quarter, 1989).

I certify that I have read and understand the rights and responsibilities incurred by both me and the researchers in this project as outlined above.

_____
(Signature)

_____
(Print Name)

_____
(Date)

Appendix B (cont.)

Introduction

The purpose of this study is to identify what qualities a good salesperson has and what behaviors lead to effective selling. In this study you will be asked to complete an in-basket exercise. An in-basket exercise is a frequently used technique for evaluating sales ability. The in-basket itself, is a collection or group of materials which might be found in the incoming mail of a supervisor or manager who has just taken over the position. A secretary is not available, phones are disconnected and files are locked. Your task is to determine what to do with the various situations presented in the in-basket materials.

Please keep in mind that it is not important whether or not you have previous experience in sales. We are interested in the raw talent people possess to be salespersons. It is therefore very important that you try to do your very best at the in-basket exercise.

Attached you will find a description of skills that the in-basket exercise measures. Preliminary data indicates that the average in-basket exercise score received by undergraduate students working on an in-basket for the first time is a 50 on a 100 point scale. We would like you to attempt to receive a score of **70**. This is a difficult but attainable goal for students with no in-basket exercise experience.

Appendix B (cont.)

IN-BASKET PERFORMANCE

Organization and Planning - The participant should develop a plan of attack. Priorities should be set. Time must be used efficiently. Delegation should be used. Conflicts should be recognized and dealt with.

Decision Making - Decisions should be made quickly. Procrastination should not take place. The decision should be of high quality given the available information.

Problem Analysis - Interrelationships between items should be noted and handled. Additional information should be sought. Customer significance should be noted. Missing information must be recognized and sought out.

Social Skills - Memos, letters, etc. should fit the situation. Consideration should be demonstrated by the use of thank-you's and polite language where appropriate. Firmness should be conveyed in writing where appropriate.

Unsatis-factory				Average				Outstanding		
0	10	20	30	40	50	60	70	80	90	100

Appendix B (cont.)

In-Basket Performance Evaluation Form
(Self Rating)

Please provide an OVERALL rating of performance. Your goal for performance was a score of 70. You should CONSIDER the performance dimensions listed below in making **ONE** overall rating. Please respond by placing any number from 0 to 100, which best describes your performance, in the space provided. Use the scale below for assistance in making your rating.

1. Dimension 1 - Organization and Planning

   A plan of attack was developed. Conflicts were recognized and dealt with.

2. Dimension 2 - Decision Making

   Decisions were made quickly. Decisions were of high quality given the available information.

3. Dimension 3 - Problem Analysis

   Interrelationships between items were noted and handled. Missing information was recognized and sought out.

4. Dimension 4 - Social Skills

   Memos, letters fit the situation. Consideration was demonstrated. Firmness and tact was used when appropriate.

Unsatis-factory				Average				Outstanding		
0	10	20	30	40	50	60	70	80	90	100

Overall Rating _____

Appendix B (cont.)

Self Feedback Acceptance

Please consider the ratings that you provided for yourself. Answer the following questions using the scale provided below. Write your responses in the space provided at the left.

Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	2	3	4	5	6	7

_____ 1) My self feedback did not truly depict my performance on the sales task.

_____ 2) My self evaluation reflected my true performance.

_____ 3) My self feedback was an accurate evaluation of my performance on the task.

Appendix B (cont.)

Self Certainty

The following questions address how confident you are in the ratings you have just provided. Please use the following scale to answer the questions below. Fill in your response in the space provided at the left.

Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	2	3	4	5	6	7

_____ 1) I am confident about the self evaluation I provided.

_____ 2) I am not sure how I did on the sales task.

_____ 3) I am certain that my self-ratings reflect my true performance.

_____ 4) I have faith in my self-ratings of performance.

_____ 5) I doubt the self-ratings I gave.

Appendix B (cont.)

In-Basket Performance Evaluation Form
(Evaluator Rating)

Please provide an OVERALL rating of performance. You should CONSIDER the performance dimensions listed below in making **ONE** overall rating. Please respond by placing any number from 0 to 100, which best describes the student's performance, in the space provided. Use the scale below for assistance in making your rating.

1. Dimension 1 - Organization and Planning

   A plan of attack was developed. Conflicts were recognized and dealt with.

2. Dimension 2 - Decision Making

   Decisions were made quickly. Decisions were of high quality given the available information.

3. Dimension 3 - Problem Analysis

   Interrelationships between items were noted and handled. Missing information was recognized and sought out.

4. Dimension 4 - Social Skills

   Memos, letters fit the situation. Consideration was demonstrated. Firmness and tact was used when appropriate.

Unsatis-factory				Average				Outstanding		
0	10	20	30	40	50	60	70	80	90	100

Overall Rating _____

Appendix B (cont.)

Shown below are a number of statements concerning your attitudes regarding various topics. Carefully consider each of the following statements with respect to your personal opinions. Then, decide the extent to which each statement describes you. Use the response options shown below. Write the number of your response to the left of each statement.

1	2	3	4	5	6	7
Always	Almost Always	Usually	Sometimes	Seldom	Almost Never	Never

---

____1. I do my best work when my job assignments are fairly difficult.

____2. When I have a choice, I try to work in a group instead of by myself.

____3. In my work assignments, I try to be my own boss.

____4. I seek an active role in the leadership of a group.

____5. I try very hard to improve on my past performance.

____6. I pay a good deal of attention to the feelings of others I work with.

____7. I go my own way when I work, regardless of the opinions of others.

____8. I avoid trying to influence those around me to see things my way.

____9. I take moderate risks and stick my neck out to get ahead in my work.

____10. I prefer to do my own work and let others do theirs.

____11. I disregard rules and regulations that hamper my personal freedom.

____12. I find myself organizing and directing the activities of others.

____13. I try to avoid any added responsibilities when I work.

____14. I express my disagreements with others openly.

____15. I consider myself a "team player" when I work.

____16. I strive to gain more control over the events around me.

____17. I try to perform better than my fellow students.

____18. I find myself talking to those around me about non-school matters.

____19. I try my best to work alone on a job.

____20. I strive to be "in command" when I am working in a group.

Shown below are several more statements concerning your attitudes. Carefully consider each of the following statements and decide the degree to which you agree or disagree with each statement. Use the response options shown below. Write the number of your response to the left of each statement.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Moderately Agree	Strongly Agree

---

____1. I feel that I'm a person of worth, at least on an equal basis with others.

____2. I feel that I have a number of good qualities.

____3. All in all, I am inclined to feel that I am a failure.

____4. I am able to do things as well as most other people.

____5. I feel I do not have much to be proud of.

____6. I take a positive attitude toward myself.

____7. On the whole, I am satisfied with myself.

____8. I wish I could have more respect for myself.

____9. I certainly feel useless at times.

____10. At times I think I am no good at all.

Consider each of the following statements. Choose the statement in each pair of statements that you feel is closest to your opinion. Write the letter indicating your response to the left of each pair of statements. THEN, check the box which best describes how much closer the statement you choose is to your true opinion than the statement you did not choose.

Statement closer to my opinion (a or b?)

a)Children get into trouble because their parents punish them too much.

_____1.

b)The trouble with most children nowadays is their parents are too easy.

____Slightly Closer ____Much Closer

a)In the long run people get the respect they deserve in the world.

_____2.

b)Unfortunately, an individual's worth often passes unrecognized no matter how hard he/she tries.

____Slightly Closer ____Much Closer

a)The idea that teachers are unfair to students is nonsense.

_____3.

b)Most students don't realize the extent to which their grades are influenced by accidental happenings.

____Slightly Closer ____Much Closer

a)Becoming a success is a matter of hard work, luck has little to do with it.

_____4.

b)Getting a good job depends on being in the right place at the right time.

____Slightly Closer ____Much Closer

a)The average citizen can have an influence in government decisions.

_____5.

b)This world is run by the few people in power, and there is not much the little guy can do about it.

____Slightly Closer ____Much Closer

a)In my case getting what I want has little or nothing to do with luck.

_____6.

b)Many times we might just as well decide what to do by flipping a coin.

____Slightly Closer ____Much Closer

a)Who gets to be the boss often depends on who was lucky enough to be in the right place first.

_____7.

b)Getting people to do the right thing depends upon ability, luck has little to do with it.

____Slightly Closer ____Much Closer

a)Most people don't realize the extent to which their lives are controlled by accidental happenings.

_____8.

b)There really is no such thing as "luck".

____Slightly Closer ____Much Closer

a)In the long run the bad things that happen to us are balanced by the good ones.

_____9.

b)Most misfortunes are the result of lack of ability, ignorance, laziness or all of these.

____Slightly Closer ____Much Closer

a)Many times I feel that I have little influence over the things that happen to me.

_____10.

b)It is impossible for me to believe that chance or luck plays an important role in my life.

____Slightly Closer ____Much Closer

a)What happens to me is my own doing.

_____11.

b)Sometimes I feel that I don't have enough control over the direction my life is taking.

____Slightly Closer ____Much Closer

Appendix B (cont.)

Perceived Congruence

Please consider the ratings that your evaluator gave you. Answer the following questions using the scale provided below. Write your responses in the space provided at the left.

Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	2	3	4	5	6	7

_____ The evaluation I received was similar to my self evaluation.

_____ The rater's evaluation was inconsistent with my self rating.

_____ My self ratings agreed with the ratings I received from the evaluator.

_____ My self assessment and the evaluation I received from the rater matched.

_____ There was a close correspondence between the rating I received from the evaluator and my own self rating.

Appendix B (cont.)

Perceived Credibility Items

Please consider the ratings that your evaluator gave you. Answer the following questions using the scale provided below. Write your responses in the space provided at the left.

Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	2	3	4	5	6	7

_____ The rater who evaluated my performance was knowledgeable.

_____ The rater was incompetent.

_____ The rater could be considered an expert evaluator.

_____ The rater was skilled in the evaluation of in-basket exercise performance.

_____ The rater was inexperienced in performance assessment.

Appendix B (cont.)

External Feedback Acceptance Items

Please consider the ratings that your evaluator gave you. Answer the following questions using the scale provided below. Write your responses in the space provided at the left.

Strongly Disagree			Neither Agree Nor Disagree			Strongly Agree
1	2	3	4	5	6	7

_____ The feedback did not truly depict my performance on the sales task.

_____ The rater's evaluation reflected my true performance.

_____ The feedback the rater gave me was an accurate evaluation of my performance on the task.

_____ I do not feel the feedback reflected my true performance.

Appendix B (cont.)

Self Rating II

You will soon be asked to complete a second in-basket exercise. Prior to doing so we ask that you again think about your performance on the previous in-basket exercise. We would like you to **CAREFULLY** consider your self evaluation of performance as well as the rater's evaluation of your performance.

Please provide an OVERALL rating of performance. Your goal for performance was a score of 70. You should CONSIDER the performance dimensions listed below in making **ONE** overall rating. Please respond by placing any number from 0 to 100, which best describes your performance, in the space provided. Use the scale below for assistance in making your rating.

1. Dimension 1 - Organization and Planning

   A plan of attack was developed. Conflicts were recognized and dealt with.

2. Dimension 2 - Decision Making

   Decisions were made quickly. Decisions were of high quality given the available information.

3. Dimension 3 - Problem Analysis

   Interrelationships between items were noted and handled. Missing information was recognized and sought out.

4. Dimension 4 - Social Skills

   Memos, letters fit the situation. Consideration was demonstrated. Firmness and tact was used when appropriate.

Unsatis-factory				Average					Outstanding	
0	10	20	30	40	50	60	70	80	90	100

Overall Rating _____

Appendix B (cont.)

DeBriefing

This study investigated reactions to performance feedback. You received feedback which was either very similar to your own self-evaluation or dissimilar from your self-evaluation. Half of those who received feedback which was dissimilar from their own self-evaluation received feedback indicating that their performance was poor, the other half received feedback indicating that their performance was good. In addition, you were led to believe that the individual who provided the feedback had either a great deal of expertise (industrial/organizational graduate student) or no expertise in evaluating sales performance (undergraduate student). In fact, the feedback you received was predetermined. We expect that both similarity of other assessments to self assessments and the expertise of the rater will influence feedback acceptance.

It should be stressed that the performance feedback you received IN NO WAY reflects your true performance. Your performance was in NO WAY being evaluated. You were randomly assigned to either a group who received feedback similar to your self-view or feedback which was dissimilar from your self-view.

Thank you for your time.

Appendix C

LOW CREDIBILITY (Experimenter Script)

Now that you have completed your self-evaluation I am going to take your in-basket to be evaluated by another person. Your performance will be evaluated by a Michigan State University Freshman psychology student who is also participating in this study for course credit. The student has NO previous experience in evaluating performance. The student has no familiarity with in-basket exercises either. In fact, no exposure to in-basket exercises will be provided to this evaluator until the student is asked to assess your performance. The freshman evaluator will be assessing your performance based on the same dimensions you used for self-evaluation. While your performance is being evaluated, please fill out this attitude questionnaire.

HIGH CREDIBILITY (Experimenter Script)

Now that you have completed your self-evaluation I am going to take your in-basket to be evaluated by another person. Your performance will be evaluated by the Industrial/Organizational psychology graduate student who is conducting this study to complete requirements for the degree of PhD. This graduate student has worked as a manager for five years prior to entering graduate school, therefore has a great deal of experience in evaluating performance. The graduate student has also received extensive training in the measurement of in-basket exercise performance. In-basket exercises were frequently used at the organization where the student worked. This evaluator now conducts seminars on the use and evaluation of in-basket exercises. The graduate student evaluator will be assessing your performance based on the same dimensions you used for self-evaluation. While your performance is being evaluated, please fill out this attitude questionnaire.

Appendix D

Results of factor analysis of self certainty and self feedback acceptance scales.

Items	Factor Loadings 1	2
Factor 1: Positively Worded Items	Eigenvalue= **4.11**	
My self feedback did not truly depict my performance on the sales task.	.655	.167
I am confident about the self evaluation I provided.	.649	.357
My self evaluation reflected my true performance.	.809	.091
I am certain that my self-ratings reflect my true performance.	.839	.181
My self feedback was an accurate evaluation of my performance on the task.	.817	.163
I have faith in my self-ratings of performance.	.618	.569
Factor 2: Negatively Worded Items	Eigenvalue= **1.08**	
I am not sure how I did on the sales task.	-.025	.849
I doubt the self-ratings I gave.	.395	.717

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