Informal feedback giving: Development of a scale and elaboration of its nomological network

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A Thesis

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Abstract

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Informal feedback giving behavior has been largely ignored in the management science literature despite the important role it plays in improving individual and organizational performance. This two-part study was designed to elucidate the construct of informal feedback giving behavior and to develop a scale to measure the behavior. A model of informal feedback giving, originally developed by Larson (1984), was extended with the addition of Dweck's (2000) implicit theories of human abilities to predict informal feedback giving by supervisors. Employee tenure and supervisor-employee task dependence were hypothesized to moderate the relationship between the supervisors' implicit theory and their informal feedback giving.

The results of the scale development and validation revealed that there are four factors underlying feedback giving. These factors include two dimensions of the feedback valence (positive and negative) and two communication methods (verbal and non-verbal) that were combined into four subscales (positive verbal, positive non-verbal, negative verbal and negative non-verbal). These factors were extracted in both the employee and the supervisor samples, suggesting a robust structure.

The extension of Larson's model produced mixed results and the original hypotheses were not clearly supported. Implicit theories of human abilities predicted certain types of informal feedback giving although there was limited concordance between the employee and the supervisor reports. The moderators, employee tenure and

task dependence, did have an effect on the relationship between the supervisors' implicit theory and their tendency to provide specific types of feedback. The implications of these findings were discussed with an emphasis on the construct of informal feedback giving and the effects of implicit theories on the behavior.

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Introduction

There is little doubt that feedback is one of the most influential topics in the organizational behavior literature. Feedback is specifically defined as "actions taken by (an) external agent(s) to provide information regarding some aspect(s) of one's task performance" (Kluger & DeNisi, 1996, p. 255). This information stipulates both the quality and adequacy of previously accomplished acts and offers a motivational direction to individuals who learn about the outcome or consequences of their actions. These two components of feedback allow it to guide and direct behavior (Ilgen, Fisher, & Taylor, 1979). Feedback includes information provided directly by the task itself and more complex interpersonal interactions such as those undertaken in the scope of employee appraisal or evaluation. The purpose of this study is to examine factors that predict supervisors' tendencies to provide feedback to their employees. An investigation of the current feedback literature is in order before specific hypotheses can be developed.

Feedback interventions of various forms have been studied since the turn of the century (e.g. Judd, 1905; French, 1958). In initial research efforts, outcome feedback (including scores and results of simple cognitive and physical tests) was provided to subjects (Annett & Kay, 1957; Annett, 1969). The results seemed to suggest that feedback interventions globally improve performance outcome (Ammons, 1956), leading researchers to stipulate uniformly "a major tenet in organizational behavior literature is that feedback improves performance" (Ang, Cummings, Straub, & Earley, 1993, p. 240).

This suggestion that the provision of feedback will always improve performance has been keenly debated in the literature (Ilgen et al., 1979; Salmoni, Schmidt, & Walter, 1984; Balcazar, Hopkins, & Suarez, 1986; Locke & Latham, 1990; Kluger & DeNisi,

1996). While some meta-analyses have supported these claims (e.g. Ammons, 1956), these same findings have been criticized for a lack of scientific rigour (Kluger & DeNisi, 1996). Researchers have now assumed a more moderate view and recognize that under certain conditions feedback can lead to performance decrements (Ilgen et al., 1979; Balcazar, Hopkins & Suarez, 1985; Kluger & DeNisi, 1996; Alvaro, Bucklin, & Austin, 2001) or, at the very least, inconsistent results (Salmoni, Schmidt, & Walter, 1984; Harris & Rosenthal, 1985). It is plainly evident that since the turn of the century, the topic of feedback has lost neither its importance nor relevance.

A Feedback Intervention Theory

Despite the contention that feedback can have variable effects on performance, there is not much known about how feedback actually serves to modify behavior. One major weakness in the literature is this lack of a theoretical framework. This oversight was highlighted by Kluger and DeNisi (1996), who explained that "recent FI (feedback intervention) research is carried out by isolated pockets of researchers who share either a theoretical or a paradigmatic orientation" (p. 254). Kluger and DeNisi (1996) combined models of the feedback process from various areas of research and developed the Feedback Intervention Theory (FIT). This model was developed to account for their recent meta-analytic finding that in 38% of the 131 studies reviewed, the provision of feedback led to performance decrements (Kluger & DeNisi, 1996).

Kluger and DeNisi (1996) contend that feedback interventions do not modify individuals' task learning or motivation to perform per se. Rather, feedback directs individuals' attention to discrepancies between their current performance and their self-

set goals or behavior standards. Thus, behavioral change is promoted. This model was the first attempt to consolidate research on feedback processes into a useable paradigm. While Kluger and DeNisi (1996) agreed that the model lacked the depth and breadth necessary to make predictions about the effect of every feedback intervention, their model still has made a valuable contribution to the literature and feedback is still recognized as an important resource for organizations and individuals alike (Ilgen et al., 1979; Stajkovic & Luthans, 1997).

Feedback as an Organizational Resource

Despite the more realistic view of feedback now held by researchers (and the fact that researchers still cannot confidently explain its dynamics), it has been clearly stated, "timely and accurate feedback is beneficial to both organizations and individuals" (Lam, Yik, & Schaubroeck, 2002, p. 192) and "feedback when properly conducted, improves performance" (Reinke & Baldwin, 2001, p. 161). For example, feedback improves the performance of the organization by facilitating the achievement of collective goals, often through the use of incentives (Payne & Hauty, 1955; Vroom, 1964; Nadler, 1977; Nadler, 1979; Ashford & Cummings, 1993). Specifically, feedback has been found to increase the prevalence of health and safety-related behaviors (Sulzer-Azaroff & de Santamaria, 1980) and improve energy conservation (Becker, 1978). Not surprisingly, feedback is also invaluable in negotiation and conflict resolution processes as it enables organizations to assess offers and counter-offers (Thompson & Hastie, 1990; Thompson & DeHarpport, 1994).

Feedback as an Individual Resource

At the level of the individual, feedback is one of the most influential determinants of behavior (Larson, 1984; Stone & Stone, 1985; Ashford, 1986). Sully de Luque and Sommer (2000) suggested that everyone has an "intuitive interest in knowing "how they are doing", especially when their jobs depend on it." (p. 829). The information often takes the form of performance feedback and it is thought to influence an employee's behavior and job attitudes (Chapanis, 1964; Larson, 1984; Taylor, Fisher, & Ilgen, 1984). This feedback allows individuals to measure their fit with the organization (Lam et al., 2002) and make social comparisons (Festinger, 1954; Pettigrew, 1967; Goodman, 1977). Its role in management training and development has been well established (Kuchinke, 2000). Importantly, feedback can have different effects depending on the recipient's status within the organization. "Feedback has different purposes at different career stages. It helps newcomers learn the ropes, midcareer workers to improve performance and consider opportunities for development, and late career employees to maintain their productivity." (London, 1997, p. 11).

The benefits of feedback for the individual are numerous (London, 1997). Timely feedback can decrease role ambiguity, role conflict, and mental stress and increase job satisfaction, performance and involvement (Ashford, 1986; Herold, Liden & Leatherwood, 1987; Podsakoff & Farh, 1989; Andrews & Kacmar, 2001). Feedback helps employees perform their own diagnostic acts and find their own mistakes in their work. Thus, it indirectly enhances learning and motivation and increases self-knowledge through the clarification of individuals' own beliefs about their work and the effectiveness of their actions (Ashford & Cummings, 1983; Baird, 1986; Morrison,

1993a, 1993b; London, 1997). London (1997) suggested that when feedback is administered in a clear, constructive and specific manner, it could have far reaching effects by improving interpersonal relations and increasing group cohesion. Since feedback is such a valuable resource, it follows that it should be available from a number of sources within the organization.

Sources of Feedback

Indeed, feedback can be obtained from sources of varying importance within the organization. While Hackman and Lawler (1971) had suggested that feedback was significantly related to the satisfaction of higher-order needs, they could not identify the jobs that provided the greatest amount of feedback. They stipulated vaguely that within a given job, feedback could be obtained from several sources. Greller and Herold (1975) later indicated that there were five main sources of feedback available to employees within an organization. Feedback could be obtained from the formal organization, immediate supervisors, co-workers, the task environment and the feedback seekers themselves. Herold et al. (1987) determined that employees could easily distinguish between these sources. That is, employees could characterize these feedback sources by the amount, consistency and usefulness of the available information.

What is the most important source of feedback for employees? Hovland, Janis and Kelly (1953) stated that employees search for credible and trustworthy sources of feedback and characterize the feedback as high quality only if it is derived from such sources. Greller and Herold (1975) hypothesized that feedback sources psychologically closest to the seeker provide the most credible information. Feedback from sources more

distal to the performer is sometimes viewed as having questionable accuracy (Beckler & Klimoski, 1989; Northcraft & Earley, 1989). Thus, Greller & Herold (1975) contended that the feedback seeker is the most valuable source of information, followed by the immediate supervisor who is the second most important source. However, in many employee surveys, individuals report that it is their supervisor who is the most informative and trusted source of feedback (Hanser & Muchinsky, 1978; Bernardin, 1979; Herold et al., 1987; Fedor, Eder, & Buckley, 1989; Fedor, 1991; Gosselin, Werner, & Hallé, 1997). Carroll and Schneier (1982) suggested that supervisors play this prominent role because of their power to reward and develop employees. Despite the recent increase in the popularity of computer-generated feedback, the immediate supervisor is still a major resource for feedback information (Earley, 1998).

Formal Performance Feedback Mechanisms

Organizations, which have long recognized the importance of feedback for their employees, often implement formal delivery systems with which supervisors can communicate this information to their subordinates. To properly understand how supervisors communicate feedback to their employees, an investigation of these formal feedback delivery systems must be undertaken.

Traditionally, within most organizations, feedback is provided in the form of a sanctioned performance appraisal administered by the employee's immediate supervisor (Larson & Callahan, 1990). Locher and Teel (1988) reported that 70% of the U.S. organizations they had surveyed performed these appraisals on an annual basis. Indeed, "performance evaluation systems are among the most important human resource

components of an organization" (Brutus & Derayeh, 2002, p. 188). Classified as both a social and communication process (Murphy & Cleveland, 1995), these appraisals traditionally involve a meeting between the supervisor and subordinate (or employee) and the supervisor may rate the employee on characteristics of his work performance with a rating scale (Murphy & Cleveland, 1995). Performance appraisals are frequently used to allocate bonuses and financial incentives, to identify employees who would benefit from training and to guide personal development efforts (Church & Bracken, 1997; Browne & Payne, 2002).

Testimony to the recognized importance of feedback, organizations have now modified the tradition of having only the supervisors serve as the source of this information (Hedge, Borman, & Birkeland, 2001). In fact, the main premise of the multisource evaluation programs is that feedback from varied sources promotes behavioral changes in the employee more effectively than does traditional performance appraisal (O'Reilly, 1994; Green, 2002). Also called 360-degree feedback, this approach involves the use of raters who have different relationships with the employee or ratee, and who thereby can provide a more complete and accurate view of the employee's performance (Lawler, 1967; Murphy & Cleveland, 1995; DeNisi & Kluger, 2000). According to Antonioni (1996), more than 10% of U.S. organizations now employ a true 360-degree rating system and many more employ a hybrid model. Forty-three percent of large Canadian companies employ some form of multisource assessment (Brutus & Derayeh, 2002). Indeed, it is now so popular that Romano (1994) estimated that in the U.S. more than $150 million was spent to develop multisource feedback programs in 1992 alone.

However, multisource feedback has not received blanket acceptance. In a survey of organizations that implemented these evaluation programs in 1997, it was found that 50% later abandoned the plan due to criticisms from employees and inflated ratings (Timmreck & Bracken, 1996). Indeed, many organizations had initially implemented 360-degree feedback programs without much thought simply because their competitors had done so (Waldman, Atwater, & Antonioni, 1998). Multisource assessment programs are often plagued with poor effectiveness and questionable validity and often require major adjustment to function effectively (Ghorpade, 2000; Brutus & Derayeh, 2002).

Organizations' search for new means to communicate feedback to their employees has not stopped with yearly performance evaluations. Formal developmental relationships have evolved to become an important source of feedback for work related issues (Kram, 1985; Kinlaw, 1989; Harris & DeSimone, 1994; Higgins & Kram, 2001). Developmental relationships include a variety of initiatives such as one-on-one mentoring, apprenticeships and coaching (Harris & DeSimone, 1994; Douglas & McCauley, 1999). The basic precept is that the coaching or mentorship relationship allows both members to exchange detailed personal feedback that would not otherwise be available from the immediate supervisor or the job environment (i.e., Fine & Pullins, 1998; Connor, Bynoe, Redfern, Pokora, & Clarke, 2000). Indeed, it is the one-on-one nature of the relationship with the potential for valuable feedback exchanges that prompted 21% of surveyed U.S. organizations to encourage mentoring initiatives (Douglas & McCauley, 1999). Indeed, while some dissatisfaction with mentoring has been reported (Clawson, 1985), in general, developmental relationships are well received.

Do traditional performance appraisals, multisource ratings, and developmental relationships satisfy employees' needs for feedback on their job performance? There is now some question as to whether these mechanisms provide employees with all the information they require (Levy, Albright, Cawley, & Williams, 1995). In all likelihood, a yearly dose of feedback on job performance is not enough. Bernardin and Beatty (1984) stated clearly "we do not believe the feedback provided in the yearly appraisal will have much effect at all on subsequent employee performance." (p. 277). One just has to examine the changes that have transpired in recent years within organizations (Mervis & Marks, 1992), to see that constant feedback is necessary for employees to adapt to continual change. Indeed, individuals have long recognized the merits of feedback for self-evaluation and, when deprived, will often seek out sources of such information (Ashford & Cummings, 1983; Sedikides, 1993). But rather than seeking information available in formal performance appraisals, employees often search for informal feedback about their performance.

Informal Feedback

Initial feedback research, as discussed above, focused on formal performance appraisals and feedback from simple psychomotor tasks (i.e., Annett & Kay, 1957). These research trends changed with a seminal article by Ashford and Cummings (1983). Ashford and Cummings (1983) stipulated that informal feedback is as important, if not even more important, than the sanctioned feedback mechanisms on which organizations rely. Informal feedback differs from the formal sources of such information. Rather than consisting of a formal report or meeting, informal feedback is communicated in daily

interactions between supervisors and employees (London, 1997). For example, a supervisor who stops by an employee's desk to make a comment about his or her work is providing informal feedback. Informal feedback does not include information obtained directly from the task itself nor does it include information obtained from the organization as a whole (such as a quarterly report). Moreover, the vast majority of employees surveyed preferred ongoing informal feedback to infrequent formal appraisals (Bernardin, 1979; Gosselin et al., 1997). In fact, such informal feedback is crucial for employee performance and development (Ashford & Cummings, 1983; Ashford & Tsui, 1991; Levy et al., 1995). "To the extent that performance and other personally held goals are important to the individual, feedback on their behavior aimed at achieving these goals becomes a valuable informational resource" (Ashford & Cummings, 1983, p. 371). It follows that as feedback becomes more valuable to the individual, more effort will be directed towards obtaining it (Ashford & Cummings, 1985). The view that individuals actively seek out such information is in contrast to the old premise that individuals are simply passive recipients of feedback from the environment (Ilgen et al., 1979; Locke, 1980; Ashford & Cummings, 1983).

Informal Feedback Seeking

While the exchange of informal feedback between employees and supervisors is a dyadic interaction, the state of the literature is such that little research has focused directly on the role of the supervisor. But, to better understand supervisors' actions, the behavior of the employee in this interaction must first be considered. Since supervisors often fail to provide this essential feedback spontaneously to their employees, an investigation of how employees obtain this information is particularly relevant to the

study of feedback giving (Graen, Orris, & Johnson, 1973; Jablin, 1984; Northcraft & Ashford, 1990; Levy et al, 1995).

Ashford and Cummings (1983) proposed a model of employee feedback seeking behavior. They defined feedback seeking as an attempt by individuals to obtain information relevant to the development of their self-concepts and work performance (Ashford & Tsui, 1991; Morrison & Bies, 1991; Ashford & Northcraft, 1992). There are two forms of feedback seeking behavior: inquiring and monitoring (Ashford & Cummings, 1983). Inquiry or active feedback seeking is a straightforward attempt by individuals to obtain information about their performance. For example, employees may directly question their peers or supervisor about their own work performance (Morrison & Bies, 1991; Ashford & Cummings, 1993; Vancouver & Morrison, 1995). The inquiry method is advantageous in that it allows the feedback recipients to control the amount, type and timing of the information received (Northcraft & Ashford, 1990; Levy et al., 1995). Ashford (1989) reported that the recipient is thus more likely to accept the feedback message.

Using an inquiry approach, employees seek different types of information from different people. This can be seen in job changers and new hires who seek information from different sources depending on their tenure in the organization (Brett, Feldman, & Weingart, 1990). Specifically, new hires obtain information about their performance from supervisors and seek social feedback from peers (Miller & Jablin, 1991; Morrison, 1993a, 1993b). Tenured employees have been found to seek out less feedback via direct inquiry than new hires so that they do not appear insecure to those around them (Ashford, 1986).

Monitoring occurs when individuals attend to their immediate environment (Ashford & Cummings, 1983). They observe the situation and other actors for cues that provide relevant information about their performance. Environmental cues include the setting itself or nonverbal behavior on the part of other actors. Indeed, non-verbal behavior is an important source of information and includes voice quality (pitch and timber), body motions, touch, facial expression and personal space allocation (Snyder, 1974). A plethora of information about individuals' emotional states, attitudes and interpersonal intimacy is available by observing their non-verbal behavior (Mehrabian, 1969).

Feedback seekers may engage in two specific forms of monitoring. A reflective appraisal is said to occur when the seekers observe others' reactions to their own behavior. For example, an employee who sees his boss smile while reading his report may interpret the smile to mean that the boss was pleased with his efforts. A comparative appraisal occurs when the actors compare their behavior directly to the behavior of others. A secretary who notes that she does not type as fast as her co-workers and concludes that she is performing poorly is making a comparative appraisal.

Feedback seekers must interpret the behavior they observe (Jones & Gerard, 1967). Suchman (1971) suggested that the feedback-seeker assigns meaning to this behavior by interpreting it within existing cognitive schemata. Cognitive schemata are complex, abstract images that summarize the characteristics of a given entity and exist for different categories of people, events or even causal relationships between objects (Fiske, 1974; Bernardin & Beatty, 1984). Feedback obtained via inquiring and monitoring must be interpreted with a "sense-making process" that encompasses the surrounding

circumstances and the recipients' perceptions of the senders' behavioral intentions (Thomas & Pondy, 1977; Weick, 1979; Fedor, Buckley, & Eder, 1989). But as social information is often ambiguous, individuals may interpret it idiosyncratically (Vallacher, 1980; London, 1997) and fill in missing information with previously held beliefs (Salancik & Pfeffer, 1978). To the extent that schemata are personal constructs, it is possible that two individuals will assign different meanings to the same behavior.

One factor that influences how the feedback seekers interpret the feedback message is their perception of the senders' motivations for providing the information (Fedor et al., 1990). Thomas and Pondy (1977) had suggested that intention perceptions are a critical part of all social interactions. Fedor et al. (1990) reported that employees believe that their supervisors have four major intentions when they provide informal feedback. Employees are able to make subtle distinctions between their supervisors' intentions. *Supervisor dominance* is the belief that supervisors deliver feedback to assert their power over the lowly subordinates. *Attentiveness to unit expectations* reflects the supervisors' desire to improve the overall performance of the group through feedback. *Subordinate nurturance* includes the supervisors' intentions to help their subordinates (such as by increasing their work-related self-esteem). Finally, *exhortations to increase subordinate performance* encompass feedback that incites subordinates to work harder. Fedor et al. (1990) suggested that feedback seekers interpret the feedback they obtain via inquiry and monitoring within this framework. However, more research is needed to determine under which conditions the various perceptions are elicited. Clearly, it is possible for subordinates to misinterpret their supervisors' intentions and consequently fail to comprehend the feedback message and respond in a fashion that was not intended

(Fedor et al., 1990). Ashford and Cummings (1993) labelled the problems associated with misinterpretation of the feedback or inferential errors as *inference costs*. The problems associated with the misinterpretation of feedback information may even be significant enough to constrain the behavior of the feedback givers themselves.

Feedback Avoidance

It is the potential problems associated with feedback seeking that makes employees reluctant to seek out this information especially if the potential costs exceed the perceived benefits (Fedor, Rensvold, & Adams, 1992; VandeWalle & Cummings, 1997). Indeed, despite the evidence that feedback interventions can have a positive effect on performance and the fact that feedback is accessible from several sources within the organization, Ashford (1989) determined that individuals often fail to seek out this information. The author labelled the avoidance of feedback as an ego defensive motivation. Specifically, feedback seekers, especially if they have low self-esteem, often experience an internal conflict between the desire to obtain valuable information and the desire to protect the ego (Tetlock & Manstead, 1985; Northcraft & Ashford, 1990; Morrison & Bies, 1991; Ashford & Northcraft, 1992; Ashford & Cummings, 1993; London, 1997). When individuals receive feedback that runs counter to their expectations they often discount it, experience negative affect, reduced self-efficacy and self-esteem and lose their motivation to improve (Aronson & Linder, 1965; Dipboye & de Pointebriand, 1981; Taylor et al., 1984; Ashford, 1986; Anderson & Rodin, 1989; Northcraft & Ashford, 1990; Karl & Kopf, 1994; Brett & Atwater, 2001; Brown, Farnham, & Cook, 2002). As feedback is a valuable individual resource, in order to

receive the information they need, employees often develop strategies to decrease the likelihood that the message will be negative. For example, feedback seekers may monitor their boss' moods in order to catch them "on a good day" before asking for feedback (Ang, et al., 1993).

This reluctance to seek feedback manifests itself clearly within organizations. The fact that formal performance appraisals are not held in high regard is evidence of the general aversion to feedback situations. While this human resource tool has received a lot of attention in the organizational behavior literature, in reality, both employees and employers dislike performance appraisals (Hall & Goodale, 1986; Kane & Kane, 1988) and often complete them only to serve the requirements of the HR department (Meyer, 1991). Indeed, employee evaluations are frequently done in a hurried or lack-luster manner (Meyer, 1991). In some cases, top managers complete performance appraisals but then ignore the results (Steers & Lee, 1987), since they feel that the results are of little consequence within the company (Napier & Latham 1986). These effects are amplified when the subordinate is a member of a minority group and perceptions of racism are elicited by the reception of negative feedback (Cohen, Steele, & Ross, 1999). This quote from a personnel manager sums up his employees' reactions to performance appraisal. "In our organization everyone hates the entire appraisal process. The employee that gets a good performance appraisal thinks that the system is wonderful; the employee that gets a bad one thinks that the system is unfair." (Roberts, 1998, pg. 301).

If feedback seekers are reluctant to seek feedback due to ego protection and impression management concerns (Ashford & Northcraft, 1992), it should not be a surprise that feedback senders are also reluctant to provide this information. This is

especially the case when the news is not good like when employees have failed to meet goal expectations (Larson, 1989). Indeed, it is a well-documented finding that individuals will avoid giving bad news to others (Fitts & Ravdin, 1953; Oken, 1961; Blumberg, 1972; Tesser & Rosen, 1975). Rosen & Tesser (1970) reported that subjects truncated the message that they were asked to provide to another subject when it contained a negative component, such as "call home about some bad news". That is, they relayed the neutral part but neglected to communicate the unpleasant part. Larson (1984) and Bond and Anderson (1987) later confirmed these findings and suggested that despite the fact that the feedback information may be critical, if its valence is negative, there are chances that it will not be delivered immediately, if it is delivered at all. The reluctance to transmit feedback may even lead providers to distort the message to make it more palatable for the recipient (Huttner & O'Malley, 1962; Ilgen & Hamstra, 1972; Oberg, 1972; Fisher, 1979; Ilgen & Knowlton, 1980; Longnecker, Sims & Gioia, 1987; Lee, 1993).

There are several reasons hypothesized to explain why supervisors are reluctant to communicate feedback information to their subordinates. Supervisors who are faced with giving a poor evaluation report that the recipient's negative emotional reaction is the major deterrent (Tesser & Conlee, 1973; Fisher, 1979; Folkes, 1982). Employees often react defensively or in a hostile fashion when given negative feedback (Gibb, 1973). As subordinates frequently overestimate the quality of their performance (Hanson, Morton, & Rothaus, 1963; Thornton, 1968), they may be more dissatisfied with the feedback that they receive (Gibb, 1973). In fact, supervisors of poor performers knew ahead of time that their subordinates would be displeased with the feedback they were to receive compared to higher performers (Fisher, 1979). Some managers also reported a fear of

negative consequences directed towards them (such as being denied a promotion) if they evaluated their employees negatively (Jones, 1966; Napier & Latham, 1986). Thus, it is not really surprising that supervisors procrastinate when faced with giving performance appraisals and feedback (McGregor, 1957; Gruenfeld & Weissenberg, 1966). Indeed, supervisors' unwillingness to provide feedback to their employees is significant enough to cause serious difficulties when problems with subordinates get out of hand (Veiga, 1988).

It is evident that the need for further study of the antecedents and characteristics of feedback sending is very real. As stated earlier, while formal appraisals can serve as a tool with which performance feedback can be communicated to employees, these appraisals simply do not meet employees' informational needs (Pringle & Longnecker, 1982). The informal feedback that employees receive on a more frequent basis may be a more significant source of job performance information. Since proactive feedback seeking is such an important behavior in organizations (Nadler, 1977), it follows that behaviors relating to the delivery or provision of such feedback are also important to study. But, regrettably, informal feedback giving has been largely ignored in the communication and organizational behavior literature (Book, 1985; Cusella, 1987; Frandsen & Mills, 1993).

In fact, a search of the current literature reveals that there is little specific research about the act of giving informal feedback. No thoroughly validated tool exists to measure the supervisor's behavioral tendencies. To access the behavior and motivations of the feedback giver, past studies have relied on the interpretations of the seeker (e.g. Morrison, 1993a, 1993b). The feedback givers' perceptions of the amount of feedback

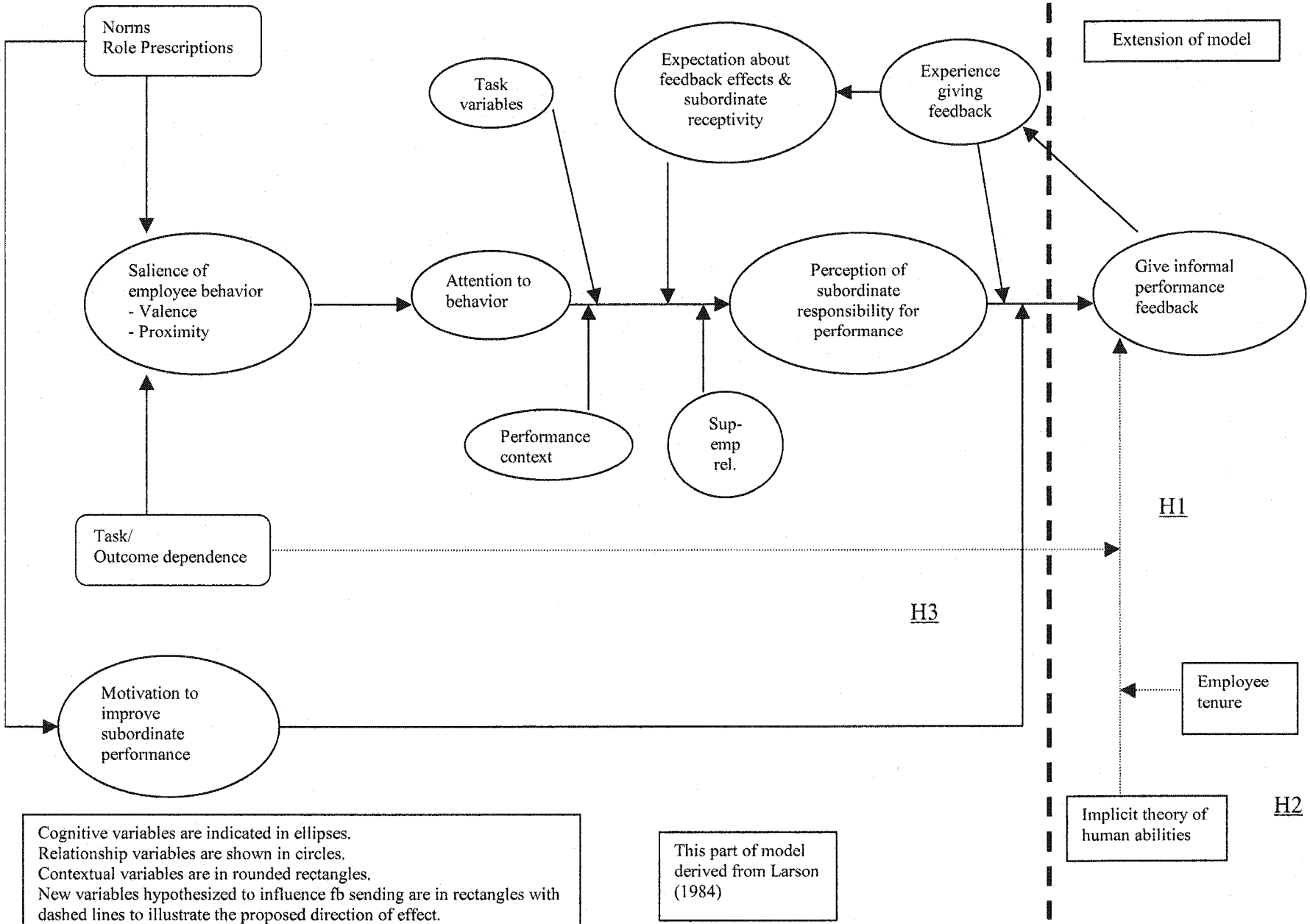
that they actually provide are not directly accessible if the feedback seekers alone are queried. But, before a tool to measure self-reported feedback giving can be developed, the theoretical framework underlying the behavior must first be elucidated.

Theoretical Framework Underlying Feedback Sending

Just as there are individual differences in employees' tendencies to seek out feedback (cf. Ashford & Cummings, 1985; Ashford, 1986; Northcraft & Ashford, 1990; Ashford & Tsui, 1991; Ashford & Northcraft, 1992; Fedor, Rensvold, & Adams, 1992; Trope & Neter, 1994; Vancouver & Morrison, 1995; London, 1997; VandeWalle, Ganesan, Challegalla, & Brown, 2000), it is likely that there are variations in feedback giving behavior. Larson (1984) stated "it is somewhat surprising to note that relatively little research has been devoted to studying the causal factors that influence the delivery of feedback" (p. 43) and consequently developed a preliminary theoretical model that accounts for the fact that feedback delivery varies tremendously across situations and from one supervisor to another. Barnes-Farrell (2001) agreed with Larson's assessment and suggested that supervisors are not all equally motivated to evaluate their employees or to provide them with informal feedback. Larson (1984) developed a model of the feedback giving process and identified antecedent variables that are thought to predict this behavior. These variables can be loosely divided into three main categories: situational, relationship and cognitive. While the relationships were not thoroughly empirically tested, the Larson (1984) model provides an important starting point for the elucidation of new constructs now hypothesized to underlie feedback sending (see

Adams, 1993). These new constructs will be discussed in detail. A revised and expanded version of the Larson (1984) model appears below.

Figure 1 - A Model of Feedback Giving Behavior - An Extension of Larson (1984)



Situational Factors

The characteristics of the feedback situation within the greater work environment are a prime determinant of the supervisor's behavior. Larson (1984) suggested that there are two situational factors that moderate the amount of feedback that the supervisor will provide. The first is the extent to which the supervisors are dependent on their subordinates for their own job-related results. The second set of situational factors concerns the organizational norms and role prescriptions that impinge the supervisors' actions.

Larson (1984) hypothesized that the more the supervisors depend on their subordinates, the more likely they are to provide feedback to those employees. The author stipulated that there are two types of dependence: task and outcome. Task dependence exists when the supervisors depend on their subordinate for the successful completion of their own work. That is, the subordinates must complete their tasks adequately for the supervisors to be able to do their job well (Larson, 1986). An example of this would be bosses who depend on their employees for accurate budgetary information. While these supervisors might present the budget to the executive committee themselves, they depend on the accuracy of the information provided by their employees. Therefore, they should be very motivated to give their subordinates feedback to ensure that they continue to provide them with the information they require. The subordinates' work performance is thus very salient to these supervisors.

Outcome dependence reflects the fact that supervisors' job outcomes (including salary, bonuses and promotions) depend on the performance of their subordinates. For example, the bosses who present the budget to the executive committee might receive a

bonus if the revenues exceed prediction. If the amount of revenue (and consequently the bonus) depends on the subordinates' technical analysis and accuracy, the supervisor is said to be in a situation of outcome dependence with those employees. Again, this boss should be motivated to improve the subordinates' performance due to the possibility of personal gain. As discussed, the provision of regular feedback is one way that employees can be motivated to excel (Ilgen et al., 1979). Larson (1984) stressed that task and outcome dependence are related but distinct concepts. He hypothesized that a subordinate-supervisor relationship characterized by task dependence would provide the opportunity for interpersonal interactions that would promote the provision of informal feedback.

Organizational feedback norms are also thought to predict feedback delivery. For example, norms about the amount of feedback that should be provided by supervisors directly affect feedback delivery. Supervisors in organizations whose climates promote independence and self-sufficiency would likely provide less informal feedback to their subordinates than would supervisors in organizations whose climates promote this dyadic exchange of information. The idea that organizations can be characterized by their feedback giving norms was initially introduced by Herold and Parsons (1985) who classified such environments by the amount and type of feedback available to the employees. Their Job Feedback Survey (Herold & Parsons, 1985) taps fifteen dimensions of the feedback environment, reflecting the source of the feedback, the valence and the type of information obtained. Andrews and Kacmar (2001) confirmed the survey's psychometric properties and suggested that it could be used to differentiate between organizations.

Herold and Parsons (1985) evaluated two organizations to see if they could detect measurable differences in the feedback environment. The results showed that the two work environments (a utility company and a hospital) differed tremendously in the type and form of feedback that was provided to employees. For example, the utility company provided more feedback to its employees in the form of positive formal recognition and informal feedback compared to the hospital. The authors concluded that the employees at these two organizations experienced substantially different feedback environments. These results are not surprising since characteristics of the culture in which the organization is situated do influence the supervisors' feedback giving behaviors (Earley, Gibson, & Chen, 1999; London, Larsen, & Thisted, 1999). Thus, feedback norms exert a powerful influence on supervisors and greatly affect the delivery of feedback.

In addition to organizational norms, Larson (1984) also suggested that the supervisors' individual role prescriptions affect the amount of informal feedback that they provide. Role prescriptions reflect the "behavioral demands inherent in the particular roles they [supervisors] occupy" (Larson, 1984, p. 54). Indeed, one reason that supervisors give feedback is because it is simply part of their job. For example, supervisors with many young, entry-level employees may define their roles as coaches and mentors and thus pay more attention their employees' behavior. These supervisors are consequently more motivated to ensure that performance improves and are therefore more likely to provide informal feedback to help their charges grow and develop.

Relationship Factors

Another important set of factors that Larson (1984) indicated should influence feedback giving behavior involves the relationship between the supervisor and each

individual employee. Specifically, Larson (1984) suggested that if supervisors liked their employees, the probability that they would transmit negative information to them would be reduced. This hypothesis was supported by Adams (1993) in a study of military helicopter pilot training. A positive relationship between the employees and the supervisor was also proposed to increase the likelihood that the supervisor would provide their employees with information about their good performance.

The author offered two explanations for these observations. The first is that supervisors who have interpersonal relationships with their subordinate have more to lose if they transmit negative feedback. The recipient may choose to "blame the messenger", thereby jeopardizing the relationship. This explanation was initially offered by Mayer (1957) and Blumberg (1972). The second explanation assumes a more cognitive view and suggests that positive affect towards an individual biases the attributions that the observer makes about that behavior. That is, supervisors who like their employees often view them as less personally responsible for their performance at work and thus provide less negative feedback (Jones & Nisbett, 1972; Gochman & Smith, 1979) or distort the content of the message (Fisher, 1979; Ilgen & Knowlton, 1980).

Cognitive Factors

Cognitive factors moderate the way supervisors perceive and interpret their subordinates' work performance, which, in turn, influences their delivery of feedback. According to Larson (1984) and Fisher (1979), the salience of the subordinate's performance or behavior affects the likelihood that the supervisor will provide feedback. Specifically, a performance that stands out from the norm or is close in physical proximity to the supervisor would elicit more feedback than would a standard

performance or one that is performed further from the supervisor. These performances are more likely to be attended to, remembered and consequently acted upon. Importantly, Larson (1984) suggested that above average and below average performance might not be equally salient to the observer. That is, below average performance might be more noticeable and elicit a reaction from the supervisor more quickly than superior performance (Fisher, 1979). This could be due to the fact that organizations usually have well-established criteria to define the minimum standards for behavior and to separate poor performance from acceptable performance. Usually, there are no standards to define exceptional behavior. For example, machine operators may be chastised for producing too many parts that fail to meet minimum quality standards. This performance will be more salient to the supervisors (under a condition of task dependence with their employees) when they are under strict orders to maintain these minimum standards. The supervisors may be motivated to change their subordinates' behavior to prevent the undesirable behavior from being repeated. Hence, it is not surprising that Hatfield and Huseman (1982) reported that manufacturing employees felt their bosses gave them feedback only to let them know when they were not performing up to par.

Another cognitive factor that determines whether supervisors will provide feedback is the extent to which they perceive that the employees are personally responsible for their work performance (Larson, 1984). If employees cannot be held personally responsible for their behavior, then feedback likely would not improve performance. Characteristics of both the task itself and the performance context determine whether the boss feels that the subordinates have control over their performance.

Characteristics of the task determine how the boss assigns responsibility for performance to the employee in question. The simplest characteristic is whether the task is completed alone (disjunctive task) or in a group (conjunctive task) (Kelley & Thibaut, 1978). A supervisor will assign less personal responsibility to the employee who is performing a task in a group compared to one who is performing the task alone.

The performance context also influences whether the supervisor allocates responsibility for job performance to the employee in question. Larson (1984) suggested that supervisors employ the covariation principle (Kelley, 1967, 1972) when making these decisions. The covariation principle suggests that "supervisors will assign responsibility for performance to one potential cause (e.g. the subordinate him/herself, the task's ease or difficulty, the unique set of circumstances involved) with which the performance appears to covary" (Larson, 1984, p. 47). The employee is observed while performing the task and the supervisor assigns responsibility for performance based on the consistency of the employee's behavior over time, the performance of the same subordinate on other, related tasks and the performance of the subordinate's peers on the same task (Kelley, 1967). Simply, if the subordinate's peers are capable of performing adequately on the same task, the supervisor is more likely to assign the blame for the poor performance to that employee, rather than blaming situational constraints such as equipment failure. When the supervisor assigns the responsibility directly to the employee, the likelihood that feedback will be given is increased (Lason, 1984).

Supervisors are also thought to develop personal theories about the nature of their employees' performance at work. These feedback givers make attributions about whether the employees' current performance is due to their own innate ability or the amount of

effort they exert on the task. Weiner et al. (1972) differentiated between ability and effort, suggesting that ability is usually stable and unchanging over time while effort is voluntarily controlled. Thus, while employees may not be able to control their fundamental abilities, they may choose to increase or decrease the amount of effort allocated to the task. Therefore, they are responsible for their performance. It follows that if the supervisors believe that the performance level is controlled by the allocation of effort, they will be more likely to give feedback. Whereas, if the supervisors feel that the employees simply do not have the fundamental ability to do the task, they may be less likely to give feedback (Green & Mitchell, 1979).

In addition to the personal theories that the supervisor has about the effort and abilities required to perform well, each supervisor has specific theories about the way each subordinate reacts to feedback and more general stereotype-like impressions about the effect of performance feedback on work behavior (Larson, 1984). "Such personal feedback policies, which are essentially behavioral intentions rather than statements about implicit assumptions or beliefs, are likely to have a particularly significant impact on supervisors' informal performance feedback behavior." (Larson, 1984, p. 49). These beliefs are thought to develop through the personal experience of giving feedback to employees or via the observation of others who provide this information (Brief & Downy, 1981; Larson, 1984).

According to Larson (1984), the cognitive antecedents of feedback giving play an important role in predicting the occurrence of the behavior. Task characteristics, the performance context and the supervisors' expectations about the effect of their feedback affect their own perception of whether the subordinates are responsible for their

performance. If the employees are held responsible, then more feedback will be given. Other factors that increase the likelihood that informal feedback will be provided include the supervisors' personal relationship with their employees. Certain situational variables including task and outcome dependence, organizational norms and the supervisor's role prescriptions also moderate the salience of the employee's behavior, which in turn promotes the delivery of informal feedback. These relationships have been hypothesized to exist by Larson (1984) and are clearly indicated in the model. Yet, empirical support has only been offered for parts of the model (Adams, 1993). It is also likely that other factors affect feedback giving. These factors will be introduced below and their relationship with the Larson's original model will be discussed in detail.

Implicit Theories of Human Abilities

In addition to the theories that supervisors hold about the effects of their feedback on the employee, they hold more fundamental or implicit theories about the very nature of human attributes and behavior that structure their understanding of the world (Kelly, 1955, 1970; Argyris & Schön, 1974, 1978; Wegner & Vallacher, 1977; Weick. 1979, Larson, 1984; Dweck, Chiu, & Hong, 1995a). Indeed, Dweck and Elliot (1983) proposed a model of behavior motivation in which implicit theories direct individuals in the selection of their personal achievement goals and guide them in their interpretation of social information. These goals, in turn, establish a framework of responses that can be characterized in terms of their cognitive, affective and behavioral characteristics. Dweck and Elliot elaborated this research on implicit theories based on seminal work started in 1983. It is hypothesized that the supervisors' implicit theories might affect their tendency to give informal feedback. But before the role of implicit theories in feedback giving

behavior can be discussed, a review of the current literature must be undertaken. This review will show how the research on implicit theories can be integrated with Larson's (1984) model.

The origin of implicit theories and the belief systems associated with them stems from Heider's (1958) theories of social perception and Kelly's (1955) theory of personality. Referring to personality constructs, Heider believed that latent or implicit theories direct the way individuals interpret their world. Kelly (1955) had posited that the main purpose of such an organized belief system is to give the individual the sense that the world could be predicted. Implicit theories, even though they may not be explicitly articulated, are thought to create the cognitive framework or meaning system through which information is processed and understood (Murphy & Medin, 1985; Dweck & Leggett, 1988; Piaget & Garcia, 1983/1989; Carey & Smith, 1993; Dweck et al., 1995a; Chiu, Hong, & Dweck, 1997). The main premise is that individuals have certain implicit beliefs about the fundamental malleability or modifiability of personal traits or characteristics such as intelligence and morality (Dweck & Leggett, 1988).[1]

Entity and Incremental Implicit Theories

Researchers have found that individuals generally hold one of two implicit theories of human abilities. Entity theorists feel that human attributes such as intelligence and morality are fixed traits that cannot be changed while incremental theorists believe that these attributes are dynamic and malleable and can be changed through effort by the individual (Bandura & Dweck, 1985; Dweck & Leggett, 1988; Chiu, Dweck, Tong, &

[1] The idea that human attributes can be malleable or fixed is derived from work by Piaget and Garcia (1983/1989) who differentiated between the classic Greek and Chinese views. The classic Greeks felt that the world was "static" and unchanging while the Chinese ascribed to the idea that the world was "dynamic" and changeable.

Fu, 1997). Entity theorists focus on trait-based causes of behavior while incrementalists take into account the situational and psychological mediators including goals and need states (Dweck et al., 1995a; Levy & Dweck, 1998). Levy and Dweck (1999) differentiated between entity and incremental theorists and stipulated that "if people assume that they live in a relatively static social reality where individuals have fixed qualities, they are likely to approach that reality differently from the way they would if they thought they lived in a social reality where personal qualities are more dynamic." (p. 1164).

Dweck, Chiu, and Hong (1995b) stressed that there is no fundamental "right" theory to hold. "Its not that one system is more "logical", "rational," "advanced" or "developmentally mature"...They are both widely held by people at all levels of education and from all walks of life." (Dweck, 2000, p. 132). Implicit theories color the attributions that individuals make about behavior (Levy, Stroessner & Dweck, 1998). In fact, "implicit theories may cognitively orient individuals toward different ways of understanding their experiences and these different interpretations of experience can guide different reactions" (Dweck et al., 1995b, p. 322).

Implicit Theories and Individual-Level Goals

Implicit theories about specific human attributes such as intelligence have been found to predict behavior in achievement situations. Dweck (1986) and Nicholls (1984) introduced the concept of goal orientation as an individual's dispositional preference for certain behaviors in achievement-related situations. Simply, individuals who hold different implicit theories generally have different achievement goals. Specifically, people with entity theories of intelligence subscribe to *performance goals* and are mainly

concerned with demonstrating their intelligence and abilities (Bandura & Dweck, 1985; Farrell & Dweck, 1985; Dweck et al., 1995a). In the face of failure, they develop a maladaptive, helpless response pattern characterized by the avoidance of challenges, negative affect and impaired strategy formulation (Diener & Dweck, 1978, 1980; Elliot & Dweck, 1988; Mikulincer, 1994; Dykman, 1998; Zhao, Dweck & Mueller, 1998; Levy & Dweck, 1999). These individuals would rather receive positive judgments about their abilities (and avoid negative assessments) than learn something new (Licht & Dweck, 1984; Dweck et al., 1995a).

Individuals with incremental implicit theories of intelligence hold *learning goals* and focus on the act of learning itself (Bandura & Dweck, 1985; Leggett, 1985; Dweck & Leggett, 1988; Mueller & Dweck, 1998; Stone, 1998). *Learning goals* are associated with productive strategy development, self-growth (Sujan, Weitz, & Kumar, 1994), goal-setting (Brett & VandeWalle, 1999) and task focus (Fisher & Ford, 1998). Individuals with a learning goal focus on the chance to learn and, even at the risk of a negative outcome, relish the opportunity to gain new knowledge and skills (Dweck & Leggett, 1988). In the face of failure, they react with increased effort (Duda, 1992).

One explanation for the different affective reactions experienced by entity theorists and incrementalists in the face of failure is the fact that implicit theories direct how individuals view the allocation of effort (Ames, 1992). For an entity theorist with a performance goal, the need to engage in substantial effort to accomplish a task is evidence of low ability. After all, it would be easy for a person with natural ability and no effort would be required. Effort is then to be avoided as it diagnoses incompetence (VandeWalle & Cummings, 1997). It is likely that for supervisors with entity theories of

human abilities their personal views about the usefulness of effort and hard work for goal completion influence their behavior toward their employees.

The idea that implicit theories are, in fact, components of more elaborate knowledge structures supports the fact that they guide the individual's behavior in many achievement and social situations (Dweck, 2000). The knowledge structure view suggests that an individual's implicit theory is linked to other cognitive structures, such as goals and attributions (Anderson, 1995). This approach accounts for many findings such as the fact that implicit theories can often be domain-specific. That is, individuals can hold different implicit theories for different human attributes as well as a more global one (Dweck et al., 1995a). For example, while someone may view intelligence as a fixed attribute, the same person may view morality as more malleable. Another individual may hold the view that all human traits are fixed and unchanging. It is thought that the global or domain-general theory of human abilities influences, as a whole, the knowledge structures that underlie the domain-specific implicit theories (Anderson, 1995). Therefore, it is not surprising that there is a correlation between measures of domain-specific and domain-general implicit abilities (Dweck et al., 1995a).

The knowledge structure theory also provides a logical explanation of why an individual's implicit theory may be modified with a simple experimental intervention. Individuals have been prompted to change their domain-specific implicit theories by asking them to read a "scientific" document extolling the virtues of the other theory (Aronson & Fried, 1988; Bergen, 1991; Chiu et al., 1997; Jones, 1998; Levy, 1998; Levy et al., 1998; Mueller & Dweck, 1998; Kamins & Dweck, 1999). Darley (1995) and Kruglanski (1995) suggested that knowledge structures support both entity and

incremental implicit theories to varying degrees. Therefore, when an external influence occurs (such as exposure to trait-focused feedback or a "scientific article"), the knowledge structure that supports the non-dominant implicit theory gains accessibility (Hong, Chiu, Dweck, & Sacks, 1997). Consequently, the individual is more likely to report this non-dominant theory in the future. Thus, "implicit theories can be relatively stable and relatively malleable" (Dweck et al., 1995b, p. 324) when they are supported by knowledge structures.

Implicit Theories and Social Judgment

Despite the fact that individuals can be temporarily prompted to change their implicit beliefs about human traits, these beliefs (both domain-general and domain-specific ones) have an important impact on behavior. In fact, this is one reason why the study of these theories is so interesting. Individuals' implicit theories guide the attributions and the explanations that they make about others' actions in the same manner as they guide their interpretations of their own performance (Hong, 1994; Hong, Chiu, & Dweck, 1994; Dweck, 1996a, 1996b; Erdley, Cain, Loomis, Dumas-Hines, & Dweck, 1997). For example, entity theorists rely heavily on dispositional explanations of behavior at the expense of situational considerations, a tendency termed 'lay dispositionism' (Ross & Nisbett, 1991; Erdley & Dweck, 1993; Chiu, et al., 1997; Gervey, Chiu, Hong, & Dweck, 1999). Indeed, entity theorists "diagnose" others' traits by observing their behavior. An entity theorist might conclude (upon observing someone's actions), "Well, that's the way he is, he can't help it." Thus, implicit theories also affect an individual's judgments about another's future behavior. As well, entity theorists are less likely than incremental theorists to modify their impressions about

someone given contradictory information and envision greater in-group homogeneity where none may exist (Erdley & Dweck, 1993; Chiu et al., 1997; Levy et al., 1998; Levy & Dweck, 1999). For an entity theorist, once a trait label is attached to someone, it becomes permanent. Peterson (1985) suggested that the ability to make such rapid, cognitively efficient judgments about others might be adaptive, especially in cases where the target conforms to typical stereotypes. Dweck et al. (1995b) adopted a more moderate position and stated that further research to evaluate the accuracy of these swift judgments is necessary. Regardless, implicit theories of human abilities are clearly relevant to the study of feedback interactions as the very act of providing such information requires that a judgment or evaluation about the feedback recipient first be made.

Implicit Theories and Performance Evaluation

To further the contention that the supervisors' implicit theory of human abilities should influence their feedback giving behavior, it is important to first recognize that evaluation is thought to be the central goal of all social processing endeavors. The very act of assigning a trait or making a behavioral attribution is first colored by the subjective evaluation that precedes it (Zajonc, 1980). An individual's implicit theory of human ability seems to affect their tendency to make such an evaluation.

Indeed, the research on implicit theories has shown that entity theorists focus more intensely on evaluative processing than do incrementalists (Peabody, 1967; Rosenberg, 1968; Tesser & Martin, 1996; Hong, et al., 1997). Hong et al. (1997) hypothesized that entity theorists attach evaluative tags to the information they receive about individuals and use this information to assign subjective traits. Cognitively, entity theorists encode the information with positive and negative valences separately and store

this information independently. As the positive and negative information is stored separately, the entity theorists are then faced with making more global trait attributions. They are at risk for biased information retrieval when later prompted for information about the target. It is the way in which the information is encoded that may make the trait-based judgments more resistant to change. The flip side suggests that incrementalists integrate information with both a positive and negative valence and take into account inherent behavioral inconsistencies to form an overall or more general impression of the target (Hong et al., 1997). Thus, they focus more on the bigger contextual picture when evaluating individuals.

Since entity theorists and incrementalists encode social information differently, it should not be surprising that domain-general implicit theories have been found to affect the way supervisors issue performance appraisal ratings. For example, Butler (2000) reported that entity theorists focus primarily on initial performance levels when evaluating others. Entity theorists, exhibiting this primacy effect, seem to feel that initial performance reflects the individual's innate abilities. Incrementalists focus more on the variability inherent within the performance. Robinson and Williams (2002) hypothesized that individuals' implicit theories of ability would influence how much information they sought before making a performance appraisal. The authors thought that entity theorists would seek less information than incrementalists. They reported that there was no difference in the amount of information sought by the two subject groups but that this was likely due to artifacts of the study design itself.

Heslin (2002), in one of the first studies of implicit theories and performance appraisal, found that managers with an incremental view of ability showed more variation

in their ratings when employees substantially changed their performance over time. The author suggested that the raters' implicit theories affect their tendency to systematically use all available and relevant information when conducting performance appraisals. This was especially true when new information contradicted previously held beliefs. Heslin (2002) drew the preliminary conclusion that "entity theorist managers may be less likely than incremental theorists to appraise people on their actual performance once they have formed an impression of them". (p. 10).

Hypotheses about Implicit Theories and Informal Feedback Giving Behavior

While the literature on social-cognitive models of performance appraisal is well developed, this is not the case for informal feedback giving behavior. For example, researchers can state confidently that raters go through a certain series of steps before they issue an appraisal of another individual's performance. The rater must first collect and encode information about performance and then store it for later retrieval. Various anecdotes and judgments are then combined to form an evaluation that must be converted into an "objective" rating that is then communicated to the ratee (DeNisi, Cafferty & Meglino, 1984). This complex process has benefited from much research effort (e.g. Murphy, Balzer, Lockhart, & Eisenman, 1985; Murphy, Gannett, Herr, & Chen, 1986; Napier & Latham, 1986; Steiner & Rain, 1989). Unfortunately, the research on informal feedback giving is sparse (i.e., Larson & Skolnik, 1985) and Larson's (1984) model is one of the few contributions to the literature. Efforts must be undertaken to delineate the factors that underlie this behavior in order to explain the individual differences that exist. Implicit theories of human abilities are a good starting point as they affect directly the way individuals make attributions and judgments about the causes of behavior.

Larson's (1984) model of feedback delivery discussed previously outlines the hypothesized effects of situational, relationship and cognitive antecedents on feedback giving. In addition to these variables, the supervisors' implicit theory of human abilities likely also influences their informal feedback giving behaviors. This is possibly due to the effect that implicit theories have on the feedback giver's perception of the human potential for change. Indeed, the belief in the potential to change is central to the distinction between entity and incrementalists (Dweck, 2000). Experimentally, it has been shown that this belief directed students' behavior toward others who had exhibited poor performance (Heyman & Dweck, 1998). Those who had an incremental view of human abilities were more likely to offer help and productive advice to their peers. The entity theorists did not offer much assistance to the poor performing students.

It is clear that entity theorists believe that initial performance is diagnostic of fundamental, fixed ability levels (Butler, 2000). These abilities, in turn, determine how the employee performs in achievement situations such as at school or work. According to entity theorists, since human abilities are fixed, an increase in effort, or an attempt to modify these abilities will be fruitless (Erdley & Dweck, 1993; Dweck et al., 1995a). Therefore, individuals cannot greatly improve or modify their overall performance as it depends on these abilities. This view is consistent with the finding by Heslin (2002) that individuals who espouse an entity theory of human abilities report little change in performance levels even if the target's behavior had changed dramatically between two time periods. As feedback is usually provided to encourage the generation of adaptive behaviors or to modify maladaptive ones (Ashford & Tsui, 1991), it is based on the premise that individuals can and do change their comportment. Thus, if supervisors

believe that employees cannot dramatically change their work performance (due to their fixed abilities), these bosses are not as likely to provide their employees with feedback about their work. After all, what is the point? The feedback would not promote the desired change in performance. Therefore, the implicit theories held by supervisors may explain the existence of differences in their feedback giving behavior.

Hypothesis 1 – Implicit theories of human abilities.

It is clear that supervisors differ in the amount of feedback that they provide to their employees (Meyers, Key, & French, 1965; Burke, 1972; Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975; Jablin, 1979; Landy & Trumbo, 1980; Katerberg & Horn, 1981; Larson, 1984). It is hypothesized that the supervisor's implicit theory is another individual variable that may predict feedback giving behavior. Simply, a supervisor with an entity view of human performance feels that employees are limited in their capacity to modify their performance even if they receive feedback. Therefore, the provision of informal feedback to these employees will not be productive. The incrementalist supervisors feel that human abilities are malleable through the allocation of effort. Consequently, they provide their subordinates with valuable feedback to direct them in their behavioral change. Thus, the following hypothesis will be tested:

H1. Supervisors' implicit theory of human abilities will predict the amount of informal feedback they provide to their subordinates in that supervisors who espouse an entity theory will provide less informal feedback to their subordinates than supervisors with an incremental theory of human abilities.

Hypothesis 2 – Employee job tenure.

It is hypothesized that the relationship between the supervisor's implicit theory and their tendency to provide informal feedback will be moderated by two variables. These factors, as indicated in the model, include the employees' (or feedback recipients') job tenure and whether the supervisors are in a situation of task and outcome dependence with their employees. An explanation of the proposed moderating effects is offered below.

There is ample evidence in the literature to suggest that supervisors view and actually treat their more tenured employees differently than they treat employees who have less tenure on the job. Employees who have many years of experience on the job are usually older employees who are often the victims of systematic and insidious age stereotyping and, its behavioral manifestation, overt discrimination (Rosen & Jerdee, 1976). Age and tenure-based stereotyping manifests itself in many contexts in the work environment. An investigation of the effect of employee tenure is relevant to the study of informal feedback giving behavior in that stereotyping against tenured employees has previously been found to be manifested in formal performance appraisal situations. For example, Waldman and Avolio (1993) reported that age and supervisor ratings are often negatively correlated but the specific cause of this negative correlation was not known. That is, it was unclear whether tenured employees were rated lower due to truly poorer performance or whether these lower ratings were due to rater bias. Ironically, Liden, Stilwell and Ferris (1996) reported that tenured employees actually performed better than younger employees on both objective and subjective measures of performance. Thus, rater bias is more likely a factor in the rating distortions. Indeed, supervisors often refer

to concerns about increasing age and decreasing productivity when rating older employees (Finkelstein, Higgins & Clancy, 2000) when these concerns may not be warranted (Shore & Bleicken, 1991).

In terms of feedback giving behavior, Rosen and Jerdee (1976) reported that supervisors are so hesitant to provide their tenured employees with feedback that these employees often suffer from reduced job motivation. When the supervisor is younger than the employee, this failure to provide feedback often contributes to the role dissention that is particularly problematic within these dyads (Kauffman, 1987). Tenured employees benefit from feedback just as the newer employees do; yet they seem to be less likely to receive it than their younger counterparts (Kauffman, 1987).

The relationship between the supervisors' implicit theory and their feedback giving behavior should be moderated by the tenure of their employees to the extent that supervisors hold these stereotypes about their tenured employees' capacities to perform. (Waldman & Avolio, 1993). Supervisors may feel that newer employees are more malleable than older ones since they have not yet developed fixed work patterns within the contexts of their jobs. The supervisors may consequently direct more attention to their newer employees to help them to work in manners consistent with the accomplishment of individual and organizational goals (Van Mannen & Scheim, 1979). Newer employees themselves recognize the need for this guidance and have been found to engage in more proactive feedback seeking, gestures likely recognized by their supervisors and reciprocated in turn with more feedback (Ashford & Black, 1996). This belief in the employee's potential to change and be "molded" may be more salient to the supervisors of newer employees (due to their pre-existing stereotypes about tenured employees) and

direct their feedback giving behavior more than it would for the supervisors of tenured employees. Consequently, it is hypothesized that the relationship between the supervisor's implicit theory and their tendency to give feedback will be stronger for employees with low tenure. Specifically, for the incremental supervisors, the fact that they are supervising new employees will simply enhance their tendency to provide feedback. For the entity theorists, their usual tendency to avoid informal feedback (due to the belief that it is fruitless) will be dampened when they are overseeing the work of new recruits. Thus, the relationship between the supervisor's implicit theory and their tendency to provide informal feedback is likely moderated by the tenure of their employee. The following hypothesis will be tested:

H2. Employee tenure will moderate the relationship between the supervisors' implicit theory of human abilities and their tendency to provide feedback in that the relationship will be stronger when employee tenure is low.

Hypothesis 3 – Task and outcome dependence.

The idea that the supervisors' dependence on their employees would affect their informal feedback giving behavior was postulated by Larson (1984), although no empirical support for this hypothesis was offered. Before more detailed hypotheses are offered, an examination of the dependence literature will be undertaken.

The suggestion that supervisors can depend on their employees for the completion of their own work (task dependence) and/or their own organizational rewards (outcome dependence) was derived from original research by Thompson (1967). Thompson (1967) first defined three types of task interdependence: pooled, sequential and reciprocal. He suggested that the organizations as a whole could be classified by the type and the extent

of the interdependent relationships between employees, including supervisors and subordinates. Salancik and Pfeffer (1978) concurred and suggested that work activities within any organization could be thought of as on-going exchange relationships based on specific tasks. Dependence relationships between employees have been found to predict leader behavior within organizations, especially those related to personal power allocation and small group performance (Gabarino, 1975; Green & Mitchell, 1979; Lord & Rowzee, 1979; Franz, 1998).

Task and outcome dependence relationships between individuals affect supervisors' reactions to their subordinates' behavior, and, specifically, the delivery of feedback information (Green & Mitchell, 1979). Yet these relationships and their effects have not been investigated in great detail. Moss and Martinko (1998) drew attention to this important oversight in the feedback literature. For example, there is a lot of research to support the contention that individuals are reluctant to provide negative feedback to others (i.e., Fisher, 1979; Bond & Anderson, 1987; Ilgen & Knowlton, 1980). However, in the experimental conditions that supported these conclusions, "there was no indication that the information provider (subject) had any stake in the outcome of the experimental situation. In other words, the subjects' future outcomes were not affected by giving or not giving the recipient the bad news." (Moss & Martinko, 1998, p. 262). Further research has shown that individuals, when placed in situations of task or outcome dependence with others, will react differently and will provide feedback to others to improve their own outcome. In fact, supervisors whose monetary rewards depended even partially on the behavior of their subordinates were more likely to view those subordinates positively and exhibited more helpful behavior compared to supervisors whose own rewards were not

tied to their employees' performance (Ilgen, Mitchell, & Fredrickson, 1981). Larson (1986) concurred and reported that when subjects' outcome depended on the performance of their 'subordinates', they provided more feedback even when their 'subordinate' performed poorly. Similar findings were reported when students' extra credit depended on the performance of another student (Moss & Martinko, 1998).

It is evident that a supervisor in a condition of task and outcome dependence with his or her employee views the employee differently than another with whom he or she does not share this dependence. According to Larson (1984), the possibility for personal gain should motivate the supervisor to ensure that the employee has good work performance. In some cases, the supervisor may need to exert considerable effort to get the employee to change his or her behavior to make it consistent with goal accomplishment so that the boss can then obtain the benefits associated with the performance. Supervisors must obviously believe that the work behavior or ability in question is modifiable and that they can promote this change in the employee. If not, they would not derive maximum benefit from their dependence situation. Consequently, the supervisors' implicit theory of human ability may become more salient and have more of an impact on their informal feedback giving behavior when they are in this condition of task and outcome dependence with their employees. Indeed, feedback giving is one way in which behavior change can be promoted (Larson, 1984; Taylor et al., 1984; Stone & Stone, 1985; Kluger & DeNisi, 1996; Lam et al., 2002). One possible explanation is that for incremental supervisors, the task and outcome dependence relationship will simply encourage the belief that behaviors and abilities can (and must) be changed. For the entity theorists, the possibility of personal gain in a high task and outcome dependence situation

may prompt these supervisors to provide the required informal feedback despite their conviction that human abilities are fixed. Indeed, the provision of this informal feedback, if accompanied by the desired change might even prompt the entity theorist to adopt a more incremental stance according to Darley (1995), Kruglanski (1995) and Hong et al., (1997). While this specific hypothesis will not be tested here, it is evident that a condition of task and outcome dependence that exists between employees and supervisors will affect the relationship between the supervisors' implicit theory and their tendency to provide informal feedback. The following moderating hypothesis will thus be tested.

> H3. Task and outcome dependence will moderate the positive relationship between the supervisors' implicit theory of human abilities and their tendency to provide feedback in that this relationship will be stronger when task and outcome dependence is high.

Experimental Design

In order to test the main hypothesis that the supervisors' implicit theory of human abilities would affect their tendency to provide informal feedback, supervisors were surveyed about their feedback giving behavior and about their implicit theories. To increase the reliability of the responses, employees were surveyed as well and asked, from their perspective, about their supervisor's feedback giving behavior. Consequently, the subjects who participated in the main study were full-time supervisors and their employees.

In order to test the hypotheses, a measure of self-reported feedback giving had to be created for the supervisors. A search of the literature revealed that a supervisor self-report measure of informal feedback giving does not currently exist. The measures that

do exist measure this behavior from the perspective of the feedback recipient (i.e.,, Herold & Parson, 1985; Morrison, 1993a, 1993b; London et al., 1999). Therefore, before the main and moderating hypotheses could be tested, this measure (and a parallel version for their employees) had to be developed. As a result, two pilot tests were completed before the main experiment was conducted. The first pilot test served to develop and test the psychometric properties of the newly created feedback giving scale. The internal reliability of Dweck's (2000) domain-general measure of implicit theories of human abilities was also verified. The second pilot test served as a trial of the data gathering strategy that was to be employed in the main study. Based on the two pilot studies, changes were incorporated in the design and measures employed in the main study. The two pilot studies and their results are described in detail below before the description of the main study.

Pilot Study 1

Method

Participants and Procedures

Two groups of subjects participated in this pilot study whose purpose was to test the psychometric properties of the newly created feedback giving scale and the 8-item implicit theory measure. The first group consisted of 42 undergraduate business students in a large English university in Quebec who did not have work experience supervising other employees. The second, more heterogeneous group consisted of both undergraduate students and employees of a municipal services office in a large city in Quebec. There were 33 subjects in this group and all had worked as supervisors before. The measures, in

the form of questionnaires, were distributed in two university classes and the municipal services office. The students completed the survey in exchange for class credit and returned the surveys anonymously to their professors. The municipal services employees completed the survey at work and returned them in a sealed envelope to an employee designated to collect them and return them to the principal investigator.

Measures

Demographic Characteristics

Demographic information was first collected for all sample respondents. This included age, sex, mother tongue, and number of years of schooling for each respondent. Other information that was collected included tenure, the type of organization for which they worked (manufacturing, retail, wholesale etc…) and the respondent's organizational level. Respondents who had supervisory experience were asked how many employees they oversaw.

Feedback Giving Scales

In order to test the main hypotheses, an instrument to measure informal feedback giving first had to be created. Since a report from the employees about the amount of feedback that their supervisor provides would likely be influenced by a number of external factors (including the quality of the relationship that the employees share with their supervisors), a supervisor self-report measure is necessary. But, as employees and supervisors will not necessarily agree on the amount of feedback that the supervisor provides (likely due to the existence of self-perception biases (Streufert & Streufert, 1969; Wicklund, 1975)), two versions of the measure were created. The supervisor self-

report measure of feedback giving is complemented by a parallel version that evaluates, from the perspective of the employee, how much feedback the supervisor provides.

The relevant dimensions of the feedback giving scale were first elucidated and then sample items were developed to sample thoroughly the content domain in question (Clark & Watson, 1995). The scales were included in the first pilot study to determine their psychometric properties.

Determining relevant dimensions.

To determine which dimensions of feedback giving should be included in the scale, a search of the literature was conducted following recommendations offered by Hinkin (1995). Two main dimensions of informal feedback were uncovered: feedback valence and communication method. There has been extensive research on the effect of the feedback sign (or valence) on the recipient and the sender in the past (i.e., Butler & Jaffee, 1974; Carver & Scheier, 1981; Herold & Parsons, 1985; Fedor et al., 1989; Podsakoff & Farh, 1989; Orpen & King, 1989; Ashford, 1993; Kluger & DeNisi, 1996). The feedback valence or sign reflects the extent to which the feedback message can be characterized as positive or negative by the recipient (Herold & Greller, 1977; Brockner, 1988). The valence of the feedback is an idiosyncratic characteristic of the message that is evaluated within each recipient's frame of reference (Ilgen et al., 1979). Festinger (1954) suggested that individuals have an intrinsic desire to evaluate their competencies and capacities, and, when lacking a clear reference point, will compare themselves to similar others. The valence of the feedback will be determined on a 'favorable-unfavorable' continuum with respect to this reference point (Fedor, 1991). According to Thorndike (1927), the feedback sign can be a reward or punisher with an important

capacity to regulate behavior. Since the sign of the feedback has been identified as an important characteristic of the informal feedback message (Ilgen et al., 1979; Brockner, 1988; Fedor, 1991), it is the first dimension to be included in the scale.

The second dimension is the method of communication. Two means of communicating informal feedback were differentiated: verbal and non-verbal. This dimension was derived from an examination of the feedback seeking literature. Ashford and Cummings (1981) and Ashford (1986) had differentiated between two means of seeking feedback, direct inquiry and monitoring. The distinction between verbal and non-verbal means of providing feedback is thought to parallel the inquiry/monitoring dichotomy. The communication of feedback via verbal means permits a direct transmission of the feedback message, and is similar to the inquiry method whereby the feedback seeker asks questions to obtain the information. Non-verbal communication is subtler and can involve the transmission of information via overt behavior in the form of kinesics or body movements (Sundaram & Webster, 2000). These nonverbal elements of communication have distinct meanings that can be interpreted by the observer and they are as important as verbal language (Rashotte, 2002). "In particular, body orientation (e.g. relaxed, open posture), eye contact, nodding, hand shaking and smiling are all powerful nonverbal signals in interpersonal interactions" (Sundaram & Webster, 2000, p. 382). This method of communication is comparable to monitoring. While few researchers have examined directly the effect of non-verbal communication in the provision of feedback or in formal performance appraisal, non-verbal communication plays an important role in interpersonal exchanges (De Meuse, 1987). Jones and LeBaron (2002) suggested that verbal and non-verbal communication behaviors should be studied

together in the context in which they occur. Testimony to the relevance of this dichotomy, non-verbal indirect feedback was included in the Job Feedback Survey by Herold and Parsons (1985). Therefore, method of communication was seen as an important dimension of feedback giving and was consequently included in the feedback giving scale.

These two dimensions, feedback valence and communication method can be combined. Therefore the feedback giving scale has 4 quadrants or subscales: positive verbal feedback, positive non-verbal feedback, negative verbal feedback and negative non-verbal feedback for which items were derived.

Item generation.

Items were generated for the four quadrants or subscales using some sample questions from other scales (Herold & Parsons, 1985; London et al., 1999) as a starting point. These items were revised and new items were created. There were initially 8 items per subscale for both the supervisor and employee versions of the scale. The supervisor and the employee versions were worded to reflect each respondent's perspective[2]. For example, item 1 in the positive, verbal feedback quadrant in the supervisor version is "I go out of my way to tell my employees when they perform well on the job". The employee version is "My supervisor goes out of his or her way to tell me when I perform well on the job." Both versions had 32 items that were included in the first pilot test survey. Respondents rated their agreement with the statements with a 5-point Likert scale with anchors ranging from (1) strongly disagree to (5) strongly agree. Both the supervisor and the employee version of the scale appear in Appendix A.

[2] This approach was also used in a study by Ilgen et al., (1981) where questions were designed specifically for each group of subjects.

Implicit Theory of Human Abilities Scale

The 8-item domain-general measure of implicit theory of human ability (Dweck & Levy, 1997; Dweck, 2000) was included in both the supervisor and the employee versions of the questionnaire. While traditionally a 3-item measure of implicit theories of human abilities has been used (Dweck, 2000), in this case, the 8-item measure was selected to assuage certain concerns inherent with the use of the shorter measure. In particular, the 3-item measure does not include items that reflect an incremental point of view. Questions are worded just to reflect the entity view based on the precept that if the respondents disagree with those statements, they must then ascribe to the incrementalist view (Henderson, 1990). As this belief is somewhat contentious (Heslin, 2002), the 8-item measure was used instead.

This 8-item measure has 4 questions that relate to incremental beliefs and 4 questions that relate to entity beliefs and has been described as a "kind-of-person" measure (Dweck, 2000; Heslin, 2002). It is thought to encompass domain-specific implicit theory beliefs including intelligence, personality and morality (Heslin, 2002). Sample items include: "As much as I hate to admit it, you can't teach an old dog new tricks. People can't really change their deepest attributes" and "No matter what kind of person someone is, they can always change very much" (Dweck, 2000, p. 180). The 8-item measure appears in Appendix B. All items were assessed with a 5-point Likert scale with anchors ranging from (1) strongly disagree to (5) strongly agree. While the implicit theory of human ability scale had been used previously with 6 anchor points, in the interest of homogenizing the response formats, the scale was converted to a 5-point one.

This minor modification is not thought to change the psychometric properties of the scale itself (Matell & Jacoby, 1971).

The 8-item measure has not been used as often as the 3-item one (see Plaks, Stroessner, Dweck, & Sherman, 2001; Heslin, 2002). To get around the problem of incrementally-worded that statements often elicit acquiescence from both entity and incremental theorists, the incremental items are worded very strongly. Test-retest reliability over a 1-week period is .82 and over a 4-week period, it is .71 according to Levy et al. (1998). There is high internal consistency ($\alpha = .93$). As evidence of validity, Dweck et al. (1995a) showed that responses on this measure of implicit theory were not related to other variables including the respondents' sex, age and political or religious affiliations.

To score this measure, the incremental items are reversed and the mean of the item responses is used to indicate where individuals fall on the implicit theory continuum. While Levy and Dweck (1999) had suggested that "theory about traits is considered to be a dichotomous variable, as once an individual has indicated agreement with a particular theory, the degree of agreement typically does not provide additional information" (p. 1167), in this case, the 8-item measure was scored as a continuous variable. With a dichotomous approach, individuals who did not clearly fall into the entity or incrementalists categories were rejected from studies (e.g. Levy & Dweck, 1999). Peterson (1995) raised an objection to the rejection of subjects on the basis of where they fell on the entity-incremental continuum. He suggested that the use of cutoffs limits generalizability and he cautioned against the tendency to characterize individuals in terms of their typologies. Furthermore, if correlational methods are employed, the

dichotomization of the variable (with the rejection of up to 15% of the participants (Dweck et al., 1995b)) is not necessary (Peterson, 1995). Therefore, in this study, the implicit theory of human ability scores were treated as continuous variables.

Results

Demographic Characteristics

Of the 42 respondents who completed the employee version of the survey, 27 (64.29%) were female and 15 (35.71%) were male. Ages ranged from 19 to 58 years with a mean of 23.37 years. While only 11 (26.82%) had English as a mother tongue, (30 or 71.43% listed another language, especially French, and 1 respondent did not indicate a mother tongue) this is not problematic. These students attended an English university in a bilingual city and are fully functional in English. With regards to employment, 17 (40.48%) indicated that they were currently employed while 11 (26.19%) completed the survey with respect to a job that they had held more than 12 months ago. The bulk of the employees in the sample (28 or 66.67%) indicated that they were hourly employees or junior assistants. Average tenure within the respondents' respective organizations was 26.72 months and the respondents indicated that their supervisors oversaw an average of 13.71 employees.

The respondents who completed the supervisor version had different demographic characteristics. Of the 33 respondents, 17 (51.52%) were male and 16 (48.49%) were female. Ages ranged from 20 to 57 with a mean of 29.97 years. Twenty-one respondents (63.64%) listed English as their mother tongue and only 11 (33.33%) stated that a language other than English was the first one they had learned to speak. As university students and employees of a municipal services office, it is essential that these individuals

be fully functional in English. Therefore, there was no concern about their ability to successfully complete the survey.

The respondents stipulated that they were employed at the first level of management or higher (25 respondents or 75.76%) and 3 (9.09%) indicated that they were top executives. Most were currently employed (15 or 45.45%) while 10 (30.30%) answered the survey with respect to a job that they had held more than a year ago. Average tenure within the organization was 92.89 months and these supervisors indicated that they oversaw the work of an average of 10.67 employees (ranging from 1 to 40).

Psychometric Properties of the Measures

Feedback Giving Scales

Item level descriptive statistics.

Means and standard deviations for all 32 items of the employee and supervisor versions of the feedback scale are shown in the table below. Means for each item ranged from 2.73 to 3.68 and the standard deviation ranged from .75 to 1.28.

Table 1 - Means and Standard Deviations - Feedback Sending Scale Employee Version Pilot Study 1

Item #	Mean	St. dev	Item #	Mean	St. dev
1	3.21	1.14	**17**	3.57	.86
2	3.19	1.42	**18**	3.63	.89
3	3.24	1.12	**19**	3.68	.94
4	3.21	1.12	**20**	3.68	.91
5	3.36	1.10	**21**	3.16	.80
6	2.90	1.28	**22**	3.41	.87
7	3.00	1.25	**23**	3.24	1.21
8	3.23	1.25	**24**	3.51	.99
9	2.88	1.11	**25**	3.54	.93
10	3.18	1.08	**26**	3.37	1.07
11	3.33	.99	**27**	3.20	1.15
12	2.73	.99	**28**	3.15	.88
13	2.75	1.03	**29**	2.34	.88
14	3.38	1.00	**30**	3.51	.75

15	2.78	.97	**31**	2.93	.96
16	3.03	.89	**32**	3.15	1.04

Means for each item in the supervisor version of the scale ranged from 2.06 to 4.40 and standard deviations ranged from .52 to 1.22, suggesting that there were no ceiling or floor effects in the data.

Table 2 - Means and Standard Deviations - Feedback Giving Scale Supervisor Version Pilot Study 1

Item #	Mean	St. dev	Item #	Mean	St. dev
1	3.94	.99	**17**	3.91	.73
2	4.40	.61	**18**	4.28	.52
3	4.33	.78	**19**	4.03	.70
4	4.15	.80	**20**	3.88	.71
5	4.12	.70	**21**	3.81	.70
6	3.82	.81	**22**	4.25	.76
7	3.94	.93	**23**	4.06	1.08
8	4.09	.91	**24**	4.28	.58
9	3.06	1.17	**25**	3.61	.79
10	2.79	1.22	**26**	3.12	1.02
11	3.45	1.03	**27**	2.42	1.09
12	2.68	.95	**28**	2.06	.93
13	2.21	1.16	**29**	2.06	.99
14	3.48	1.00	**30**	3.09	.98
15	2.97	1.10	**31**	2.88	.93
16	2.79	.99	**32**	2.58	1.06

Reliability analysis and scale reduction.

Alpha coefficients were calculated for the 4 feedback giving subscales in each version of the questionnaire. Corrected item-total correlations were also examined for both the supervisor and the employee versions. For the employee version, the subscales had acceptable reliabilities. For the supervisor version, reliabilities were slightly lower but acceptable nonetheless. Due to the length of the scales, items were dropped to facilitate administration. Items in which the item-total correlation was less than $r_{xy} = .40$

were removed first as were items that were deemed repetitive. The following items were dropped: 2, 6, 14, 16, 21, 23, 25 and 29. Refer to Appendix A for a list of the items in the feedback giving scales. Therefore, in the final versions, each subscale has 6 items for a total of 24 items in both the supervisor and employee versions of the questionnaire. The reliabilities appear in Table 3. Therefore, the scales are deemed to have acceptable psychometric properties.

Table 3 - Feedback Giving Scale (Reduced Version) Reliability

Version	Subscale	Reliability
Employee	**Positive verbal feedback**	$\alpha = .90$
	Positive non-verbal feedback	$\alpha = .86$
	Negative verbal feedback	$\alpha = .74$
	Negative non-verbal feedback	$\alpha = .88$
Supervisor	**Positive verbal feedback**	$\alpha = .85$
	Positive non-verbal feedback	$\alpha = .71$
	Negative verbal feedback	$\alpha = .75$
	Negative non-verbal feedback	$\alpha = .83$

Scale descriptive statistics.

For both the employee and supervisor versions of the feedback giving scales, four subscales were created. These subscales were based on the reduced versions of the four original quadrants (positive verbal feedback, positive non-verbal feedback, negative verbal feedback and negative non-verbal feedback) that were proposed to exist. Means and standard deviations were calculated for each subscale after averaging individual responses for the respective items in each subscale. The means and standard deviations for the four subscales of the employee feedback scale are shown in Table 4 with the intercorrelations among the subscales. Means range from 2.93 to 3.58 for the employee version. For the supervisors, means range from 2.69 to 4.10 and appear in Table 5. For

the supervisor version, the means are high for verbal feedback, suggesting that supervisors report that they give a lot of both positive and negative verbal feedback.

Table 4 - Feedback Giving Subscale Intercorrelations - Employee Version

	Mean (SD)	Pos. verbal	Pos. non-verbal	Neg. verbal	Neg. non-verbal
Pos. verbal	3.23 (.96)	1.00			
Pos. non-verbal	2.93 (.78)	-.26	1.00		
Neg. verbal	3.58 (.59)	.36*	.10	1.00	
Neg. non-verbal	3.22 (.80)	-.37*	.58**	.06	1.00

* $p < .05$ level (2-tailed)
** $p < .01$ level (2-tailed)

It is interesting to note that there are significant correlations between some of the subscales in the employee version. For example, positive and negative non-verbal feedback giving are significantly correlated, as employees report that their supervisor provides both negative and positive feedback using this method of communication. The same applies for feedback provided verbally. However, there is a negative correlation between positive verbal feedback and negative non-verbal feedback, suggesting that the provision of more positive verbal feedback is associated with less non-verbal negative feedback. For the supervisor version, similar results were found.

Table 5 - Feedback Giving Subscale Intercorrelations - Supervisor Version

	Mean (SD)	Pos. verbal	Pos. non-verbal	Neg. verbal	Neg. non-verbal
Pos. verbal	4.10 (.62)	1.00			
Pos. non-verbal	2.87 (.72)	-.39*	1.00		
Neg. verbal	4.09 (.43)	.56**	-.11	1.00	
Neg. non-verbal	2.69 (.77)	-.33	.38*	-.08	1.00

* $p < .05$ level (2-tailed)
** $p < .01$ level (2-tailed)

Implicit Theory of Human Abilities Scale

Reliability analysis.

The results indicated that the 8-item measure of implicit theory had adequate internal reliability. In fact, the scale's reliability was similar to that reported in the literature. Heslin (2002) had reported an alpha value of .94. In this pilot study, when the results were combined for both groups of respondents, the reliability of the 8-item scale was a bit lower (á = .87) but still acceptable.

Summary Statement

The results of the pilot study indicated that both versions of the feedback giving scale had adequate internal reliabilities. The internal reliability of the 8-item measure also is also adequate. Therefore, these measures were deemed acceptable for use in testing the main and moderating hypotheses.

Pilot Study 2

The purpose of this second pilot study was to complete a test run of the data gathering strategy that would be employed in the main study. The methods and results of this second pilot study are described below. Modifications to the data gathering strategy were introduced based on these results.

Method

Participant Recruitment

What is unique about this study is the method in which the respondents were recruited. The respondent recruitment and the data gathering strategy necessitated, in fact, this second pilot test. A description of the strategy is offered with a rationale for the approach.

The main hypothesis evaluates the effect of the supervisors' implicit theories on their feedback giving behavior. To recap, it is hypothesized that supervisors who espouse an entity theory of human abilities will provide less informal feedback to their employees than supervisors who are incrementalists. To evaluate this hypothesis, it was necessary to measure the feedback giving behavior of the supervisors from their own perspective and also from the perspective of their employees, since neither set of respondents would be the most objective source of information. Thus, it was necessary to recruit supervisor-employee dyads to participate in this study. Since at least 100 supervisor-employee dyads from a variety of work environments needed to be recruited for the main study to ensure adequate statistical power, undergraduate students were invited to recruit these dyads in exchange for class credit. This pilot survey served as a test of the data-gathering strategy and allowed the investigator to evaluate the potential subject response rate for the main study.

The undergraduate students were responsible for distributing both versions of the feedback giving questionnaire to one full-time employee. This full-time employee would complete the employee version of the questionnaire and then ask his or her supervisor to

fill in the supervisor version. To ensure confidentiality, the questionnaires were distributed in sealed envelopes and the respondents mailed them directly back to the investigator. The students in the undergraduate class obtained their class credit when the investigator received both the supervisor and employee versions of the surveys by mail. It is important to note that the questionnaire respondents had to be full-time employees and fluent in the English language. To increase the accuracy of the responses, and for verification purposes, the students were asked to provide contact information for all employees and their supervisors.

Thirty-five students in an undergraduate business class initially elected to participate in exchange for class credit. These students served as participant recruiters.

Measures

The same questionnaire that was used in pilot study 1 was used in this study with the addition of the Impression Management scale described below.

Impression Management Scale

Since supervisors may see the provision of feedback as an integral part of their job (Larson, 1984), it is possible that the respondents who complete this version will exaggerate the extent to which they provide this information in order to appear in a favourable light. Impression management refers to the fact "that some subjects are purposefully tailoring their answers to create the most positive social image" (Paulhus, 1991, p. 21). Indeed, impression management behaviors have begun to receive more attention in the management literature (Liden & Mitchell, 1988). Thus, to the extent that impression management concerns of the respondents can systematically bias

questionnaire response, this will be controlled with a short version of the Paulhus (1984, 1991) Impression Management scale of the Balanced Inventory of Desirable Responding.

The original version of the impression management scale had 12 items on which the respondents indicated their agreement with a 5-point Likert scale ranging from (1) not true to (5) very true. Sample statements include "When I hear people talking privately, I avoid listening" and "I have received too much change from a salesperson without telling him or her" (reverse scored). Before the scale was included in the study, it was decided that 4 of the 12 items should be deleted since they reflected behaviors that could be considered by the respondents as being deviant in nature. There was some concern that these items would offend the respondents and decrease the overall credibility of the survey. For example, one deleted item queried the respondents about their use of pornographic materials. Thus, the reduced impression management scale had 8 items. The scale appears in Appendix C.

In terms of scoring this measure, while D. Paulhus (personal communication, January 20, 2003) suggested that only extreme scores (4 or 5 on the Likert scale) should be counted towards an overall impression management score, it was decided that a continuous scoring approach would be utilized as recommended by Stöber, Dette and Musch (2002). This approach had previously resulted in higher internal reliability and greater convergent validity with other measures of social desirability.

Results

Participant Recruitment

The main purpose of this pilot study was to evaluate the data collection strategy. Therefore, the actual data collected from the surveys are less important than the subject response rates achieved. Thus, the specific survey results will not be discussed here nor will they be combined with data from the main study for any further statistical analyses.

The response rate achieved was 40.00%. That is, while 35 packages were distributed to students, only 14 supervisor-employee dyads returned surveys by mail. This response rate was deemed to be acceptable given the fact that the students were depending on the goodwill of individuals with whom they did not necessarily interact directly.

Comments from the students were also obtained during the distribution of the surveys. The students had questions about the eligibility of certain employees to whom they wished to distribute the surveys. These questions were addressed on an ad hoc basis during the distribution period.

Summary Statement

Overall, the students were receptive and understood the procedures. The response rate was adequate. In order to justify the amount of extra credit offered to the students, it was later decided that, for the main study, each student would receive the full credit if they recruited two supervisor-employee dyads. Therefore, in the main study, students would receive packages with two employee and two supervisor versions of the survey to distribute. The instruction sheet included in the package was also revised for the main study to reflect the specific questions that the students had brought to the investigator's attention.

The methods employed in the second pilot study to recruit the supervisor-employee dyads were deemed to be a success and were employed for the main study.

Main Study

Overview of Main Study

The main purpose of this study was twofold. The first goal was to evaluate the psychometric properties and the factor structure of the supervisor and employee versions of the feedback giving scale and of the task and outcome dependence measure (required to test the moderating hypotheses). The second goal was to test the main (H1) and moderating hypotheses (H2 and H3). Hypothesis 1 examined the effect that the supervisors' implicit theory of human ability has on their feedback giving behavior. Specifically, supervisors who ascribe to an incremental theory are hypothesized to provide more feedback to their employees than would supervisors who espouse an entity theory. The idea that the supervisor's implicit theories would impinge feedback giving behavior extends the original model of feedback giving posited by Larson (1984). Since Larson's model was not thoroughly empirically tested (see Adams, 1993), it provides an important starting point for the development of the current hypotheses. The relationship between the supervisors' implicit theory and their tendency to provide informal feedback to their employees is thought to be moderated by two variables. The first moderating hypothesis (H2) suggests that the relationship between the supervisors' implicit theory of ability and their tendency to provide informal feedback to their employees will be stronger with employees who have low levels of job tenure. The second moderating hypothesis (H3) posits that the relationship between the supervisors' implicit theory of ability and their tendency to provide feedback will be stronger when they are in a

condition of task and outcome dependence with their employee. Measures and procedures developed in the first and second pilot study will be used in the main study and have been described in detail above.

Method

Participants and Procedures

Pairs of supervisors and employees were recruited to participate in this study using the participant recruitment tactic developed in the second pilot study. One hundred and sixty students in undergraduate business classes were approached and asked if they would help to recruit subjects for this study in exchange for extra class credit. Students were given two extra points if they recruited two full time employees and their supervisors to fill in the respective questionnaires. To increase the validity of the data, students were asked to provide contact information for the survey respondents. When the surveys were returned to the principal investigator, the student received the extra credit. If only one supervisor-employee pair of surveys was returned, then the student received partial credit.

The participation rate is defined as the number of students who participated (i.e., returned at least one matched, useable pair of surveys) divided by the number of potential participants. In this case, 160 students were invited to participate and 84 actually returned at least one survey for a participation rate of 52.50%. Since each student was given the potential to recruit two supervisor-employee dyads, there was a possible return of 320 pairs of surveys. In total, 152 supervisor surveys and 155 employee surveys were returned. Of these surveys, 148 formed useable matched pairs. Thus, the dyad response

rate was 46.25%. This response rate is acceptable and is, in fact, slightly greater than the response rate achieved in the second pilot study.

The surveys that did not have a corresponding matched pair were still used but only to determine the psychometric properties of the various instruments. These data were included in the factor analysis. Only 11 surveys were not matched with a respective employee or supervisor version.

Measures

Demographic Characteristics

Demographic information was collected for all sample respondents. This included age, sex, mother tongue, and number of years of schooling for each respondent. Other information that was collected included the type of organization for which they worked (manufacturing, retail, wholesale etc…) and the respondent's organizational level. Respondents who had supervisory experience were asked how many employees they oversaw.

Tenure

Both employees and supervisors were asked how long they had worked with the current organization. Since the relationship between tenure and feedback giving is related to the supervisor's perception of the employee's tenure within the organization, the supervisors were asked directly how long they had overseen the work of the specific employee in question.

Feedback Giving Scales

The reduced versions of the supervisor and employee feedback giving scales were included in the surveys for the respective respondents. The psychometric properties of

these scales were initially established in the first pilot study. The reduced versions of the supervisor and employee feedback giving scales have 24 questions in four subscales and have been described above.

Implicit Theory of Human Abilities Scale

The 8-item measure of implicit theory of human ability (Dweck, 2000) was included only in the supervisor version of the questionnaire.

Task and Outcome Dependence Scale

A search of the literature revealed that there was no acceptable measure of task and outcome dependence available to include in this questionnaire. Consequently, a 10-item measure of task and outcome dependence was created. Since it was unclear from the start whether task or outcome dependence would influence supervisor feedback giving behavior more, it was decided that both constructs should be included in the measure. Therefore, items tapped the extent to which supervisors depend on their employees to complete their tasks at work and the extent to which their work outcome (i.e., salary, bonuses) depend on the performance of these employees. Sample items include "There are tasks that I do that require the direct input of my employee". Respondents indicated their agreement with a 5-point Likert scale with anchors ranging from (1) strongly disagree to (5) strongly agree. This measure appears in Appendix D.

Since this measure is used to test only a moderating hypothesis, it was determined that a preliminary pilot test to establish its psychometric properties was not necessary. Consequently, the task and outcome dependence measure will undergo factor analysis and the internal reliabilities of the scales will be determined before the scores are included in the analysis of the moderating hypotheses.

Impression Management Scale

The reduced, 8-item impression management scale from Paulhus' (1984, 1991) Balanced Inventory of Desirable Responding was included in both the supervisor and the employee versions of the instrument to verify the possibility that impression management concerns directed respondents to adjust their responses to the feedback questionnaire.

Data Verification

To ensure that the supervisor and the employee dyads were legitimate, that is, to ensure that these employees actually worked together, a decision rule was created to drop certain suspicious dyads. If the difference in employee self-reported and supervisor reported employee tenure exceeded 100 months, the entire dyad was dropped from analysis for the main hypotheses. There were 6 dyads that were dropped due to a greater than 100 month discrepancy in reported employee tenure.

Other criteria were also employed to drop dyads. Since the main hypotheses depend on the fact that the employee and the supervisor work together (in order to exchange informal feedback), an inspection of the contact information was conducted to ensure that the respondents did meet this criteria. In situations where this was doubtful, the complete dyad was dropped from the analysis. In all, 7 dyads were dropped due to discrepancies or suspicions with the contact information. Overall, a total of 13 dyads were dropped from the analysis, leaving a total of 147 useable dyads.

Before an analysis of the data was undertaken, the computerized version of the data was verified to ensure that there were no errors in data entry. Two independent raters checked ten percent of the surveys. They determined that there were no important errors in data entry or coding.

Data Analysis Techniques

Once the data was coded, it was first analyzed in several steps as recommended by Clark and Watson (1995). These analyses were done to evaluate the psychometric properties of the newly constructed measures. In terms of procedures, Clark and Watson (1995) stipulated that item distributions for each scale should be analyzed before an inspection of the scale dimensionality (factor analysis) and measures of internal consistency. For this purpose, data from the first pilot study for the feedback giving scale was combined with the data from the main study to increase the sample size for the factor analyses. Once the scale dimensionality was ascertained for the feedback giving scales and the measure of task dependence, further analyses of the main (H1) and moderating hypotheses (H2 and H3) were undertaken. The statistical techniques employed to determine the factor structure and internal reliabilities of each measure are first described. This description is then followed by an elaboration of the hierarchical regression techniques employed to test the main and moderating hypotheses and the results of these analyses.

Results

Demographic Characteristics

A total of 147 useable dyads were included in the analysis of the main hypotheses. Demographic characteristics were collected for each survey respondent and appear in Table 6. For the continuously scored variables, refer to the correlation matrix in Appendix E for the means and standard deviations.

Table 6 - Demographic Data

		Employee		Supervisor	
Variable	**Specification**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Sex	Male	57	38.78	75	51.02
	Female	85	57.82	61	41.50
	Missing	5	3.40	11	7.48
	Total	147	100.00	147	100.00
Mother tongue	English	67	45.58	74	50.3
	Non-English	73	49.66	61	41.5
	Missing	7	4.76	12	8.2
	Total	147	100.00	147	100.00
Organizational type	Manufacturing	12	8.16	16	10.88
	Agriculture, mines, forest, construction	3	2.04	3	2.04
	Transport, utilities	2	1.36	3	2.04
	Wholesale, retail	35	23.81	35	23.81
	Finance, insurance, banking	28	19.05	23	15.65
	Healthcare, pharmaceuticals, biotech, chemical	7	4.76	5	3.40
	Communications, software, internet, info technologies	15	10.20	15	10.20
	Tourism, entertainment, culture, arts, sports	9	6.12	8	5.44
	Higher education	4	2.72	6	4.08
	Human services	3	2.04	5	3.40
	Government	1	.68	1	.68
	Other	24	16.33	19	12.93
	Missing	4	2.72	8	5.44
	Total	147	100.00	147	100.00
Organizational level	Top executive, CEO	1	.68	26	17.67
	Upper middle management	3	2.04	21	14.29
	Middle management	24	16.33	46	31.29
	First level management	11	7.48	28	19.05
	Hourly employee	69	46.94	5	3.40
	Junior assistant	4	2.72	2	1.36
	Not relevant	17	11.56	5	3.40
	Missing	18	12.24	14	9.52
	Total	147	100.00	147	100.00
Employment status	Full-time permanent	116	78.91	130	88.44
	Full-time renewable contract	7	4.76	4	2.72
	Full-time non-renewable contract	1	.68	0	0
	Full-time temporary (replacement)	7	4.76	0	0
	Part-time	11	7.48	2	1.36
	Missing	5	3.40	11	7.48
	Total	147	100.00	147	100.00

The sample was comprised of more females than males in the employee group (57.82 % versus 38.78%) but more males than females in the supervisor group (51.02% versus 41.50%). The average employee (30.47 years) was younger than the average supervisor (39.79 years), although there was no difference in the years of education reported. With respect to mother tongue, the employee sample had slightly more respondents indicate that they had a language other than English as their mother tongue (49.66%) while in the supervisor sample the majority (50.34%) indicated that they first learned to speak English at home. This variable will be important in later analyses and will be controlled for as a result.

In terms of tenure with the organization, employees had worked for their employers for an average of 52.19 months (4.34 years), with the bulk of the respondents at the level of hourly employee (46.94%). The supervisors reported an average tenure of 111.77 months (9.26 years) and worked at the level of middle management (63.30%) or higher. More than 17% indicated that they were top management (such as president or CEO).

The organizational status variable was a check to see how many respondents worked only part-time. Since the main hypotheses evaluate how much feedback the supervisor provides to his or her employee, it would be important that the vast majority of the respondents be full-time employees. In this case, only 7.48% of the employees worked part-time.

One final demographic variable of interest serves as a measure of concordance between the employee and the supervisor. Employees were asked how long they had worked for their supervisor and supervisors were asked how long they had supervised

that specific employee. In this case, employees reported that they had worked for their supervisor for an average of 30.55 months while the supervisors reported an average of 31.24 months. As previously discussed, this variable was used to discard dyads with questionable data.

Overall, the results suggest that the employee and supervisor samples are consistent with the commonly held beliefs about these dyads. The supervisors are older, more likely to be male, slightly more educated and occupy a higher level in the organizational hierarchy. The employees are more likely to be female and work as hourly employees. These results allow us to conclude that the data collection process was a success and that the sample was adequately varied.

Psychometric Properties of the Measures

Feedback Giving Scale - Employee Version

Analysis of item distributions.

The first step in the analysis was to pool the data from the first pilot study with the data obtained from the main study. Consequently, these analyses were completed for 198 employees.

The next step was to examine the data for important deviations in skew and kurtosis for all 24 items of the feedback giving scale. A conservative threshold of plus or minus 2 was used to identify any items that deviated substantially from a normal distribution. In this case, no items in the employee version of the feedback giving scale showed abnormal skew or kurtosis.

Exploratory factor analysis.

The responses to the employee and the supervisor version of the feedback giving scales were subjected to an exploratory factor analysis using the principal axis extraction method to extract the factors. Following this extraction, a direct oblimin rotation was performed on the extracted factors.[3] Missing data was treated by replacing it with the item mean. In all cases, factors were retained based on two criteria. Factors were retained as long as their eigenvalues exceeded 1.0 (Kaiser-Guttman criterion); (Floyd & Widaman, 1995). See the table of eigenvalues below.

Table 7 - Total Variance Explained by Unrotated Solution - Feedback Giving Scale Employee Version

	Initial Eigenvalues		
Factor	*Total*	*% of Variance*	*Cumulative %*
1	6.358	26.494	26.494
2	3.755	15.647	42.141
3	2.164	9.016	51.157
4	1.194	4.977	56.134
5	1.111	4.627	60.761
6	.985	4.104	64.865
7	.798	3.326	68.191
8	.750	3.127	71.318
9	.692	2.882	74.200
10	.617	2.571	76.771
11	.589	2.452	79.223
12	.560	2.334	81.557
13	.518	2.160	83.717
14	.484	2.017	85.735
15	.462	1.924	87.659
16	.451	1.879	89.537
17	.442	1.842	91.379
18	.387	1.614	92.993

[3] For comparison purposes, the factor analysis was also completed with a maximum likelihood extraction method with varimax and promax rotation. These methods produced equivalent structures. It was thought that the subscales of the feedback sending scale would correlate with each other and thus an oblique rotation was performed.

19	.356	1.485	94.478
20	.322	1.342	95.820
21	.308	1.284	97.104
22	.264	1.100	98.204
23	.237	.986	99.191
24	.194	.809	100.000

In addition, the number of factors to be retained was determined by an examination of the scree plot that revealed a slope approaching zero (Zwick & Velicer, 1986).

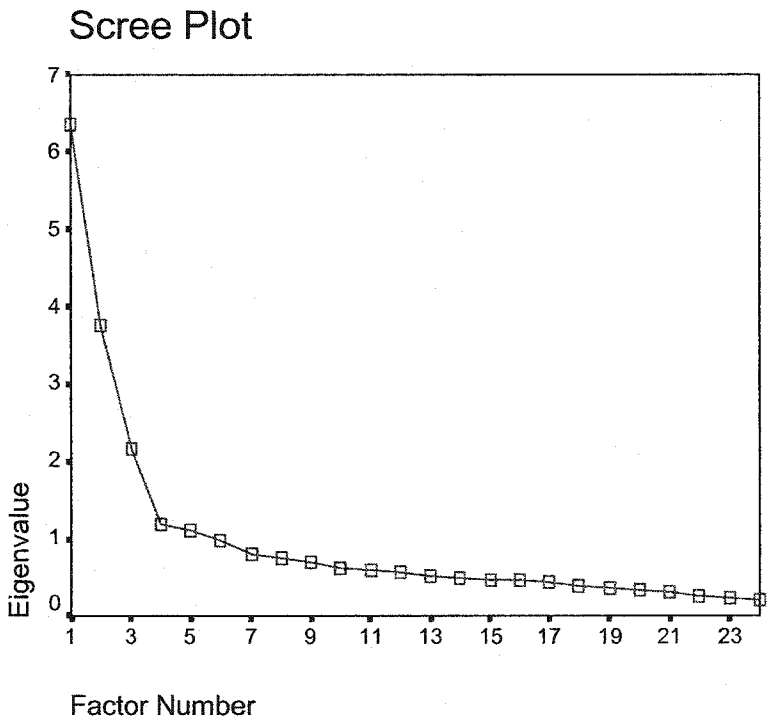


Figure 2 - Scree Plot - Feedback Giving Scale Employee Version

Using the methods described above, five factors were extracted using the principal axis method. Based on the a priori hypotheses that there are four subscales (positive verbal feedback, positive non-verbal feedback, negative verbal feedback,

negative non-verbal feedback), in the employee version of the scale, it was decided that only 4 factors would be subjected to rotation. This decision was supported by the fact that the first four factors accounted for 56.14% of the variance. The fifth factor only accounted for an additional 4% of the variance and only had three items that loaded on it greater than 0.3.

The analysis was then rerun with a direct oblimin rotation to determine the simplest solution. Note that rotated solutions, as opposed to orthogonal ones, allow correlations to exist among factors (Floyd & Widaman, 1995). While five factors were originally extracted, the four-factor solution accommodated the a priori subscales discussed above. The four-factor solution had eigenvalues ranging from 6.36 to 1.19. The decision to retain only 4 factors (when 5 factors have eigenvalues in excess of 1.0) is acceptable according to Streiner (1994) who stipulated that factors should account for at least 50% of the total variance. In this case, this criterion was met.

Table 8 - Rotated Pattern Matrix - Feedback Giving Scale Employee Version

	Factor			
	1	2	3	4
Positive verbal feedback Q3	.817			
Positive verbal feedback Q1	.769			
Positive verbal feedback Q4	.759			
Positive verbal feedback Q5	.730			
Positive verbal feedback Q6	.694			
Positive verbal feedback Q2	.677			
Positive non-verbal feedback Q10		.592		
Positive non-verbal feedback Q12		.557		
Positive non-verbal feedback Q8		.500		
Positive non-verbal feedback Q7		.383		
Positive non-verbal feedback Q9		.362		
Negative verbal feedback Q14			-.742	
Negative verbal feedback Q16			-.683	
Negative verbal feedback Q15			-.665	
Negative verbal feedback Q13			-.622	
Negative verbal feedback Q17			-.338	

Negative verbal feedback Q18			-.300	
Negative non-verbal feedback Q22				.833
Negative non-verbal feedback Q24				.722
Negative non-verbal feedback Q20				.699
Negative non-verbal feedback Q23				.531
Negative non-verbal feedback Q19				.526
Negative non-verbal feedback Q21				.394
Positive non-verbal feedback Q11		.324		.344

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 9 iterations.

A specific survey item was said to load on a factor as long as its loading weight was greater than 0.30 and it loaded less than 0.30 for any other factor (Hinkin, 1995). The factors are thus labeled as follows. Factor 1: positive verbal feedback; Factor 2: positive non-verbal feedback; Factor 3: negative verbal feedback; Factor 4: negative non-verbal feedback. The rotated pattern matrix (table 8) shows that the items all load greater than 0.34 except for one item. This exception is item 11 "My supervisor is not one to tell me directly how I am doing; he/she lets me know by the way he/she acts around me". This item loaded on both the non-verbal feedback factors (Factor 2 and Factor 4). This is not surprising given that the question is a bit ambiguous and does not indicate a valence (positive or negative) associated with the feedback communicated by the supervisor. Therefore, item 11 was deleted.

The inter-factor correlations appear in Table 9 and indicate that the factors are slightly correlated. These results are not surprising given the correlations between subscales originally found in the first pilot study.

Table 9 - Factor Correlation Matrix - Feedback Giving Scale Employee Version

Factor	Pos. verbal	Pos. non-verbal	Neg. verbal	Neg. non-verbal
Pos. verbal	1.00			
Pos. non-verbal	.09	1.00		
Neg. verbal	-.32	-.07	1.00	
Neg. non-verbal	-.38	.41	.04	1.00

Reliability analysis.

The internal reliability of the four subscales was re-evaluated (with the deletion of item 11 in the positive non-verbal feedback subscale). This analysis was conducted with the data combined from both the first pilot and the main study. The results were comparable to those obtained in the first pilot study and confirm that the subscales are internally consistent. Please refer to Table 10.

Table 10 - Feedback Giving Scale Reliabilities - Employee Version

Version	Subscale	Reliability
Employee	**Positive verbal feedback**	$\alpha = .89$
	Positive non-verbal feedback	$\alpha = .70$
	Negative verbal feedback	$\alpha = .77$
	Negative non-verbal feedback	$\alpha = .83$

Scale descriptive statistics.

As a confirmation of the results obtained in the first pilot study, means and standard deviations were calculated for each subscale. They are comparable to those obtained in the first pilot study. A total feedback score, defined as the mean of the four subscales was also calculated. These data were then used to analyze the main and moderating hypotheses. These values appear in the correlation matrix in Appendix E.

Feedback Giving Scale - Supervisor Version

Analysis of item distributions.

Data from the first pilot study was combined with data from the main study so the analyses were completed for 186 supervisor respondents. The data was examined for important deviations in skew and kurtosis and revealed that only three items violated these assumptions. These items included item 13 "I let my employees know when they are not performing up to par" (skew = -1.32; kurtosis = 3.10), item 14 "I feel that it is important to inform employees about their poor performance" (skew = -1.35; kurtosis = 3.15) and item 16 "Even if it's a touchy subject, I still tell my employees when they have made mistakes" (skew = -1.03; kurtosis = 2.13). Given that factor analytic techniques are generally robust to deviations in normality (Gorsuch, 1983; Hatcher, 1996) and the fact that these items only deviated slightly, they were not transformed.

Exploratory factor analysis.

The same techniques that were employed to analyze the factor structure of the employee version were used with the supervisor version. The unrotated factor solution was determined using the principal axis methods. Following this extraction, a direct oblimin rotation was performed on the extracted factors[4]. Missing data was replaced with the item means. Factors were retained using the same criteria as for the employee version of the survey (eigenvalues > 1.0) and an examination of the scree plot. The eigenvalues and the scree plot appear below.

[4] For comparison purposes, the factor analysis was also completed with a maximum likelihood extraction method with varimax and promax rotation. These methods produced equivalent structures.

Table 11 - Total Variance Explained by Unrotated Solution - Feedback Giving Scale Supervisor Version

	Initial Eigenvalues		
Factor	*Total*	*% of Variance*	*Cumulative %*
1	6.403	26.677	26.677
2	3.708	15.451	42.128
3	1.671	6.961	49.090
4	1.290	5.374	54.463
5	1.130	4.709	59.172
6	.920	3.832	63.004
7	.896	3.735	66.739
8	.798	3.323	70.062
9	.764	3.183	73.245
10	.701	2.923	76.168
11	.654	2.727	78.895
12	.589	2.455	81.350
13	.549	2.288	83.638
14	.504	2.100	85.738
15	.479	1.997	87.734
16	.410	1.709	89.443
17	.380	1.581	91.025
18	.373	1.555	92.579
19	.359	1.496	94.076
20	.334	1.391	95.467
21	.327	1.364	96.830
22	.297	1.238	98.068
23	.256	1.068	99.136
24	.207	.864	100.000

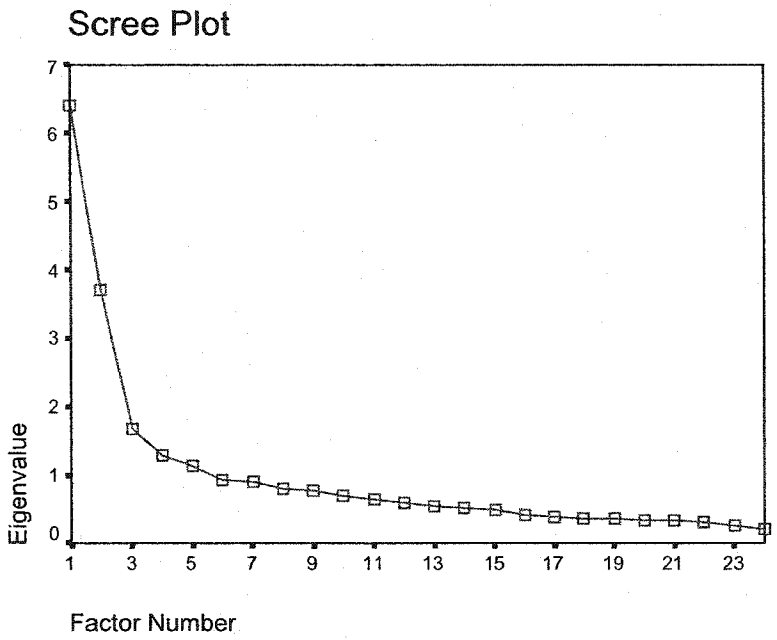


Figure 3 - Scree Plot - Feedback Giving Scale Supervisor Version

Five factors were extracted from the unrotated factor solution using the principal axis method. These five factors accounted for 59.17% of the variance. But since the a priori hypotheses suggest that there are in fact only four subscales (as in the employee version), only 4 factors were retained in the rotated solution. These four factors account for 54.46% of the variance, in excess of the 50% recommended by Streiner (1994).

This analysis was then rerun with a direct oblimin rotation to isolate the simplest solution. Again, the decision was made to retain only 4 factors, despite the fact that 5 factors had eigenvalues greater than 1.0. In terms of individual items, they were said to load on a specific factors as long as the loading was greater than 0.3 but less than 0.3 for any other factor (Hinkin, 1995). The loadings for each survey item are shown in the table below.

Table 12 - Rotated Pattern Matrix - Feedback Giving Scale Supervisor Version

	Factor			
	1	2	3	4
Negative non-verbal feedback Q20	.807			
Negative non-verbal feedback Q22	.768			
Negative non-verbal feedback Q24	.629			
Negative non-verbal feedback Q21	.626			
Negative non-verbal feedback Q19	.624			
Negative non-verbal feedback Q23	.549			
Positive non-verbal feedback Q10	.422			.315
Positive non-verbal feedback Q9	.354			.319
Negative verbal feedback Q15		.753		
Negative verbal feedback Q17		.709		
Negative verbal feedback Q16		.625		
Negative verbal feedback Q14		.562		
Negative verbal feedback Q13		.483		
Negative verbal feedback Q18		.446		
Positive verbal feedback Q4			.719	
Positive verbal feedback Q1			.709	
Positive verbal feedback Q5			.681	
Positive verbal feedback Q3			.680	
Positive verbal feedback Q2			.668	
Positive verbal feedback Q6			.310	
Positive non-verbal feedback Q12				.651
Positive non-verbal feedback Q11				.646
Positive non-verbal feedback Q8				.447
Positive non-verbal feedback Q7				

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization. Rotation converged in 9 iterations.

The factor loadings do not load as cleanly as for the employee version of the scale. In this case, the four factors are labeled as follows. Factor 1: negative non-verbal feedback; Factor 2: negative verbal feedback; Factor 3: positive verbal feedback and Factor 4: positive non-verbal feedback. There are, in fact, some items that load on more than one factor or do not load at all. For example, item 9 "My employees can tell when I am happy with them by the look on my face" and item 10 "I prefer to use subtle ways to

let my subordinates know when they are doing well" load on Factor 1 (negative non-verbal behavior) and Factor 4 (positive non-verbal feedback), suggesting that these items do not differentiate the valence of the feedback message. Item 7 "By watching how I act, my employees can tell how well they are performing on the job" does not load greater than 0.3 on any factor. Consequently, items 7, 9 and 10 were deleted. With the deletion of these items, the revised employee and supervisor versions of the scales therefore do not contain the same items. It was deemed acceptable to delete the items and create slightly different scales so that both versions independently had the best psychometric properties.

The inter-factor correlations appear in Table 13 and reveal that some of the factors are only slightly correlated while others (such as factor 2 and 3; 1 and 4) are more moderately correlated.

Table 13 - Factor Correlation Matrix - Feedback Giving Scale Supervisor Version

Factor	Neg. non-verbal	Neg. verbal	Pos. verbal	Pos. non-verbal
Neg. non-verbal	1.00			
Neg. verbal	-.10	1.00		
Pos. verbal	-.27	.46	1.00	
Pos. non-verbal	.52	-.02	.09	1.00

Overall, the results provide support for the contention that 4 subscales underlie the supervisor version of the feedback giving scale.

Reliability analysis.

The internal reliability of the four subscales was re-evaluated (with the deletion of items 7, 9 and 10 in the positive non-verbal feedback subscale). The results were comparable to those obtained in the first pilot study and confirm that, with one exception, the subscales are internally consistent. As the positive non-verbal feedback subscale only has 3 items, it has poorer internal reliability than the other subscales. However, with the

inclusion of the deleted items, the reliability was, in fact, further reduced. Consequently, the decision was made to include this 3-item subscale in the analysis of the main hypotheses despite its problematic reliability since it is just one of four subscales and the others demonstrate acceptable reliability. It is possible that the poor reliability of this subscale reflects the fact that the supervisors failed to identify the survey items as reflecting positive non-verbal feedback behaviors. Refer to table 8 for the alpha values.

Table 14 - Feedback Giving Scale Reliabilities - Supervisor Version

Version	Subscale	Reliability
Supervisor	**Positive verbal feedback**	$\alpha = .82$
	Positive non-verbal feedback	$\alpha = .62$
	Negative verbal feedback	$\alpha = .81$
	Negative non-verbal feedback	$\alpha = .85$

Scale descriptive statistics.

To confirm the results obtained in the first pilot study, means and standard deviations were calculated for each subscale of the supervisor version of the feedback giving scale. A total supervisor feedback score was also calculated as the mean of the four subscales. They are comparable to those obtained in the first pilot study and appear in the correlation matrix in Appendix E.

Implicit Theory of Human Abilities Scale

Reliability analysis.

The reliability of this scale was recalculated with data combined from the main study and the first pilot study. Recall that in the first pilot study, the alpha value was 0.87. With this sample of supervisors, the reliability was 0.81, which is still acceptable.

Task and Outcome Dependence Scale

Analysis of item distribution.

In order to determine the psychometric properties of this newly created measure, the results obtained from 160 supervisor respondents in the main study were analyzed. The first step was to examine the data for deviations in skew or kurtosis. The same conservative threshold of plus or minus 2 was used to identify items that deviated from normality. In this case, no items showed abnormal skew or kurtosis.

Item level descriptive statistics.

Means and standard deviations for all 10 items of the task and outcome dependence scale are shown below.

Table 15 - Means and Standard Deviations - Task and Outcome Dependence Scale

Item	Mean	Std. dev
Task dependence Q1	3.10	1.21
Task dependence Q2	3.68	1.02
Task dependence Q3	3.66	1.01
Task dependence Q4	3.92	.84
Task dependence Q5	3.48	1.01
Outcome dependence Q1	3.03	1.19
Outcome dependence Q2	3.01	.99
Outcome dependence Q3	2.97	1.12
Outcome dependence Q4	2.82	1.11
Outcome dependence Q5	2.70	1.09

Means for task dependence items ranged from 3.01 to 3.92 (standard deviations ranged from .84 to 1.21) and means for the outcome dependence items ranged from 2.70 to 3.03 (standard deviations ranged from .99 to 1.19). This suggested that there was no ceiling or floor effects in the data, although it is interesting that there should be a difference in the means for the task and outcome dependence items. Indeed, supervisors reported that they

were less likely to be in a situation of outcome dependence with their employees than in a situation of task dependence.

Exploratory factor analysis.

The responses to the task and outcome dependence questions were subjected to an exploratory factor analysis using the principal axis extraction method to extract the factors. This factor analysis served to establish whether task and outcome dependence formed one unified construct. Following this extraction, a direct oblimin rotation was performed on the extracted factors.[5] Missing data was treated by replacing it with the item mean. In all cases, factors were retained when their eigenvalues exceeded 1.0 (Kaiser-Guttman criterion) (Floyd & Widaman, 1995).

Using the methods described above, three factors were extracted using the principal axis method. These factors accounted for 64.14% of the variance. The table of eigenvalues appears below.

Table 16 - Total Variance Explained by Unrotated Solution - Task and Outcome Dependence Scale

	Initial Eigenvalues		
Factor	*Total*	*% of Variance*	*Cumulative %*
1	3.659	36.587	36.587
2	1.655	16.55	53.137
3	1.100	11.000	64.136
4	.911	9.108	73.245
5	.641	6.412	79.657
6	.561	5.612	85.269
7	.491	4.914	90.183
8	.397	3.975	94.158
9	.342	3.418	97.575
10	.242	2.425	100.00

[5] For comparison purposes, the factor analysis was also completed with a maximum likelihood extraction method with varimax and promax rotation. These methods produced equivalent structures.

Based on a priori hypotheses that there are in fact two forms of dependence, task and outcome, it was decided that only two factors would be subject to rotation. These two first factors accounted for 53.14% of the variance. Thus, the analysis was then rerun with a direct oblimin rotation to reveal the simplest solution. A specific survey item was said to load on a factor as long as the loading weight was greater than 0.30 and it loaded less than 0.30 for any other factor (Hinkin, 1995). The rotated pattern matrix appears in the table below.

Table 17 - Rotated Pattern Matrix - Task and Outcome Dependence Scale

	Factor	
	1	2
Outcome dependence Q4	.837	
Outcome dependence Q3	.810	
Outcome dependence Q5	.807	
Outcome dependence Q1	.505	
Task dependence Q2		.766
Task dependence Q3		.628
Task dependence Q5		.541
Task dependence Q1		.465
Task dependence Q4		.443
Outcome dependence Q2		.354

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

The factors are labeled as follows. Factor 1: outcome dependence and Factor 2: task dependence. The only exception was question 2 "Even if my employee performs very poorly, I could still get a performance bonus if I do my job" (reverse scored). This question reflects an outcome dependence situation but loads on factor 2, the task dependence factor. Thus, a decision was made to delete the item.

The two factors have an inter-correlation of 0.41, suggesting that outcome and task dependence factors are, in fact, related constructs as predicted.

Reliability analysis.

The internal reliability of the two subscales derived from the rotated factor solution was evaluated. The results showed that the reliability of the outcome dependence subscale was increased when question 2 was deleted as suggested above. In fact, the reliability of this subscale increased from á = .75 to á = .82 when this item was deleted. Consequently, the revised outcome dependence has only 4 items. It appears in Appendix D.

For the task dependence subscale, which included the items that load on factor 2, reliability increased slightly with the deletion of question 1 "Even if my employee performs poorly, I could still do my job well." Therefore, the decision was made to delete this item. The entire revised task dependence subscale appears in Appendix D.

Scale descriptive statistics.

Means and standard deviations were calculated for the task and outcome dependence subscales. An overall supervisor dependence scale (the mean of the two subscales) was calculated as well. The means and standard deviations appear in the correlation matrix in Appendix E. The data obtained with this scale will be used to test the moderating hypotheses. Thus, despite the failure to independently pilot test this measure, it demonstrated more than adequate psychometric properties and will consequently be used to test H3.

Impression Management Scale

Reliability analysis.

The reduced version of Paulhus' impression management scale was administered to both the employees and the supervisors. For the supervisors, the initial reliability was .59 that was increased to .63 with the omission of question 6 "I have done things I don't tell other people about" (reverse scored). For the employees, the internal reliability was only .54. This scale appears in Appendix C. The reliability is in fact quite poor when the scale was administered to both subject groups. This is not entirely surprising considering that 4 items were deleted from the reduced version and no preliminary testing was undertaken. It is important to note that the original version of Paulhus' impression management scale had 20 items (Paulhus, 1991). The 12-item reduced version was reported to have a reliability of .75 (D. Paulhus, personal communication, January 20, 2003). Thus, it is not a surprise that removing other (albeit questionable items) would further lower the internal reliability. Despite the low reliability, the decision was made to include the 8-item impression management scale in the analysis of the main and moderating hypotheses since it served only as a control variable. The results will obviously be interpreted with this limitation in mind.

Scale descriptive statistics.

The means and the standard deviations for the employee and the supervisor impression management scales (with question 6 deleted) appear in the correlation matrix in Appendix E. Factor analysis was not undertaken at this point since the factor structure of the reduced scale had been established by original author (Paulhus, 1991).

Hypothesis Testing

Correlation Among Variables

The correlations among all the measures and the demographic variables included in this study are presented in Appendix E. The results show that there are moderate, positive correlations between the different subscales of the two feedback sending scales. First of all, in terms of total feedback giving, there was a correlation of $r_{xy} = .23$, $p < .01$ between the employees and the supervisors, suggesting that the respondents only moderately agreed about how much overall feedback the supervisor provides. However, the correlations between feedback subscales were greater. For example, the greatest correlation occurs between the negative, non-verbal feedback subscales of both versions ($r_{xy} = .40$, $p < .01$). The correlation between the positive, non-verbal subscales for the supervisors and the employees was lower at $r_{xy} = .25$, $p < .01$. For the positive, verbal feedback subscale, there was a correlation of $r_{xy} = .20$, $p < .05$ between the supervisor and the employee version. A more unexpected finding was the fact that there was a correlation of $r_{xy} = .40$, $p < .01$ between the supervisor positive non-verbal and the employee negative non-verbal subscales. It is a bit surprising that the employees and supervisors would have greater agreement about the amount of non-verbal feedback provided rather than the amount of verbal feedback. Since the delivery of non-verbal feedback is subtler and less obvious than the delivery of verbal feedback, these findings suggest that employees pay particular attention to their supervisors' non-verbal behavior.

There were some significant correlations between one demographic variable and some of the feedback giving subscales. The supervisor's mother tongue correlated negatively with the supervisor's total feedback giving score ($r_{xy} = -.20$, $p < .05$) such that

the supervisors who reported that they were not native English speakers also reported that they gave less total feedback. Supervisor mother tongue also correlated with the supervisor's task dependence and outcome scores (r_{xy} = .20, p < .05 and r_{xy} = .24, p <.01) in that the native English-speaking supervisors reported higher task and outcome scores on the dependence measure. Consequently, a decision was made to control for this variable.

The correlations between the supervisors' impression management score and their self-reported feedback giving behavior actually varied depending on the feedback subscale. For example, the correlations between the supervisors' impression management score and their score on the positive and negative verbal subscales were r_{xy} = .17, p < .05 and r_{xy} = .18. p < .05 respectively. That is, supervisors who reported greater impression management concerns reported giving more positive and negative verbal feedback. However, there was a significant, negative correlation between impression management and the negative, non-verbal subscale (r_{xy} = -.29, p < .01), suggesting that the more the supervisor reported having impression management concerns, the less likely he or she was to report giving this type of feedback. Thus, this control variable was included in all the analyses to assuage the possibility that the supervisor's feedback giving behavior could be influenced by their impression management concerns.

The employee impression management scores were not significantly correlated with any of the feedback scores. Regardless, this variable was controlled for when the regression analyses were performed.

Regression Results

The relationships proposed in H1, H2 and H3 were tested using hierarchical multiple regression. The variables were entered into the model in two steps. In the first step, the independent, control and moderator variables were entered. The control variables consisted of the supervisor's impression management score and the supervisor's mother tongue. The independent variable was the supervisor's implicit theory and the moderators were employee tenure and the supervisor task and outcome dependence. In the second step, the interaction term was added. The models were evaluated with different dependent or outcome variables including the supervisor total self-reported feedback giving and also the feedback giving subscale scores (positive verbal, positive non-verbal, negative verbal and negative non-verbal). To evaluate the effect of these variables on the employee's perception of the amount of feedback provided by his or her supervisor, the analyses were repeated using the employee's overall feedback and feedback subscale scores as the dependent variable. In this case, the employee impression management score, the supervisor impression management score and the supervisor mother tongue served as control variables. In the case of missing data, cases were deleted listwise.

Hypothesis 1 – Implicit theory of human abilities.

Hypothesis 1 stated that supervisors with an incremental theory of human abilities would give more feedback to their employees than would supervisors who espoused an entity theory after controlling for the supervisors' impression management tendencies, and, as discussed, their mother tongue. This hypothesis was evaluated from both the perspective of the employee and the perspective of the supervisor. Thus, this hypothesis

was evaluated with two sets of outcome variables: the supervisors' feedback giving tendencies (measured by their self-reported total feedback scores) and the employees' perceptions of their supervisors' feedback giving tendencies (measured by their reported total feedback scores).

Overall, the main hypothesis was not supported when supervisor self-reported total feedback giving was used as the outcome variable. While there was a significant relationship between the supervisors' implicit theory of human abilities and this variable, the direction of the relationship was opposite to that which was predicted. Refer to the tables below for the beta weights with both employee tenure (table 18) and task dependence (table 19) as moderators.

Table 18 - Hypothesis 1 Results - Employee Tenure as Moderator

	Supervisor Self-Reported Total Feedback			**Employee Reported Total Feedback**		
	R^2	ÄR^2	â	R^2	ÄR^2	â
Step 1	.135	.135**		.015	.015	
Sup Imp Man			-.193*			.011
Emp Imp Man[b]			---			-.070
Sup Mother Tongue			-.199*			-.024
Employee Tenure[a]			-.184*			.062
Implicit Theory			.176*			.070
Step 2	.141	.005		.016	.002	
Implicit Theory X Employee Tenure			-.420			.246

*p < .05
**p < .01
p < .10

a: Employee tenure as reported by the supervisor
b: Entered only with employee reported total feedback as the outcome variable

The sign of the implicit theory beta weight was positive, indicating that the supervisors with higher scores on the implicit theory measure gave more feedback to their employees.

Recall that a higher score on this measure reflects an entity theory belief; consequently, H1 was not supported.

Table 19 - Hypothesis 1 Results - Task Dependence as Moderator

	Supervisor Self-Reported Total Feedback			**Employee Reported Total Feedback**		
	R^2	ΔR^2	â	R^2	ΔR^2	â
Step 1	.071	.071		.058	.058	
Sup Imp Man			-.118			.014
Emp Imp Man[a]			---			-.071
Sup Mother Tongue			-.205*			-.077
Task Dependence			.827			.209*
Implicit Theory			.988*			.085
Step 2	.094	.023		.063	.005	
Implicit Theory X Task Dependence			-1.149			-.566

*p < .05
**p < .01
p < .10

a: Entered only with employee reported total feedback as the outcome variable

The same regression analyses were run with the employees' perceptions of their supervisor's feedback giving behavior (as measured by the employee reported total feedback giving score as the dependent variable) to test H1. Recall that these scores measure from the employees' perspective how much feedback their supervisors provide. In addition to the supervisors' impression management scores, the employees' impression management scores were also entered as a control variable with the supervisors' mother tongue as previously discussed. Refer to tables 18 and 19 for the beta weights with employee tenure and task dependence as moderators of the relationship between feedback giving and supervisor implicit theory. In this case, H1 was not supported when the employee-derived results were used as the outcome variable.

The same analyses were then re-run with the subscales as the dependent variables to see if the supervisors' implicit theory would predict specific types of feedback giving

behavior. The results were not more conclusive. See tables 20 and 21 below for the regression results with the two moderators (employee tenure and task dependence) shown separately. There was no significant main effect relationship between the supervisor positive verbal, negative verbal and negative non-verbal subscales and the same supervisor's implicit theory. While there was a significant relationship between the supervisor's implicit theory and the positive non-verbal feedback subscale when employee tenure was included as a moderator (shown in table 20), the direction of the relationship was opposite to the hypothesis.

Table 20 - Regression Results - Supervisor Self-Reported Feedback Giving Moderator: Employee Tenure

	Positive verbal			**Positive non-verbal**			**Negative verbal**			**Negative non-verbal**		
	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â
Step 1	.051	.051		.083	.083*		.050	.050		.211	.211**	
Sup Imp Man			.172			-.237**			.182*			-.368**
Sup MT[a]			-.075			-.115			-.113			-.107
Emp Tenure[b]			-.116			1.379**			.048			.256**
Implicit Theory			.083			.238*			.069			.146
Step 2	.067	.016		.130	.047*		.050	.000		.211	.000	
Implicit Theory X Emp Tenure			.734			-1.269*			-.050			.080

*p < .05
**p < .01
p < .10

a: Sup MT = Supervisor Mother Tongue
b: Employee tenure as reported by the supervisor

Table 21 - Regression Results - Supervisor Self-Reported Feedback Giving Moderator: Task Dependence

	Positive verbal			Positive non-verbal			Negative verbal			Negative non-verbal		
	R^2	ÄR^2	â	R^2	ÄR^2	â	R^2	ÄR^2	â	R^2	ÄR^2	â
Step 1	.046	.046		.042	.042		.050	.050		.112	.112**	
Sup Imp Man			.158			-.156			.181*			-.288**
Sup MT[a]			-.081			-.138			-.102			-.113
Task Dep[b]			.422			.631			.263			-.017
Implicit Theory			.398			.716			.305			.134
Step 2	.050	.004		.057	.014		.052	.002		.118	.006	
Implicit Theory X Task Dep			-.476			-.901			-.332			-.603

*p < .05
**p < .01
p < .10

a: Sup MT = Supervisor Mother Tongue
b: Task Dep = Task Dependence

With the employee feedback subscales, the results were a bit different. These results are shown in tables 22 and 23 below with the two moderators (employee tenure and task dependence) shown separately. The relationship between the supervisor's implicit theory of human abilities and the employee positive, verbal feedback subscale approached significance with p = .08 when employee tenure was entered in the regression as shown in table 22. The beta weight for the implicit theory variable was also negative, which supported the contention that supervisors with incremental theories would give more of this type of feedback than those who held entity theories.

Table 22 - Regression Results - Employee Reported Feedback Giving Moderator: Employee Tenure

	Positive verbal			Positive non-verbal			Negative verbal			Negative non-verbal		
	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â
Step 1	.140	.140**		.079	.079		.073	.073		.144	.144**	
Sup Imp Man			.181*			-.147			.239**			-.205*
Emp Imp Man			.069			-.106			-.001			-.093
Sup MT[a]			.050			-.020			-.028			-.074
Emp Tenure[b]			-.305**			. 129			-1.335**			.239**
Implicit Theory			-.149			.179*			-.266*			.205*
Step 2	.146	.006		.084	.005		.117	.044*		.153	.009	
Implicit Theory X Emp Tenure			.463			-.408			1.393**			-.559

*p < 0.05
**p < 0.01
p < 0.10

a: Sup MT = Supervisor Mother Tongue
b: Employee tenure as reported by the supervisor

Table 23 - Regression Results - Employee Reported Feedback Giving Moderator: Task Dependence

	Positive verbal			Positive non-verbal			Negative verbal			Negative non-verbal		
	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â	R^2	ΔR^2	â
Step 1	.077	.077		.103	.103*		.066	.066		.090	.090*	
Sup Imp Man			.116			-.131			.230*			-.141
Emp. Imp Man			.006			-.104			.013			-.064
Sup MT[a]			.086			-.095			-.036			-.123
Task Dep[b]			.155			.165			.039			.077
Implicit Theory			-.159			.208*			-.108			219*
Step 2	.083	.006		.111	.008		.069	.003		.092	.002	
Implicit Theory X Task Dep			-.586			-.669			-.420			.372

*p < 0.05
**p < 0.01
p < 0.10

a: Sup MT = Supervisor Mother Tongue
b: Task Dep = Task Dependence

When the employee positive and negative non-verbal subscales were entered as outcome variables, there was a significant relationship between these variables and the supervisor's implicit theory. However, the direction of the relationship was opposite to that which was hypothesized. These employees reported that their supervisors with entity theories of human abilities gave more of these specific forms of feedback than did their incremental peers.

Finally, when the negative, verbal feedback subscale was entered as the dependent variable, the beta weight for the implicit theory variable was significant and negative (see table 22 above). In this case, according to the employees, incremental supervisors provided them with more negative, verbal feedback than did entity theorist supervisors. This result provided tentative support for H1, although because it is feedback type specific, it cannot be taken as conclusive evidence of support for the hypothesis.

Hypothesis 2 – Employee job tenure.

Hypothesis 2 stipulated that employee tenure will moderate the relationship between the supervisors' implicit theory of ability and their tendency to provide feedback in that the relationship will be stronger when employee tenure is low. Again, this hypothesis was evaluated from the perspective of both the supervisor and the employee. Therefore, there are two sets of outcome variables as before.

The hypothesis that the employees' tenure would moderate the relationship between the supervisors' implicit theory and their tendency to provide feedback was not supported with the supervisor total self-reported feedback giving as the outcome variable (see table 18). The interaction between implicit theory and employee tenure was not significant despite the fact that the employee tenure variable predicted significantly a

main effect in the first step of the hierarchical regression. It is important to note that the sign of this beta weight is negative which supports previous findings that employees with less tenure receive more feedback.

Hypothesis 2 was also not supported when employee reported total feedback giving was entered as the dependent variable. The relationship between the supervisor's implicit theory and this outcome variable was non-significant. See table 18.

The same analyses were re-run with the feedback subscales as the outcome variables. The results in these cases were more contradictory. In some cases, (such as for the supervisor positive verbal and negative verbal feedback subscales), the interaction models were non-significant, indicating that employee tenure did not moderate the relationship between the implicit theory of the supervisors and the amount of self-reported feedback giving. This is shown in table 20.

However, when the supervisor positive non-verbal feedback subscale served as the dependent variable, the introduction of the interaction term implicit theory X employee tenure in step 2 resulted in a significant ΔR^2, suggesting that the interaction model was significant. See table 20. Thus, employee tenure did moderate the relationship between the supervisors' implicit theory and the amount of self-reported positive, non-verbal feedback giving by the supervisor. A graph of the interaction model appears below as figure 4.

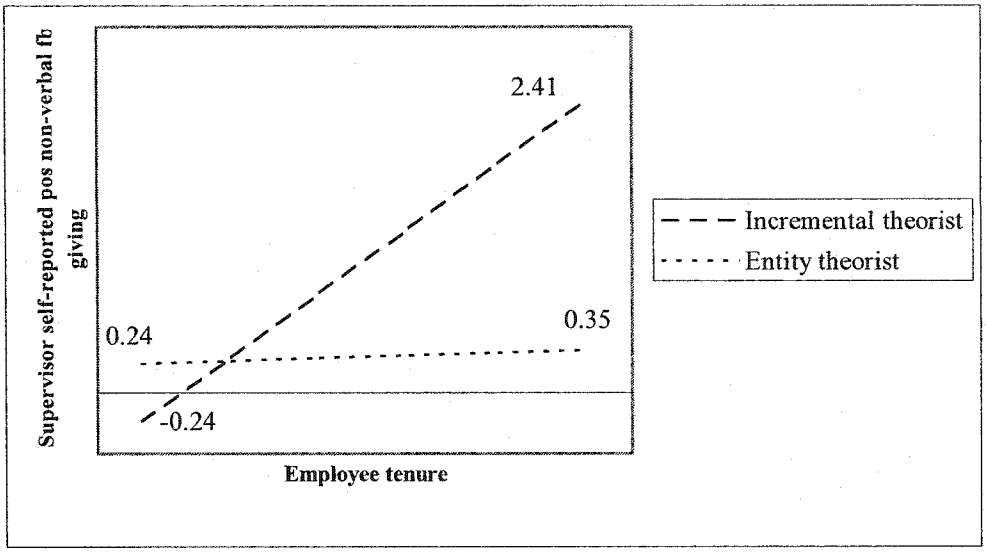


Figure 4 - Supervisor Self-Reported Positive Non-Verbal Feedback Giving as a Function of Employee Tenure for Incrementalists and Entity Theorists

This graph reveals that at low levels of employee tenure, incremental supervisors reported giving approximately the same amount of positive non-verbal feedback to their employees as did the entity theorists. However, as employee tenure increased, the incremental supervisors reported giving substantially more positive non-verbal feedback than did the entity theorists. In fact, the behavior of the entity theorists did not change as employee tenure increased as evident by the flattened slope of the line. Thus H2 was not supported since the relationship between the supervisors' implicit theory and their tendency to provide informal feedback was stronger only when employee tenure was high in this case.

With the supervisor negative non-verbal feedback subscale as the dependent variable, the interaction of implicit theory and employee tenure was not significant. See table 20 above. However, employee tenure had a main effect relationship in step 1 of the regression. In this case, employee tenure had a positive beta weight with $p < .01$. The

positive beta weight suggested that supervisors who have employees with more tenure say they give more negative non-verbal feedback.

When the employee subscales were entered as dependent variables, the results were similar. See table 22. For the positive verbal, positive non-verbal and negative non-verbal feedback subscales, the interaction term implicit theory X employee tenure was non-significant in step 2. With the employee negative verbal feedback subscale as the outcome, the interaction term implicit theory X employee tenure was significant in step 2 at the $p < .01$ level, confirming that a moderating effect of employee tenure did exist when this subscale score was entered as the dependent variable. Refer to the graph of the interaction effect in figure 5.

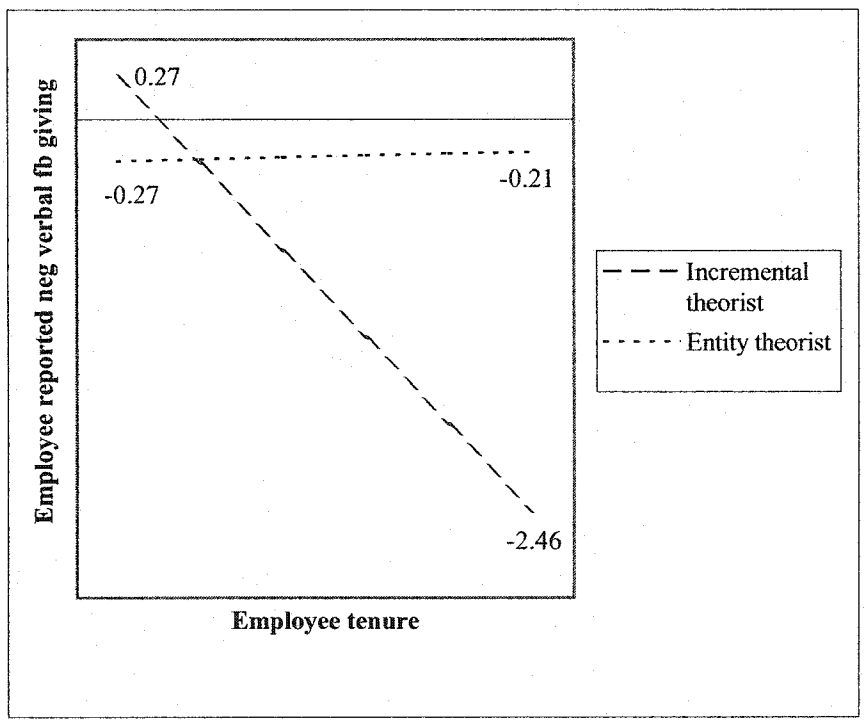


Figure 5 - Employee Reported Negative Verbal Feedback Giving as a Function of Employee Tenure for Incrementalists and Entity Theorists

The graph reveals that at low levels of employee tenure, incremental and entity theorists give approximately the same amount of negative verbal feedback (according to

their employees). However, as tenure increased, the employees reported that the incrementalists gave substantially less negative verbal feedback to their employees than did the entity theorists. The feedback giving behavior of the entity theorist supervisors did not change substantially as tenure increased as evident by the flat slope of the line. Again, H2 was not supported in that the relationship between the supervisors' implicit theory of human abilities and their feedback giving behavior was not stronger when employee tenure was low.

Hypothesis 3 – Task and outcome dependence.

Hypothesis 3 stipulated that task and outcome dependence will moderate the positive relationship between the supervisors' implicit theory of ability and their tendency to provide feedback in that this relationship will be stronger when task and outcome dependence is high. This hypothesis was evaluated from the perspective of both the supervisor and the employee.

The results revealed that there were no significant interaction relationships with outcome dependence as a moderator for any of the dependence variables. Therefore, this moderator will not be discussed further. The same results were found when the combined task dependence and outcome dependence score, total supervisor dependence, was entered as a moderator. It too will not be discussed in detail. Results will focus on task dependence as a moderator of the implicit theory-feedback giving relationship.

The moderating effect of task dependence on supervisor implicit theory was revealed by an interaction term that approached significance ($p < 0.10$) in step 2 of the regression model when supervisor self-reported total feedback giving was entered as a dependent

variable. See table 19 for the beta weights. The graph of this interaction appears in figure 6 below.

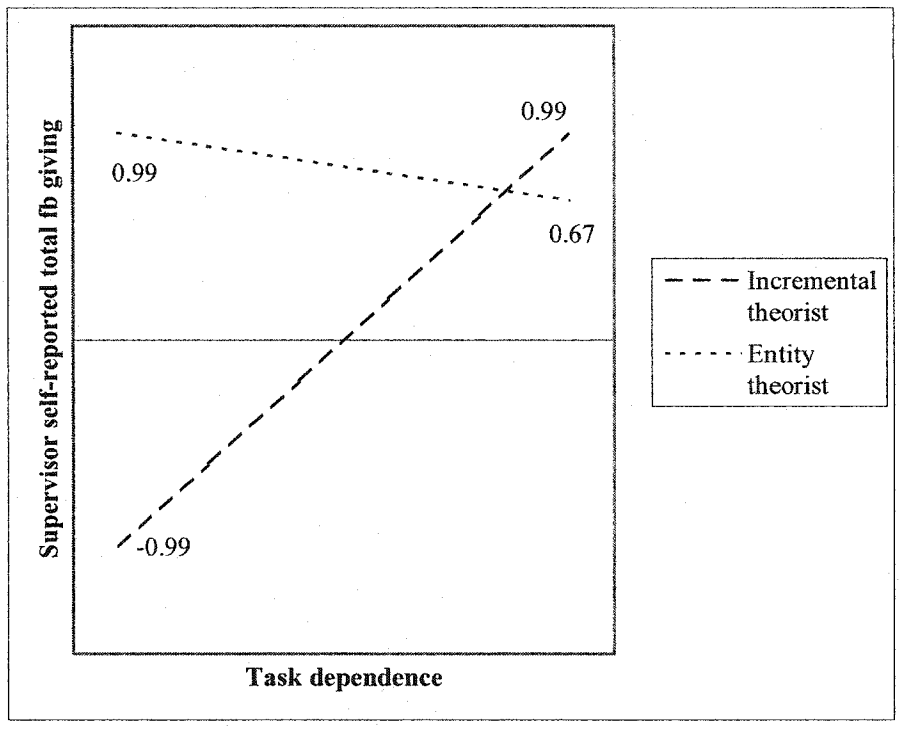


Figure 6 - Supervisor Self-Reported Total Feedback Giving as a Function of Task Dependence for Incrementalists and Entity theorists

Task dependence approached significance at $p < .10$ as a main effect in step 1 with a positive beta. The positive beta weight suggested that as task dependence increased, the supervisor's total feedback score also increased. An examination of figure 6 revealed that at low levels of task dependence, the incremental supervisors reported giving very little feedback compared to the entity theorists. As task dependence increased, incrementalists and entity theorists reported that they gave approximately the same amount of feedback. It would, however, appear that entity theorists did not change their behavior substantially as a result of increasing task dependence. For the incrementalists, it was clear that feedback giving behavior was affected by task dependence but only under conditions of low task dependence. At high levels of levels of task dependence, the incrementalists did

not differ substantially from the entity theorists. This would suggest that the relationship between the supervisors' implicit theory and their feedback giving behavior was moderated by task dependence but only at low levels of task dependence when the supervisor self-reported total feedback giving behavior was entered as the outcome. However, when employee reported total feedback giving was entered as the outcome variable, this relationship did not hold and no support was found for H3. See table 19 for the non-significant beta weights.

The results for the individual supervisor and employee feedback subscales are very straightforward. With the four supervisor feedback subscales, the interaction term implicit theory X task dependence was non-significant in step 2 of the models when these variables served as dependents. There were no significant main effect relationships either. See table 21. With the employee feedback subscales, interaction term was non-significant in step 2 of all the models when these variables served as dependents. See table 23. However, for the positive verbal and non-verbal feedback subscales, task dependence was almost significantly related to these outcomes as a main effect, $p < .10$, in step 1. The beta values were positive suggesting that as task dependence increased, positive verbal and non-verbal feedback giving by the supervisor increased (as reported by the employee).

Summary Statement

The main study had two goals. The first goal was to develop further the theoretical construct of informal feedback giving and create a scale to measure the behavior. Two versions of the informal feedback giving scale, designed to reflect the

perspectives of the employees and the supervisors, were generated. The scales' psychometric properties were assessed and the factor structure was established. The factor structure of a measure of task and outcome dependence was also evaluated. The second goal was to test the main hypothesis (H1) that the supervisors' implicit theory of human abilities would affect their feedback giving behavior such that supervisors with incremental theories would give more feedback to their employees than would those with an entity theory. It was also hypothesized that this relationship would be moderated by the employee's job tenure (H2) and the supervisor's relationship of task and outcome dependence with that employee (H3).

The first goal of the main study was successfully accomplished. The factor structure that was derived from an analysis of the item responses for the employee and the supervisor versions confirmed that informal feedback could be classified by its valence (positive or negative) and the means with which it is communicated (verbally or non-verbally). This factor structure was upheld when the supervisors were asked about their personal feedback giving behavior and when their employees were asked about their supervisors' behavior. Thus, it would appear that the factor structure is quite robust.

The second goal of the main study was to test a set of hypotheses pertaining to the dynamics of informal feedback giving. These results proved to be quite interesting. Hypothesis 1 was not supported with the supervisor's self-reported total feedback giving as the outcome variable as the results were significant but in the direction opposite to prediction. Thus, it was the entity theorists who claimed to provide more feedback to their employees. The fact that the results were significant but in the opposite direction is

very interesting and the ramifications of these findings will be discussed in more detail below.

The moderating hypothesis H2 had mixed results as well. While H2 was not directly supported, there were still some interesting findings. In particular, employee tenure did moderate the relationship between the supervisors' implicit theory and their tendency to provide feedback when supervisor-reported positive non-verbal feedback served as the outcome variable. At high levels of employee tenure, it was clear that the incrementalists gave substantially more feedback than the entity theorists. Note that it was predicted that the relationship between the supervisors' implicit theory of their feedback giving would be stronger at low levels of tenure, not high. When employee reported negative verbal feedback served as the outcome, the employees reported that their incremental supervisors gave less of this form of feedback than did the entity theorists as employee tenure increased.

Finally, H3 was only partially supported. Since there was no significant relationship between the outcome dependence subscale score and the total dependence score, these were removed from further analysis. The moderating effects of supervisor task dependence were revealed only when supervisor self-reported total feedback giving was entered as the outcome variable. In this case, at low levels of task dependence, incrementalists reported giving low amounts of feedback. This provided some support for the hypothesis that task dependence would moderate the positive relationship between the supervisors' implicit theory and their tendency to provide feedback but only at low levels of task dependence, which does not reflect the original hypothesis.

The implications of all these findings, and what they reveal about informal feedback giving behavior will be elaborated in the general discussion below.

General Discussion

Feedback, especially informal feedback, is a valuable resource at the level of the organization (Payne & Hauty, 1955; Vroom, 1964; Nadler, 1979; Ashford & Cummings, 1983), and, in particular, at the level of the individual (Larson, 1984; Stone & Stone, 1985; Ashford, 1986; Kuchinke, 2000; Sully de Luque & Sommer, 2000; Lam et al., 2002) and has not been studied in enough detail. This study served to remedy a gap in the literature by further developing the theoretical construct of informal feedback giving and extending the model of the behavior originally proposed by Larson in 1984.

The State of Informal Feedback Research

One of the main limitations of the current literature is the lack of an in-depth understanding of the construct of informal feedback giving. It is clear that much attention has been dedicated to the more formal manifestations of feedback giving in organizations. The formal feedback mechanisms that are employed by organizations such as performance appraisals, multisource assessments, and developmental relationships (Larson & Callahan, 1990; Harris & DeSimone, 1994; Murphy & Cleveland, 1995; Douglas & McCauley, 1999; DeNisi & Kluger, 2000) have received much attention. For example, there are now models of the social-cognitive processes through which performance appraisers must proceed in order to generate ratings. DeNisi, Cafferty and Meglino (1984) and others (Murphy et al., 1985; Murphy et al., 1986; Napier & Latham, 1986; Steiner & Rain, 1989) delineated the steps of information collection, encoding and storage. Behavioral anecdotes are combined and an objective rating (usually with the use

of a rating instrument) is generated. This information is then communicated to the employee usually via a performance appraisal meeting (Murphy & Cleveland, 1985).

Informal feedback giving behavior has not benefited from the same attention. Only in 1983 with a seminal article by Ashford and Cummings, did attention shift and did researchers begin to focus on informal feedback, a process in which information is transmitted in daily interactions between supervisors and employees. Ashford and Cummings (1983) had originally suggested that employees are not the passive recipients of information but rather actively seek out feedback that is relevant to their work-related self-concepts (Ashford & Tsui, 1991; Morrison & Bies, 1991; Ashford & Northcraft, 1992). Further research on informal feedback then focused on the tactics used by employees to obtain this information such as in the case of organizational entry (Levy et al., 1995; Vancouver & Morrison, 1995). Research also focused on the individual determinants of feedback seeking (VandeWalle et al., 2002). However, what is still lacking is a thorough understanding of the flip side of this behavior, informal feedback giving.

What is known about feedback giving reflects the tendencies or preferences of the feedback giver and is quite rudimentary. For example, it has been repeatedly shown that feedback givers are hesitant to transmit negative information to their subordinates and will engage in a variety of tactics to avoid delivering this information (Fitts & Ravdin, 1953; Oken, 1961; Blumberg, 1972; Tesser & Rosen, 1975; Bond & Anderson, 1987; Larson, 1989). However, as discussed in detail in the introduction, only one model of the informal feedback delivery process has been elucidated to account for any of these findings. Larson (1984) suggested that several antecedent variables affect the likelihood

that supervisors will provide informal feedback to their employees. It is important to note that this model is simply a theoretical proposal of inter-relations among variables. These inter-relations have not been tested empirically in great depth (see Adams, 1993). This current study extended a portion of Larson's model to determine factors that predict supervisors' informal feedback giving behavior.

The Informal Feedback Construct

Before an extension of the model can be undertaken, the construct of feedback giving itself must be investigated. Little research has elucidated the components or characteristics of informal feedback. A review of the literature revealed that informal feedback could be characterized by the valence of its message (positive and negative) (see Herold & Greller, 1977; Ilgen et al., 1979; Brocker, 1988; Fedor, 1991) and by the means with which it is communicated (verbal or non-verbal) (Sundaram & Webster, 2000; Rashotte, 2002). Individuals have been shown to characterize feedback particularly along the positive-negative continuum (Ilgen et al., 1979; Rotheram, La Cour & Jacobs, 1982; Landy & Farr, 1983; Brockner, 1988; Fedor, 1991). The dimensions of feedback (valence and communication methods) can be combined, however. Thus, any discussion of feedback giving behavior and its antecedents must first take into account the type of informal feedback delivered (positive verbal, positive non-verbal, negative verbal or negative non-verbal).

Creation of the Feedback Giving Scales

One of the main gaps in the literature is a lack of an understanding of the dimensions of informal feedback and, as such, a lack of a properly designed tool to

measure its delivery. While certain measures do exist, they do not tap the four dimensions or subtypes of feedback or they measure feedback only from the perspective of one respondent, either the supervisor or the employee (i.e., Herold & Parsons, 1985). Ultimately, neither the supervisor nor the employee can be completely objective in their assessment of how much informal feedback is available. Therefore, two parallel versions of the scale were created to evaluate how much feedback the supervisor actually provides.

It was anticipated that there would not be perfect concordance between the supervisor and the employee report since Adams (1993) had revealed a lack of agreement between students and trainers about the availability of positive, verbal feedback from the trainer. Indeed, in the main study, the correlation between supervisor self-reported and the employee reported total feedback giving was only $\underline{r}_{xy} = .23$, $\underline{p} < .01$. It is important to note that the two measures that were used to evaluate this concordance differed slightly. That is, they did not have an identical number of items as certain questions were removed to improve the factor structure. It is possible that the lack of concordance might be due to the fact that the scales were not identical. However, Adams (1993) got similar findings when completely different scales were used to measure feedback giving behavior on the part of the student and the trainer. In this case, there were only small differences in the scales and these differences were only due to the deletion of three items. It was not expected that the deletion of these items affected the concordance of the supervisor and the employee reports.

One main reason why there is only moderate concordance between the employees and the supervisor reports may be due to the supervisors' concerns about their impression

management. At first glance, it would seem obvious that these concerns should affect supervisor self-reported feedback giving behavior. After all, giving feedback to employees is consistent with the role of a supervisor. A good supervisor might even give more feedback to his or her employees to ensure their continued high performance within the organization since feedback is a valuable resource for the accomplishment of individual level goals (Taylor et al., 1984; Sully de Luque & Sommer, 2000; Lam et al., 2002). Thus, it was thought that supervisors might exaggerate the extent to which they claim to provide such information to their subordinates, thereby explaining the lack of concordance. Therefore, the supervisor's impression management concerns were controlled for in the regression analyses. The results, however, did not correspond to this explanation. When supervisor impression management was controlled for, the partial correlation between the supervisor self-reported and the employee reported total feedback giving remained unchanged at $\underline{r}_{xy} = .23$, $\underline{p} < .007$. This would suggest that the supervisor's impression management concerns could not explain the low concordance between the supervisor and the employee reports. To further this contention, when supervisor impression management was controlled, the correlations between the supervisor and the employee feedback giving subscales did not change either. For example, when supervisor impression management was not controlled, the concordance between the supervisor reported positive verbal feedback and the employee-reported positive feedback giving was $\underline{r}_{xy} = .20$, $p < .05$. When this variable was controlled in a partial correlation, the concordance was almost identical at $\underline{r}_{xy} = .18$, $p < .05$.

One possible explanation for the low correlations may be due the fact that the supervisor does not act the same way with all of his or her employees. Since there is only

one employee's perspective being tapped with this data collection approach, it could mean that the results simply reflect the idiosyncratic relationship between each employee and his or her supervisor. Alternatively, employees may simply not pay attention to all the instances in which they receive feedback from their supervisors. As well, since employees and supervisors have greatly different perspectives on the working environment and work-related behavior, it is possible that the low correlations are due to simple differences in perception. Employees may not interpret the information they receive from their supervisors as feedback per se and may interpret the information, for example, as an administrative directive or reprimand. That is, they may interpret it differently from the feedback provider. Indeed, it is well known that employees' interpret the feedback givers' intentions and this may affect their recognition of the message (Fedor et al., 1990). Regardless of the cause of the lack of concordance in the reports, it was evident that to investigate hypotheses relating to the dynamics of supervisor feedback giving, it was necessary to evaluate the behavior from the perspectives of both the employees and the supervisors.

Feedback Subscales

The decision to include four a priori subscales (positive verbal, positive non-verbal, negative verbal and negative non-verbal) in the feedback giving scale was supported by the results of the factor analysis later undertaken. For both versions, the items that had been identified as taping the specific subscales loaded on separate factors. This would suggest that the survey respondents clearly differentiated between these types of informal feedback. Thus, the factor structure was very robust despite the deletion of a few items that did not load well as well as anticipated. For example, items 7, 9 and 10

were deleted from the supervisor version. In addition to the clean factor structure, reliabilities for the subscales ranged from .62 for the employee positive non-verbal subscale to .89 for the supervisor positive verbal subscale. With the exception of the employee positive non-verbal subscale, the reliabilities were more than adequate.

It is important to note that the supervisor and employee feedback scales were designed initially with parallel questions. That is, the items were worded to reflect the perspective of each respondent but were otherwise identical. After the main study, items were deleted independently from each scale based on the results of the factor analysis. Thus, the two scales had slight differences in the items that were retained. This is not problematic as the scales, which can be used independently or with a matched sample of supervisors and employees such as in this study, all tap the same dimensions as revealed in the factor analysis. The use of non-parallel scales has been undertaken before in a similar study. For example, as discussed, Adams (1993) measured positive and negative feedback giving behavior from the perspective of the trainer and the student using scales with completely different. Thus, the first contribution of this study was the creation of the employee and supervisor versions of the feedback giving scale after an elaboration of the theoretical framework. It is hoped that these scales will be used for further study of informal feedback giving behavior.

Impression Management

The impact of impression management concerns must be considered when creating any instrument that measures self-reported behavior. In this case, the supervisor's impression management scores were found to correlate significantly with their responses on the feedback subscales. The effects of this variable will be discussed

below. While supervisor impression management concerns cannot explain the lack of concordance between the supervisor and the employee reports of feedback giving behavior, as addressed above, this variable does appear to constrain specific types of self-reported feedback giving behavior. For example, it was shown that there was a significant negative correlation between the supervisors' negative non-verbal feedback giving and their impression management scores. Refer to Appendix E[6]. In this case, the greater the supervisors' impression management scores, the less negative non-verbal feedback they claimed to provide to their employees. Conversely, for self-reported positive and negative verbal feedback giving, the correlation between the supervisors' impression management scores and their self-reported feedback giving was positive. This would suggest that the supervisors' impression management concerns caused them to enhance only their self-reported *verbal* feedback giving behavior.

It is clear from these findings that supervisors differentiate between communication methods when providing feedback and view verbal and non-verbal feedback differently. One explanation for these effects is that perhaps these supervisors felt that there was something about saying that they gave negative, non-verbal feedback to their employees that makes them appear in an unfavorable light. Negative, non-verbal feedback is comprised of subtle gestures or facial expressions that communicate dissatisfaction with performance. It is possible that the supervisors felt that this was not an effective means with which to communicate with their employees since they could not necessarily control the content of the message (other than its negative valence). Thus, one potential explanation is that they under-reported how much they provided negative non-

[6] The correlation between the supervisors' positive non-verbal feedback giving and their impression management was negative but non-significant.

verbal behavior and, at the same time, exaggerated their self-reported verbal feedback giving behavior.

On the other hand, the positive relationship between the supervisors' self-reported verbal feedback giving and their impression management would suggest that supervisors felt that this behavior makes them appear favorable to others. When one considers informal feedback, the verbal means of communication is presumably the most commonly recognized form. If giving feedback is consistent with the supervisors' schema of "actions performed by a good supervisor", then they would be more likely to report that they engaged in this behavior to be consistent with their personally held schema and in order to appear like "good supervisors" to others. Thus, the possibility that they exaggerated their self-reported verbal feedback giving is very real. It is clear that further investigations of the effects of the supervisors' impression management concerns must be undertaken to clarify this issue.

Extension of Larson's Model with Dweck's Implicit Theory of Human Abilities

If the first main contribution of this study was the creation of an instrument to measure feedback giving, the second contribution was an examination and elaboration of hypotheses pertaining to the dynamics of this behavior. Specifically, Larson's (1984) model of the feedback giving process was extended with the addition of the implicit theory of human abilities construct proposed by Dweck and others (Dweck & Elliot, 1983; Piaget & Garcia, 1983/1989; Bandura & Dweck, 1985; Dweck & Leggett, 1988; Dweck et al., 1995a; Chiu, Dweck, Tong, & Fu, 1997, Levy & Dweck, 1998). Dweck's theory was integrated with Larson's (1984) model to determine if it could further predict

supervisor feedback giving. Hypotheses about the effects of implicit theories were also tested.

In her model, Dweck suggested that individuals could be classified as either incrementalists or entity theorists by whether or not they believed in the fundamental malleability of human traits and attributes such as intelligence, morality and even personality. This belief system is thought to organize the way individuals view and understand the world (Kelly, 1955; 1970; Argyris & Schön, 1974; 1978; Wegner & Vallacher, 1977; Weick, 1979; Larson, 1984; Dweck, Chiu, & Hong, 1995a). In fact, individuals' implicit theories of human ability are thought to guide them in a host of behaviors including achievement goal selection, behavior in the face of failure and the interpretation of social information. The suggestion by Anderson (1995) that implicit theories are in fact components of more elaborate and interrelated knowledge structures supports some of the more contentious findings. For example, the controversy over how individuals can hold both incremental and entity theories at the same time and the fact that implicit theories can be both domain-specific and domain-general is resolved by the fact that implicit theories are related to other cognitive constructs such as goals and attributions via knowledge structures.

The main mechanism whereby implicit theories are proposed to affect informal feedback giving is via the impact that these theories have on individuals' interpretations of social behavior and information. For example, individuals' implicit theories guide the attributions and the explanations that they make about others' actions in the same manner as they guide their interpretation of their own performance (Hong, 1994; Hong, Chiu, & Dweck, 1994; Dweck, 1996b, Erdley, Cain, Loomis, Dumas-Hines, & Dweck, 1997).

Entity theorist assign trait-based explanations for behavior at the expense of situational considerations while incrementalists take into account psychological and situational moderators when explaining another person's behavior (Ross & Nisbett, 1991; Erdley & Dweck, 1993; Chiu et al., 1997). Not surprisingly, entity theorists focus more on evaluative processing and are ready to assign long-lasting trait descriptions with little in-depth observation (Hong et al., 1997; Butler, 2000). Indeed, Heslin (2002) suggested that the rater's implicit theory affected their tendency to use all available and relevant information when conducting performance appraisals. Since the act of providing performance feedback requires that an evaluation first be made, it was hypothesized that the feedback-giver's implicit theory would affect the amount of feedback provided. Simply, an entity theorist, who feels that initial performance diagnoses the individual's fundamental ability level, would give less informal feedback to their employee than an incremental supervisor. After all, the employee's abilities are not malleable so why bother trying to change them? This argument formed the theoretical basis for H1.

It was proposed that the relationship between implicit theory and informal feedback giving would be moderated by employee tenure and whether the supervisor was in a condition of task and outcome dependence with his or her employee. The first moderating hypothesis (H2) stated that employee tenure would moderate the relationship between the supervisors' implicit theory of ability and their tendency to provide feedback such that the relationship would be stronger when employee tenure is low. The second moderating hypothesis (H3) stipulated that task and outcome dependence would moderate the relationship between the supervisors' implicit theory of ability and their tendency to provide feedback in that the relationship would be stronger when task and

outcome dependence was high. The effects of task and outcome dependence were actually first proposed by Larson (1984, 1986) in the original model. The results of these hypothesis tests were not straightforward and will be discussed in detail.

Hypothesis 1 - Implicit Theory of Human Abilities

The main hypothesis (H1) stipulated that supervisors with an incremental theory of human abilities would give more feedback to their employees than would supervisors who espoused an entity theory. This relationship was posited to exist after the supervisors' impression management tendencies and mother tongue were controlled for.

Supervisor Self-Reported Feedback Giving Behavior

It was clear from the outset that when the main variable, supervisor self-reported total feedback giving was entered into the analysis, H1 was not supported. In fact, when supervisor self-reported feedback giving was used as the outcome, not only was H1 not supported, there was a significant predictive relationship between the supervisor's implicit theory and their self-reported feedback giving behavior in the *opposite* direction, revealing that it was the supervisors with an entity theory who reported that they provided more overall feedback to their employees. Several possible explanations could be offered for the failure to support H1. However, an examination of the results obtained with the individual feedback subscales reveals that partial support for H1 does in fact exist, especially when the employee derived scores are entered into the analysis. The discussion will be focused at this level since it can illuminate important differences in the feedback giving behavior of entity theorists and incrementalists.

An examination of the regression results obtained with the individual feedback subscales reveals that it is the communication method that differentiates entity theorists

from incrementalists. That is, according to the supervisors, the entity theorists gave significantly more non-verbal feedback (both positive and negative). (See table 20). There was no significant main effect for implicit theory when the verbal feedback subscales were used as the outcome. Entity theorists are, thus, less prone to report that they provide verbal feedback to their employees. These particular findings still run in the direction contrary to H1, but they are particularly relevant when taken into consideration with the results obtained from the employee perspective.

Employee Reported Feedback Giving Behavior

An examination of H1 using employee total reported feedback giving as the outcome variable provided no support for the hypothesis as the relationship was non-significant. The supervisor's implicit theory of human abilities did not predict, from the perspective of the employee, how much overall feedback the supervisor provided. The fact that the supervisors and the employees did not agree that the entity theorists provided more overall feedback (as revealed when supervisor self-reported total feedback giving was entered into the analysis) will be discussed before a more thorough examination of the individual subscale results. The lack of concordance between the entity theorists and the incrementalists suggests that supervisors with an entity theorist claim to provide informal feedback that is not, in turn, recognized or reported by their employees.

To further investigate this contention, the sample was divided into two dichotomous groups of supervisors who had extreme scores on the implicit theory of human abilities measure. Since the mean of the implicit theory scores of the entire sample was quite high, 3.15, with a standard deviation of .64, the bulk of the respondents fell into the entity range with scores greater than 2.5. Therefore, it was decided that two artificial

groups would be created based on the standard deviations about the mean. The subjects, who were defined as entity theorists, had scores equal to the implicit theory mean plus one standard deviation. The incrementalists were those with scores equal to the implicit theory mean minus one standard deviation. In this analysis, both groups had approximately the same number of subjects (the incrementalist group had an $n = 24$ and entity theorists had a sample size of $n = 21$). Correlations between the supervisors' self-reported feedback giving scores and those of their employees were then calculated. The results were very clear. There was a non-significant correlation of $r_{xy} = .29$, n.s., between supervisor self-reported total feedback giving and employee reported total feedback giving for the entity theorists, suggesting that the employees of entity theorists did not agree with their supervisor's self-reports. Interestingly, for the incremental supervisors, there was a significant correlation of $r_{xy} = .55$, $p < .01$ between the supervisor and the employee total reported feedback giving. Thus, only the employees of supervisors with strongly incrementalist dispositions were likely to agree with their supervisors about how much overall feedback they provided.

How can this intriguing finding be explained? The first explanation is that entity theorists have a limited awareness of their own feedback giving behaviors. That is, their proclivity to make trait-based attributions of behavior (Hong et al., 1997) may, in some way, alter their own understanding of the feedback process. For example, it has been shown that entity theorists offer less constructive advice to their peers who were having trouble in school and diagnose traits by observing behavior (Erdley & Dweck, 1993; Chiu et al., 1997; Levy et al., 1998; Levy & Dweck, 1999). Thus, perhaps these supervisors are simply unaware that they are failing to provide feedback to their employees.

The other possibility is that these supervisors actually provide trait-based feedback (as in their nature) but that the employees do not interpret this information as feedback. It is a well-documented fact that employees can misinterpret their supervisors' intentions and even fail to comprehend the feedback message completely (Fedor, Eder, & Buckley, 1989; Fedor et al., 1990; Ashford & Cummings, 1993). In this case, it is possible that the way entity theorists conceptualize and, consequently, provide feedback makes it more difficult for their employees to recognize that they are, in fact, the beneficiaries of informal feedback from their supervisors. Researchers have shown that entity theorists favor punishment over rehabilitation, for example, when dealing with poor employees or students (Gervey, Chiu, Hong, & Dweck, 1999; Hong, Chiu, Dweck, Lin, & Wan, 1999). It is possible that the entity theorists, recognizing that employees cannot change their behavior without outside influence (as their initial performance is diagnostic of a fixed ability level), provide them with feedback to initiate or direct change more in the form of punishment (Butler, 2000; Heslin, 2002). This directive information, in turn, may not be interpreted as feedback per se by the employees since it may resemble an order or an administrative edict. Thus, entity theorists may use informal feedback as a method to control or direct their employees, while incrementalists may view it as a means to guide and stimulate their subordinates towards improved performance. Recall that the employee's perception of the supervisor's intention for providing the feedback plays an important role in how they interpret the message (Fedor et al., 1990). Further research to examine these possibilities must be undertaken.

The fact that entity supervisors claim to provide feedback that is then not corroborated by the feedback recipients leads to the idea that incrementalists and entity

theorists may conceptualize and, consequently, provide feedback differently. This possibility must definitely be considered in light of the high correlation between the employee and supervisor reports for incremental supervisors that was not found for the entity theorists. An examination of the supervisor-derived regression results at the feedback subscale level reveals there is an important difference in the feedback giving behavior of entity theorists and incrementalists. In fact, there appears to be a relationship between the communication method (verbal or non-verbal) and the supervisor's implicit theory. This relationship was found to exist when the employee feedback subscales were entered into the analysis as well. Specifically, an examination of table 22, which depicts the regression results based on data derived from the employees, reveals partial support for H1 when the positive verbal and the negative verbal subscales were entered into the analysis. That is, there was a significant relationship between the implicit theory of the supervisor and the employee's report of positive and negative verbal feedback giving in the hypothesized direction. According to the employees, incremental supervisors gave more verbal feedback (regardless of the valence). However, the opposite finding held for non-verbal feedback. There was a significant relationship, but in the opposite direction, such that according to the employees, entity theorists gave more non-verbal feedback. Recall that the supervisors themselves also exhibited this finding, as there was a significant relationship between implicit theory and non-verbal feedback giving in the direction opposite to that which was predicted in H1 (see table 20). While the supervisor self-reported total feedback giving identified entity theorists as the main source of feedback, these more specific findings shed light on the behavior of the incremental supervisors.

Why should there be such a salient difference in the feedback giving behaviors of incrementalists and entity theorists? The partial support for H1 when the verbal feedback subscales were entered into the analysis suggests that supervisors with an incremental implicit theory of human abilities do view informal verbal behavior as a valuable tool with which to help employees modify changeable behavior. Their choice to provide verbal feedback may reflect their conscious attempt to stimulate the employee to initiate a behavior change. In fact, perhaps it is the incrementalists' understanding of the situational and psychological mediators of behavior that prompts them to deliver specifically more verbal feedback to their employees as originally hypothesized. Furthermore, the strong correlation between the incremental supervisors and their employees' reports of their feedback giving as discussed above implies that their employees do identify this verbal behavior as feedback when asked.

Entity theorists, who feel that human abilities are fixed, may be less determined to change behavior. They may resign themselves to the fact that the employee's behavior may be stagnant. Non-verbal feedback, which consists of gestures, facial expressions or body postures, may take less effort for the supervisor, which is in line with their tendency to make rapid trait-based judgments without detailed observation of another's behavior. Thus, non-verbal feedback may be the entity theorists' means to communicate simple satisfaction or dissatisfaction to their employees without the more detailed information or instruction available in feedback provided in a verbal exchange. The very nature of non-verbal behavior is such that while the valence of the message may be communicated with facility, more detailed information is not available. For example, a frown will let the employee know the supervisor is not happy but it will not let the employee know how he

or she can rectify the situation. Thus, the choice of communication medium by the supervisors may reflect these important differences inherent in their implicit theories of human abilities.

However, it is necessary to consider the possibility that the supervisor's non-verbal behavior may be a simple affective reaction to their employee's performance and not an intentional attempt to transmit feedback. That is, this non-verbal behavior may not reflect a conscious attempt to deliver informal feedback. For example, the frown described above could be the supervisor's immediate and unconscious reaction to poor performance and reflect the supervisor's frustration with the situation, rather than a concerted attempt to communicate feedback to the employee in question. This is important to consider given the fact that it is the employees of entity theorists who report that their supervisors provide non-verbal behavior. Thus, it is possible that the entity theorists, when faced with poor performance, become frustrated (since they feel behavior and performance is relatively fixed). Their non-verbal gestures are thus a reflection of this frustration and anger, rather than an intentional attempt to communicate with their employee.

It is particularly important to consider the intentions behind the entity theorists' non-verbal behavior because non-verbal feedback has been shown to be very salient to both the supervisors and the employees. There was an extremely high correlation between supervisor self-reported negative non-verbal feedback giving and the same type of feedback reported by the employees for both the incrementalists and the entity theorists ($r_{xy} = .61$, $p < .001$ and $r_{xy} = .66$, $p < .001$ respectively). Thus, there is something about negative non-verbal behavior that prompts both employees and supervisors to

recognize it and report it as a form of feedback when asked. Further investigation of this particular form of behavior must be undertaken to determine why it elicits such high levels of agreement between employees and supervisors. It must also be determined under what conditions does negative non-verbal behavior reflects a conscious attempt to deliver feedback and when it is a simple manifestation of supervisor frustration.

Overall, there appear to be fundamental differences in the way that entity theorists and incrementalists conceptualize and deliver informal feedback to their employees. Further research to uncover these qualitative differences should be undertaken.

Hypothesis 2 - Employee Tenure

The hypothesis (H2) stipulated that employee tenure would moderate the relationship between the supervisors' implicit theory of human abilities and their tendency to provide feedback in that the relationship would be stronger when employee tenure was low.

What was immediately obvious from the outset was that there was no significant moderating effect of employee tenure when supervisor self-reported total feedback giving and employee reported total feedback giving were used as the outcome variables. This lack of a moderating effect is interesting in itself since previous research has suggested that employee tenure would affect supervisors' feedback giving behavior (Rosen & Jerdee, 1976; Larson, 1984; Kauffman, 1987; Waldman & Avolio, 1993). The absence of this interaction effect suggests initially that the supervisors do not take into consideration their employees' tenure when providing informal feedback.

However, when the feedback subscales were used as the outcome variables, two important findings were revealed. With the supervisor positive non-verbal feedback

subscale, there was a significant interaction effect of employee tenure. Please refer to figure 4. This graph reveals that at low levels of employee tenure, incremental supervisors reported giving approximately the same amount of positive non-verbal feedback to their employees, as did the entity theorists. However, as employee tenure increased, the incremental supervisors reported giving substantially more positive non-verbal feedback than did the entity theorists. This is especially intriguing since the same interaction graph reveals that entity supervisors do not differentiate between employees with different levels of tenure when providing positive non-verbal feedback.

These findings prove to be even more enigmatic when the results are examined from the perspective of the employee. There is a significant moderating effect of tenure when employee reported negative verbal feedback giving is used as the outcome variable. Please refer to figure 5 for the interaction graph. These employees report that their incremental supervisors provide high tenured employees with very little negative verbal feedback compared to other employees. According to these respondents, the entity theorists again do not appear to differentiate between the levels of employee tenure.

Tentative explanations for these findings will be offered since once again it is evident that the employees and the supervisors do not agree about what type of feedback is provided by entity and incremental supervisors under different moderating conditions. From the perspective of the supervisor, the incrementalists provide more positive non-verbal feedback to the tenured employees than do the entity theorists. They provided about the same amount of feedback to the new employees as do the entity theorists. These findings are counter-intuitive since it was originally suggested that a belief in the employee's potential to change and be "molded" would be more salient to the supervisors

of newer employees (due to their pre-existing stereotypes about tenured employees) and would direct their feedback giving behavior more than it would for the supervisors of tenured employees. Consequently, it was thought that the incrementalists would have their natural tendencies to give informal feedback enhanced when they supervised newer employees and that they would provide more feedback. This result was not found.

One possible explanation is that the incremental supervisors were not comfortable reporting that they gave positive non-verbal feedback to their newer employees. Positive non-verbal feedback can include a whole gamut of behaviors (for example, a smile, a handshake), which are subtle and may involve direct physical interaction with the employee that may be taboo for incrementalists with new employees. The incremental supervisor may prefer to allow the new employee to fully adapt to his or her surroundings before engaging in such personal exchanges. Indeed, the preoccupation with the contextual and psychological factors that impinge individuals' behavior, which characterizes incrementalists, may make them particularly sensitive to their own non-verbal behavior and the possible effects it has on others. To avoid making the newcomer feel intimidated by a display of positive non-verbal feedback, they may choose another means with which to communicate their message. (Indeed, the regression results had shown that incrementalists give more verbal feedback, while entity theorists give more non-verbal feedback.) It is important to realize that this explanation is tentative at best since the interaction effect was only found to exist with this specific form of feedback giving behavior and was not replicated with total self-reported feedback giving. Further research to clarify this moderating relationship is necessary.

Despite the lack of agreement between the supervisors and the employees, it may be easier to offer an explanation for the findings derived from the employee feedback subscales, specifically the negative verbal one. According to the employees, the entity supervisors did not differentiate between employee tenure levels and provided approximately the same amount of feedback to everyone regardless of tenure. This is not surprising given what is known about entity theorists. These individuals have been reported to favor punishment over rehabilitation. Feeling that their employees cannot engage in self-directed behavior change, they provide negative verbal feedback to everyone, regardless of tenure. Their employees, for whom negative verbal feedback is quite salient, thus report that their entity theorist supervisors do not differentiate when dolling out the bad news. However, the employees reported that the incremental supervisors provided substantially less negative verbal feedback to the tenured employees than the newer ones. The employees may feel that their incremental supervisors 'cut some slack' for the tenured employees, as the supervisors believe problematic behaviors will resolve themselves over time. (Incrementalists do take into account a plethora of situational and psychological mediators when explaining behavior). These incrementalists do, however, intervene with the newer employees, perhaps to offer them initial guidance in the early stages of their socialization within the organization. The fact that the employees reported that the more tenured workers received less negative verbal feedback than the neophytes is evidence for the fact that they believe that incremental supervisors differentiate between tenure levels when providing informal feedback. However, given the fact that supervisors and employees do not agree on the types of

informal feedback giving behavior that are moderated by employee tenure, it would be important to investigate these findings further.

Hypothesis 3 - Task and Outcome Dependence

The hypothesis (H3) stipulated that task and outcome dependence will moderate the positive relationship between the supervisors' implicit theory of abilities and their tendency to provide feedback in that this relationship will be stronger when task and outcome dependence is high. Since outcome dependence did not appear to have an effect in any of the regression models, it was dropped from the analysis. The discussion will be based on the results obtained for the moderating effects of task dependence.

The main finding of interest is that task dependence moderated the relationship between the supervisors' implicit theory of human abilities and their propensity to provide feedback as measured by the supervisors' self-reported total feedback giving. These results only approached significance with $p < 0.10$ but no other subscales had comparable results. As well, from the perspective of the employees, there were no moderating effects of task dependence. The employees may not even notice when they are in a situation of task dependence with their supervisors since they do not derive the personal benefits associated with the relationship.

The interaction graph (see figure 6) showed that incrementalists gave very little feedback at low levels of task dependence. At higher levels, they gave approximately the same amounts of feedback as their entity theorist peers. These results follow from the initial prediction that a relationship of task dependence between the supervisor and the employee would make the supervisors' implicit theory more salient. Recall that in a condition of task dependence, the supervisors depend on their employees to complete

their own work. Obviously, these supervisors must feel that their subordinates' behavior is at least somewhat modifiable, if only so they can obtain their own optimal outcome. For the supervisors, the task dependence relationship will simply promote the belief that behaviors and abilities can (and must) be changed, a belief that is consistent with their implicit theory of human abilities. Consequently, incremental supervisors in particular will recognize when there is no relationship of task dependence with their employees and will provide less informal feedback. This recognition is fully in line with their tendency to distinguish situational and psychological mediators of behavior (Hong et al., 1997; Dweck, 2000). Further investigations to examine the specific motivations of incremental supervisors in conditions of high task dependence should be undertaken.

Theoretical Contributions

This thesis makes a number of important theoretical and practical contributions and further develops our understanding of the construct of informal feedback giving behavior. It was clear from the outset that informal feedback giving behavior has not benefited from the same attention in the management literature as formal mechanisms such as performance appraisal, multisource assessment and mentoring. Feedback, in all forms, merits in-depth study since it is essential for employees and organizations to achieve their individual and collective goals (Payne & Hauty, 1955; Vroom, 1964; Nadler, 1977; Nadler, 1979; Thompson & Hastie, 1990; Thompson & DeHarpport, 1994; Ashford & Cummings, 1993). Ashford and Cummings (1983) had an important impact on the state of feedback research when they stipulated that informal feedback is as important, if not even more important, than the sanctioned feedback mechanisms on which organizations rely.

Yet the construct of informal feedback is still not very well understood, despite its recognized importance. Thus, the first main contribution of this study was the development of the construct of informal feedback giving. Other researchers have examined informal feedback in a perfunctory fashion and have frequently qualified it by the valence of the message alone. Feedback valence is defined as the extent to which the message can be classified as positive or negative by the recipient (Herold & Greller, 1977; Brockner, 1988). The feedback valence or sign is very salient and extensive research has been completed on the effect of this message characteristic (i.e., Butler & Jaffee, 1974; Carver & Scheier, 1981; Herold & Parsons, 1985; Fedor et al., 1989; Podsakoff & Farh, 1989; Orpen & King, 1989; Ashford, 1993; Kluger & DeNisi, 1996). Adams (1993), in particular, created a measure of informal feedback giving behavior based on the fact that the recipients and feedback senders could classify the message as positive or negative.

However, it was clear that feedback valence is not the only characteristic of informal feedback. Consequently, when the informal feedback construct was developed for this study, the communication method was considered in addition to the feedback valence. Thus, it was proposed that informal feedback giving behaviors could be classified by two means of communication, verbal and non-verbal. Traditionally, in any organization, feedback is communicated via the written word (such as in a formal report) or by verbal means (such as in a performance appraisal meeting). But it is clear from the literature that non-verbal communication tactics play an important role in dyadic exchanges (Sundaram & Webster, 2000). In fact, Herold and Parsons (1985) had initially suggested that non-verbal communication should be included in their Job Feedback

Survey to classify feedback environments. Given the important role that non-verbal behaviors play in the exchange of information (Jones and LeBaron, 2002), this communication method was included as a component of the informal feedback construct.

Thus, four dimensions or subscales of informal feedback giving behavior were developed based on the feedback valence and the communication method (positive verbal, positive non-verbal, negative verbal and negative non-verbal). These were incorporated into two scales that measured supervisors' informal feedback giving behavior from the perspective of the supervisor and the perspective of the employee. The factor structures supported the existence of the four subscales in both versions of the scales. While there were slight differences in the weights and the order in which the factors were extracted, both the supervisor and the employee versions of the feedback giving scale had similar structures. Thus, the main contribution of this study was the creation and partial validation of this tool to measure informal feedback giving behavior from two perspectives. The fact that these four factors were extracted from two different samples provides further evidence for the robustness of the construct proposed to underlie informal feedback giving.

This study has also contributed to our understanding of how employees and supervisors conceptualize and interpret informal feedback. What was immediately clear was that both parties are extremely perceptive about the means with which feedback is communicated. It was originally thought that employees and supervisors would find verbal feedback to be the most salient (and thus be most likely to agree about its availability). But in actual fact, the respondents were more likely to agree about the availability of non-verbal feedback as revealed by the correlations between the employee

and supervisor reports of this type of feedback giving. This would suggest that employees are particularly sensitive to these behaviors, and are clearly very observant, despite the less overt nature of this communication method. It is evident that negative non-verbal feedback is an important type of informal feedback that is transmitted by supervisors to their employees and this study underlines its importance.

Another important contribution of this study is the extension of the nomological network surrounding the informal feedback construct. Larson's (1984) original model of feedback giving behavior was extended by an examination of the effects of implicit theories of human abilities on the manifestations of this behavior. Dweck and others (see Dweck, 2000) suggested that a belief in the fundamental malleability or fixed nature of human traits serves to organize a gamut of social and achievement-based behaviors. It was hypothesized that individuals holding different beliefs in the malleability of human traits would provide different amounts of feedback to their employees. Specifically, it was hypothesized that entity theorists would provide less informal feedback than would incremental supervisors, who contend that behavior is susceptible to psychological and situational mediators. The results did not initially appear to support this hypothesis. In fact, the opposite finding was uncovered. The entity theorists claimed to provide more feedback to their employees. However, when the results derived from the feedback subscales were examined it was clear that there was a relationship between the communication method and the implicit theory of the supervisor. Entity theorists, according to their subordinates, provided more non-verbal feedback and incrementalists provided more verbal feedback (providing partial support for H1). Thus, what was immediately clear was that entity supervisors conceptualize feedback differently than

their incremental peers, who shared greater agreement about their feedback giving behavior with their employees. This finding sheds some important light on the differences between entity and incrementalists.

The final theoretical contribution that this study makes was that it drew attention to the effects of employee tenure and task dependence on the implicit theory-feedback giving relationship. The results were far from clear and further study is required to understand the complicated dynamics between these mediating variables.

Practical Implications

There are several practical implications and recommendations that can be derived from this study. The first "lesson" is that timely, comprehensible feedback is essential if employees are to achieve their personal goals, which in turn, promotes the success of the entire organization. This has been shown repeatedly in the literature. While there may be general agreement that such feedback is essential for employees and organizations, not all supervisors are aware of their feedback giving behavior. Since officially sanctioned performance appraisals are not held in high regard (Meyer 1991; Roberts, 1998), the burden of the feedback giving falls squarely on the shoulders of the supervisor and frequently occurs in an informal capacity. This feedback giving manifests itself in dyadic exchanges between the supervisors and the employees. The problem arises when supervisors are not entirely aware of their feedback giving behavior. This is particularly an issue for entity theorists, who claim to give a tremendous amount of informal feedback that is then not recognized by their employees. If the employees do not recognize that feedback is being communicated, they certainly cannot use it to modify their behavior.

Thus, the one practical recommendation of this study is that supervisors be taught to identify their own informal feedback giving behaviors and to recognize the different feedback messages that they may be communicating. For example, feedback can be provided for developmental purposes to guide employees and or as an order or an administrative edit. The recipients may interpret these two forms of feedback differently. Indeed, differences in the ways supervisors conceptualize feedback may explain why the employees of entity theorists do not report that they receive this feedback from their supervisors. Thus, entity supervisors could be trained to act more like incrementalists to increase the likelihood that their employees will pick up on the messages that they are transmitting.

In a related vein, supervisors must understand the importance of their non-verbal feedback behaviors. As it was clear that employees are very sensitive to these behaviors, supervisors must realize that their body language communicates information to their employees, whether it is transmitted intentionally or not. Negative, non-verbal feedback is particularly salient to both the employees and supervisors. Given that this type of informal feedback elicits great agreement between the employees and the supervisors, it should be used carefully to communicate specific messages.

At the same time, the supervisors' impression management concerns about feedback must be addressed. Depending on the type of informal feedback giving reported by the supervisors, their impression management concerns affected their responses. This was particularly evident with the self-report of negative, non-verbal feedback. Supervisors must be encouraged to voice their concerns about the self-report of this behavior.

Two practical recommendations are derived from the findings about the effects of employee tenure and task dependence. Specifically, employee tenure affects behavior to the extent that supervisors hold pre-existing stereotypes about tenured employees and their capacities to modify their behavior. For example, incremental supervisors provided more positive, non-verbal feedback to their tenured employees while the employees reported that tenured employees received less negative verbal feedback than the newer employees. Managers need to be aware that their beliefs about tenured employees affect their informal feedback giving behavior directed towards them.

A shared relationship of task dependence between employees and supervisors has also been shown to affect the relationship between the supervisors' implicit theory and their feedback giving behavior. Indeed, the absence of task dependence prompts incrementalists to provide less feedback to their employees. If the supervisor and the employee share this dependence, the supervisor has a vested interest in the employees' performance and thus provides more feedback to improve his or her work outcome. If the supervisor benefits from this relationship, it is clear that the organization as a whole can benefit from the improved performance as well. Thus, organizations could profit by emphasizing dependence relationships between employees and supervisors to increase the delivery of informal feedback and thus promote improved individual and organizational performance. Of course, further investigation into these relationships is merited considering that entity supervisors do not seem to change their behavior based on conditions of task dependence.

Limitations

As with all studies that are based on self-report, this particular study had some limitations inherent in the data collection techniques. Supervisors' informal feedback giving behavior was evaluated with a self-report questionnaire and with a report obtained from one of their employees. Therein lies the main limitation of the study. Because only one employee was queried, it was possible that he or she did not accurately capture the true essence of the supervisors' informal feedback giving behavior. Since supervisors may behave differently with each employee, a more rigorous study design would be to gather reports from several subordinates for each supervisor and then calculate an average employee-derived feedback score. Thereby, idiosyncrasies inherent in the employee-supervisor relationship would not be reflected in the data.

The other main limitation had to do with the distribution of the implicit theory scores in the sample. In this case, there was a non-normal distribution of scores such that a greater portion of supervisors fell into the category of entity theorists. This finding is surprising since Dweck (2000) indicated that respondents can be easily dichotomized into groups of entity and incrementalists based on their results on the 8-item implicit theory of human abilities scale. This non-normal distribution was not expected to have affected the regression results since these techniques are generally robust to such deviations (Streiner, 1994).

The other limitation was due to the failure to control organizational variables such as culture. It is impossible to say whether the results were affected by any specific culture effects. However, the advantage with this type of study design where many organizations were surveyed is that the results have high generalizability.

Two other limitations refer to the reliabilities of two scales used in this study. The supervisor positive non-verbal feedback scale demonstrated a reliability of just 0.62. This was due to the fact that only three items were retained after the factor analysis. Several of the items that were originally thought to tap positive non-verbal behavior did not load on the factor. It is possible that the construct of positive, non-verbal feedback is ill-defined or vague and cannot be accurately measured via self-report since each respondent conceptualizes it differently.

The other scale that demonstrated poor reliability was the impression management scale. A reduced form of the Paulhus' (1984) impression management form was used without pre-testing and several items had been dropped as they referred to potentially deviant behaviors. Thus, the reliability was only 0.63. While impression management concerns were controlled for in the regression analysis, it would be interesting to see if the results would have been different if the reliability had been higher.

The final limitation had to do with the employee tenure variable. Employee tenure was hypothesized to moderate the relationship between the supervisors' implicit theory of human abilities and their feedback giving behavior. The main difficulty with the employee tenure variable is that it is confounded with employee age. Employee age and tenure are two related but distinct concepts. It is possible that the supervisors were reacting more to the fact that their tenured employees were older rather than the fact that they had a lot of experience at the organization (due to their tenure). Thus, the tenure/age confound needs to be disentangled, perhaps in future studies.

Future Research

There are four main directions in which future research must be undertaken. First of all, further work to clarify the theoretical construct of informal feedback giving must be completed. In this study, the results showed that there were subtle differences between the factor structures of the feedback giving scales designed for the employees and the supervisors. While the same factors were extracted, they were not extracted in the same order with the same weights. This would suggest that the two sets of respondents conceptualized informal feedback slightly differently. Further research in this area must be undertaken.

Another area of research, which follows logically, is to determine how individuals' implicit theories of human abilities guide their understanding of informal feedback. It is clear that entity theorists and incrementalists do not view, and consequently deliver, informal feedback giving in the same manner. This is evident by the different ways in which their employees respond to their behavior. Once the differences between entity theorists and incrementalists are elucidated, steps can be taken to promote the delivery of informal feedback that will be recognized and used by the employees.

The effect of the supervisors' impression management concerns on their self-report of feedback giving must also be investigated further. The results were not straightforward and suggest that supervisors are hesitant to report that they give certain types of feedback to their employees. If the cause of these impression management concerns can be uncovered, perhaps their effects can be dampened and informal feedback giving by the supervisors can be promoted.

Finally, further research is necessary to clarify the role that non-verbal communication plays in the delivery of informal feedback to employees. Employees are very sensitive to this form of communication and show great agreement with their supervisors when feedback is communicated with these methods. However, it was not clear why this means of feedback delivery was so salient. Research into specific non-verbal behaviors that are most significant to employees must be completed. As well, a differentiation must be made between non-verbal behaviors that are a manifestation of supervisor dissatisfaction, for example, and those that reflect an intentional attempt to communicate information. Clearly, the role of non-verbal behaviors must be studied further since this area of feedback research is still in its infancy.

Conclusion

Overall, the two main goals of this study were successfully achieved. The construct of informal feedback giving has been elucidated with greater clarity and a useful tool to measure the behavior was created. The addition of Dweck's implicit theories to Larson's model raised important questions about the essence of informal feedback giving and the role individuals' implicit theories play in their conceptualization of the behavior. Given the importance of informal feedback and the fact that implicit theories exert considerable influence on individuals' social and achievement behaviors, further research in these areas is essential.

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Appendix A - Feedback Giving Scales

Feedback Giving Scale - Supervisor Version

1. I go out of my way to tell my employees when they perform well on the job.
2. *As a supervisor, giving feedback to my employees is an important part of my job.
3. I feel that positive feedback is necessary for employees to improve their performance.
4. I give my employees positive feedback when they deserve it because it makes them feel better about themselves.
5 I make sure to congratulate an employee after he or she gives a good presentation.
6. *I give people who are new to the job lots of information about how they are performing.
7. **I provide regular feedback to all employees, not just those who are doing a poor job.
8. I don't think that it's really necessary to give feedback to the good employees. *(Reverse scored)*
9. **By watching how I act, my employees can tell how well they are performing on the job.
10. **I let my employees know indirectly when I am pleased with them.
11. My employees can tell when I am happy with them by the look on my face.
12. I prefer to use subtle ways to let my subordinates know when they are doing well.
13. I am not one to tell my subordinates directly how they are doing; I let them know by the way I act around them.
14. *My subordinates can tell when their performance exceeds my expectations by my reaction.
15. I use subtle, non-verbal gestures to let my employees know when I am happy with their work.
16. *When I am pleased with an employee's performance, everyone around me will know even if I don't say anything.
17. I let my employees know when they are not performing up to par.
18. I feel that it is important to inform employees about their poor performance.
19 I am direct and upfront when I discuss with my employees the areas in which they must improve.
20. Even if it's a touchy subject, I still tell my subordinates when they have made mistakes.
21. *My subordinate's yearly performance appraisal is not a surprise to them, as I make sure to let them know immediately if they are performing poorly.
22. I know that employees cannot change their behavior unless they know where their faults lie.
23. *I feel that it's only really necessary to give feedback to employees who are not doing their jobs well. *(Reverse scored)*
24 Even if they have made a major mistake, I tell my employees how they can improve for next time.

25. *My employees can sense when I am displeased with them even if I do not tell them directly.
26. I don't have to tell my employees directly when I am displeased with their performance as they can tell from the look on my face.
27. When I am upset due to an employee's unsatisfactory performance, everyone around me will know even if I don't say anything.
28. I don't say anything; employees who perform poorly just seem to know.
29. *I don't believe in direct confrontation. I let employees know indirectly that they have made a mistake.
30. My employees can tell by my reaction when their performance does not meet my satisfaction.
31. I use subtle, non-verbal gestures to communicate to my employees my displeasure with their performance.
32. My employees don't have to wait for me to tell them when they have made a major mistake. They know automatically by my behavior towards them.

*denotes items that were dropped after pilot study 1.
** denotes items that were dropped after the factor analysis.

Feedback Giving Scale - Employee Version

1. My supervisor goes out of his/her way to tell me when I perform well on the job.
2. *An important part of my supervisor's job is to give feedback to his/her employees.
3. My boss agrees that positive feedback is necessary for employees to improve their performance.
4. My supervisor gives his/her employees feedback when they deserve it because it makes them feel good about their jobs.
5 My boss makes sure to congratulate an employee who gives a good presentation.
6. *My boss gives the people who are new to the job lots of information about how they are performing.
7. My supervisor provides regular feedback to all his/her employees, not just those who are doing a poor job.
8. My boss does not find it necessary to give feedback to the good employees. *(Reverse scored)*
9. By watching my supervisor, I can tell how well I am performing my job.
10. My supervisor lets me know indirectly when he/she is pleased with me.
11. **I can tell my supervisor is happy with me by the look on his/her face.
12. My boss prefers to use subtle ways to let me know if I am doing well at work.
13. My supervisor is not one to tell me directly how I am doing; he/she lets me know by the way he/she acts around me.
14. *From my supervisor's reactions, I can tell when my performance exceeds his/her expectations.
15. My boss uses subtle, non-verbal gestures to let me know he/she is happy with my work.
16. *When my boss is pleased with an employee's performance, everyone around him/her will know even if he/she does not say anything.
17. My boss lets the employees know when they are not performing up to par.
18. My boss feels its important to inform employees about their poor performance
19. My supervisor is direct and upfront if he/she has to discuss the areas in which I need to improve with me.
20. Even if it's a touchy subject, my supervisor still tells me when I have made a mistake.
21. *My yearly performance appraisal is not a surprise because my supervisor lets me know immediately if I am performing poorly.
22. My supervisor knows that employees cannot change their behavior unless they know where their faults lie.
23. *My supervisor feels its only necessary to give feedback to employees who are not doing their job well. *(Reverse scored).*
24. Even when I have made a major mistake, my boss will tell me how I can improve for next time.
25. *I can sense when my supervisor is displeased with me even if he/she does not tell me directly.
26 My supervisor does not even have to tell me when he is dissatisfied with my performance, I can tell from the look on his face.

27. When my boss is upset due to an employee's unsatisfactory performance, everyone around him/her will know even if he/she does not say anything.
28. My boss doesn't have to say anything; employees who perform poorly just seem to know it.
29. *My boss doesn't believe in direct confrontation but rather lets me know indirectly that I made a mistake.
30. From my supervisor's reactions, I can tell when my performance does not meet his/her satisfaction.
31. My boss uses subtle, non-verbal gestures to communicate his/her displeasure with my performance.
32. I don't have to wait for my supervisor to tell me when I have made a major mistake, I know automatically by his/her behavior towards me.

*denotes items that were dropped after pilot study 1.
** denotes items that were dropped after the factor analysis.

Appendix B - Domain-General Measure of Implicit Theory of Human Abilities

Dweck (2000)

1. The kind of person someone is, is something basic about them, and it can't be changed very much.
2. People can substantially change the type of person they are. *(Reverse scored)*
3. People can do things differently, but the important part of who they are can't really be changed.
4. Everyone, no matter who they are, can substantially change their basic characteristics. *(Reverse scored)*
5. Everyone is a certain kind of person, and there is not much they can really change about that.
6. No matter what type of person someone is, they can always change a lot. *(Reverse scored)*
7. As much as I hate to admit it, you can't teach a new dog old tricks. People can't change their deepest attributes.
8. People can change even their most basic qualities. *(Reverse scored)*

Appendix C - Short Version of Paulhus (1994) Impression Management Scale

1. I never cover up my mistakes.
2. There have been occasions when I have taken advantage of someone. *(Reverse scored)**
3. I always obey laws, even if I'm unlikely to get caught.*
4. I have said something bad about a friend behind his or her back.
5. When I hear people talking privately, I avoid listening.
6. I have received too much change from a salesperson without telling him or her. *(Reverse scored)**
7. When I was young I sometimes stole things. *(Reverse scored)**
8. I have never dropped litter on the street.
9. I never look at sexy books or magazines. *(Reverse scored)**
10. I have done things that I don't tell other people about. *(Reverse scored). Deleted in supervisor version.*
11. I have pretended to be sick to avoid school or work. *(Reverse scored)* **
12. I don't gossip about other people's business.

* Omitted in 8-item version.
** Modified in 8-item version with the deletion of "or work".

Appendix D - Task and Outcome Dependence Measure

Task Dependence:

1. Even if my employee performs poorly, I could still do my job well. *(Reverse scored)*
2. For me to do my job well, my employee must be performing well.*
3. My success on my job depends a lot on what my employee does.
4. There are tasks that I do that require the direct input of my employee.
5. If my employee does not have good performance on the job, my own performance will suffer as a result.

Outcome Dependence:

1. A portion of my compensation package is determined by the work of my employee.
2. Even if my employee performs very poorly, I could still get a performance bonus if I do my job. *(Reverse scored)**
3. If my employee performs exceptionally on the job, I could get a salary raise because of his/her good work.
4. One reason why I could get a promotion is because my employee is excelling in his/her job.
5. One reason why I would not get a yearly salary bonus is because my employee was not working as well as expected.

* Deleted after factor analysis

Appendix E - Correlation Matrix

	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. E - org type	6.83 (4.36)																
2. E - org level	4.74 (1.29)	.07															
3. E - tenure	52.19 (62.6)	-.04	-.08														
4. E - status	1.52 (1.22)	.04	.17	-.19*													
5. E - # overseen	15.67 (20.3)	.07	-.06	.15	-.09												
6. E - time w. employee	30.55 (38.67)	.05	-.16	.54**	-.12	.21*											
7. E - age	30.47 (9.99)	.04	-.09	.56**	-.27**	.08	.39**										
8. E - mother tongue	1.52 (.50)	.08	.00	-.10	.17*	-.02	-.03	-.06									
9. E - years of education	14.8 (2.94)	-.05	-.17	-.25**	.06	-.19*	-.19*	-.21*	-.00								
10. E - sex	1.60 (.49)	.01	.16	.08	-.10	-.03	-.01	.07	.09	-.16							
11. E - pos verbal fb	3.76 (.71)	-.09	-.16	-.10	.03	.00	-.23**	-.07	.16	.13	.14						
12. E - pos non-verbal fb	2.99 (.63)	-.03	.00	-.18*	.01	-.15	.07	-.25**	-.02	.08	-.11	-.19*					
13. E - neg verbal fb	3.84 (.56)	-.09	-.14	.07	-.04	.12	.10	.06	.04	-.12	.12	.36**	-.07				
14. E - neg non-verbal fb	2.95 (.73)	.00	.01	.00	-.05	-.09	.20*	-.02	-.11	-.04	-.16	-.37**	.65**	-.07			
15. E - total fb	3.38 (.35)	-.09	-.13	-.11	-.02	-.06	.06	-.13	.03	.04	-.01	.37**	.67**	.50**	.60**		
16. E - impression man	3.32 (.63)	-.07	-.04	.22**	-.05	.00	.11	.34**	.14	.01	.21*	.07	-.13	.06	-.12	-.07	
17. S - org type	6.55 (4.32)	.62**	-.05	.00	.06	.10	.05	-.04	-.04	.02	.03	-.03	.10	.02	.10	.10	-.09
18. S - org level	2.93 (1.43)	-.04	.22*	-.05	-.00	-.02	.26**	-.17	.01	-.13	-.01	-.05	-.06	-.24**	-.12	-.20*	-.18*
19. S - tenure	111.77 (89.1)	-.09	-.20*	.30**	.06	.06	.37**	.31**	.06	-.03	.08	-.07	-.03	.16	.01	.02	.19*
20. S - status	1.09 (.51)	.00	.05	-.06	.34**	.01	-.04	-.14	.05	-.01	-.03	.09	.05	-.07	-.05	.01	-.06
21. S - # overseen	19.07 (27.0)	.17	.06	.15	.05	.54**	.26**	.20*	.11	-.26**	-.00	-.02	-.10	.08	-.04	-.05	.09
22. S - time w. employee	31.24 (42.2)	.00	-.24**	.44**	-.12	.29**	.92**	.32**	-.01	-.11	-.04	-.28**	.09	.12	.19*	.04	.19*
23. S - age	39.8 (11.0)	-.11	-.21*	.26**	.19*	.09	.39**	.41**	-.03	.08	-.04	-.12	-.01	.02	.11	.00	.20*
24. S - mother tongue	1.45 (.50)	-.15	.14	.01	.08	-.00	-.07	.06	.38**	-.07	.17	.12	-.07	-.02	-.11	-.30	.11
25. S - years of education	15.52 (3.25)	-.04	-.05	-.12	-.01	-.07	-.10	.04	-.19*	.19*	-.04	.11	-.03	-.02	-.03	.02	-.02
26. S - sex	1.45 (.50)	.00	.16	.00	.11	-.09	-.10	-.05	.11	.05	.20*	.16	-.05	.06	-.08	.05	.01
27. S - task dep	3.7 (.73)	.03	-.18*	-.09	-.14	.11	.00	.09	.06	.09	.01	.20*	.11	.09	.02	.20*	.02
28. S - outcome dep	2.85 (.93)	-.09	-.11	.02	-.05	.13	-.01	.00	.11	.10	-.05	-.03	.11	-.01	.08	.07	-.04
29. S - total dep	3.27 (.70)	-.04	-.15	-.04	-.10	.15	-.02	.05	.11	.10	-.02	.08	.15	.03	.07	.16	-.02
30. S - pos verbal fb	4.24 (.51)	.19*	-.09	-.06	-.01	-.02	-.09	.09	.11	-.10	.04	.20*	-.08	.19*	-.09	.09	-.02
31. S - pos non-verbal fb	2.50 (.79)	-.23**	.09	.01	.06	-.03	.08	-.03	-.21*	-.06	.21*	-.21*	.25**	-.05	.40**	.19*	-.13
32. S - neg verbal fb	4.11 (.52)	.05	-.00	.07	-.00	.06	.02	.06	.03	-.15	.03	-.01	-.11	.26**	-.00	.05	.10
33. S - neg non-verbal fb	2.49 (.79)	-.18*	-.06	-.02	-.06	.09	.15	.04	-.14	-.06	-.14	-.23**	.22*	-.17*	.40**	.12	-.12
34. S - total fb	3.34 (.35)	-.15	-.02	-.00	-.01	.05	.10	.06	-.15	-.16	.17	-.18	.19*	.05	.41**	.23**	-.11
35. S - implicit theory	3.14 (.65)	.03	.00	.04	-.09	-.07	.10	.04	-.01	-.05	-.10	-.13	.19*	-.09	.21*	.09	-.14
36. S - impression man	3.48 (.68)	-.06	-.05	.21*	.02	.03	.14	.18*	.08	.05	.09	.13	-.11	.22*	-.12	.03	.14

	17	18	19	22	23	24	25	26	27	28	29	30	31	32	33	34	35
18. S - org level	-.13																
19. S - tenure	-.08	-.32**															
20. S - status	.02	.00	-.17														
21. S - # overseen	.23**	-.06	-.02														
22. S - time w. employee	.13	-.28**	.46**														
23. S - age	-.06	-.37**	.53**	.39**													
24. S - mother tongue	-.08	.02	-.05	-.07	-.09												
25. S - years of education	.00	-.07	-.2*	-.03	-.03	-.08											
26. S - sex	-.03	.19*	.02	-.10	-.21*	.03	-.20*										
27. S - task dep	.17*	-.14	-.02	.09	.04	.20*	.19*	-.12									
28. S - outcome dep	.01	-.08	.12	.12	-.02	.24**	.15	-.22*	.39**								
29. S - total dep	.10	-.11	.08	.13	.00	.26**	.20*	-.22**	.79**	.87**							
30. S - pos verbal	.11	-.05	-.02	-.08	-.16	-.06	-.05	.17	.12	.03	.08						
31. S - pos non-verbal	-.09	.05	-.02	.11	-.00	-.14	.11	-.12	-.04	.03	.00	-.30**					
32. S - neg verbal	.04	-.16	.05	.03	-.08	-.09	.03	-.11	.04	.08	.08	.37**	-.11				
33. S - neg non-verbal	-.05	-.02	.07	.22*	.19*	-.12	.01	-.10	-.06	.03	-.01	-.38**	.57**	-.16			
34. S - total fb	-.02	-.06	.03	.17	.02	-.20*	.07	-.10	.00	.08	.06	.12	.75**	.36**	.69**		
35. S - implicit theory	.06	-.03	-.04	.01	-.06	.02	-.09	-.15	-.02	.06	.02	.04	.02	.06	.12	.11	
36. S - impression man	-.05	-.14	.12	.12	.18*	.04	.24**	-.12	.09	.03	.05	.17*	-.15	.18*	-.29**	-.11	.08

Based on a sample of 143 respondents. *p < .05 **p < .01 E = Employee S = Supervisor
Note: org = organization; N-verbal = non-verbal; pos = positive; neg = negative; dep = dependence