8-1999

Goal orientation and work environment needs related to the interpretation of multi-rater feedback

Sabine Brigitte Maetzke

To the Graduate Council:

I am submitting herewith a dissertation written by Sabine Brigitte Maetzke entitled "Goal orientation and work environment needs related to the interpretation of multi-rater feedback." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Industrial and Organizational Psychology.

Joyce E. A. Russell, Major Professor

We have read this dissertation and recommend its acceptance:

R. Thomas Ladd, Eric Sundstrom, Dudley Dewhirst

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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GOAL ORIENTATION AND WORK ENVIRONMENT NEEDS RELATED TO THE INTERPRETATION OF MULTI-RATER FEEDBACK

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Sabine B. Maetzke

August 1999

DEDICATION

This dissertation is dedicated to my parents, Marianne and Werner Maetzke. Their unwavering love and encouragement have made it possible for me to pursue my dreams to the fullest extent. I will always be grateful for their help and friendship.

ACKNOWLEDGEMENTS

I would like to thank my dissertation committee, Dr. Joyce Russell, Dr. R. Thomas Ladd, Dr. Dudley Dewhirst, and Dr. Eric Sundstrom for their help and guidance throughout this process. Joyce has been a wonderful mentor and friend since my first day at The University of Tennessee. Without her encouragement and support, I am certain that my tenure at UT would have been a less rewarding experience for me. Joyce has demonstrated a constant faith in my ability and has allowed me to pursue a vast variety of developmental activities and projects. For this, I will always be extremely grateful. Tom has also played an important role in my professional development at the university. I enjoyed participating in his courses and appreciate his boundless efforts in maintaining the high level of excellence present in our industrial and organizational psychology program. Tom truly cares about the well-being of the students. Thanks to Dudley for his valuable comments and feedback. I appreciate his insights as an instructor and also enjoyed having the opportunity to work with him as a facilitator in the Executive MBA Program. Finally, I would like to thank Eric for his important role as both a committee member and instructor. I greatly appreciate his helpful comments and have learned much in the courses he has taught.

I would also like to express a sincere thank you to Jenny Headrick and Carey Peters. Jenny has been very instrumental in making this research possible and has been extremely supportive of me throughout my internship. Also, many thanks to Carey for encouraging me and providing me with the resources necessary to complete this research as originally designed. His help and unyielding support throughout this project are

greatly appreciated. Also, thanks to Dianne Hartley and Carrie Springer for their valuable insights. Special thanks to June, Jackie, Carolyn, and Maggie who have made my time spent in the Industrial and Organizational Psychology Program a pure joy. Finally, I would like to thank the late Dr. Greg Dobbins for his encouragement and kind words during my first two years in the doctoral program. His presence has been greatly missed.

Other individuals have also made my experience at UT meaningful and special. I would like to thank Mark, Steve, Suzanne, Tim, and Eric for their friendship and support. I could always count on you for comic relief. Also, a heartfelt thanks to Susan, Stephanie, and Danielle for their continuous encouragement and faith in me.

I would also like to thank my wonderful family and friends outside of UT for supporting me for many years in pursuit of the Ph.D.: Holly, Barbara, Kara, and Helene have seen me through every step of the way. Finally, a very special thank you to Werner and Marianne Maetzke.

ABSTRACT

The purpose of the present study was to gain a better understanding of how individuals process the information received in a multi-rater feedback format. The goal orientation and work environment needs of the feedback recipients were assessed in order to determine whether they were more likely to attend to the ratings from one source (i.e., manager, peers, direct reports) than another.

Using Ashford and Cummings' (1983) model of the feedback-seeking process as a point of departure, it was hypothesized that the needs of the feedback recipients would influence which aspects of the feedback report they would mentally process. Previous research demonstrated that performance goal-oriented individuals value external rewards more than individuals with a learning goal orientation (Pintrich & Garcia, 1991). Thus, individuals with a performance goal orientation were predicted to attend more to the feedback received from their manager due to the greater access to external rewards possessed by managers. Hence, the recall of information received from the manager was expected to be greater than that of other feedback sources due to the perception that the manager could better meet the needs of the feedback recipient.

Subjects were 210 employees who had recently participated in a multi-rater feedback program as part of a larger organizational change initiative at a southeastern public utility. Questionnaires were completed and each participant was interviewed by the researcher approximately two months after receiving his or her multi-rater feedback report.

The results indicated that goal orientation and an individual's work environment needs did not generally result in a differential processing of information from one feedback source relative to another as measured by recall. Interestingly, however, individuals with a low learning dominant goal orientation were generally more familiar with their feedback in a global sense than individuals with a high learning dominant goal orientation. Also interesting was the finding that feedback recipients differentiated between the usefulness of the information received from a particular source depending on the purpose for the information. For example, when asked which source provided the most useful information about their strengths, a majority of individuals chose peers or direct reports. The opposite was found when individuals were asked to identify the source that provided them with the most useful information about their developmental needs. Upon further exploration of this phenomenon, it was discovered that those employees who chose peers or direct reports as providing the most useful information about their developmental needs also indicated wanting a significantly greater amount of recognition from their manager than they were currently experiencing.

Although the relationship between learning goal orientation and the ability to recall feedback on the multi-rater feedback report was found to be negative, individuals with a higher learning goal orientation were more likely to actively participate in a developmental activity based on the information received in the feedback report. Similar results were found for individuals with a higher need for professional development. These findings indicated that, although high learning-oriented individuals were less likely to process all of the information presented in the report, they may be more likely to

actually choose a particular dimension for development and follow through with the developmental activity.

In summary, an individual's goal orientation did not engender a differential processing of information from one feedback source more than another source as predicted. Surprisingly, individuals with a low learning goal orientation were generally more familiar with their feedback in a global sense than individuals with a high learning goal orientation; however, high learning goal-oriented individuals were more likely to participate in developmental activities based on the feedback that they received.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Most workers desire some form of feedback about their strengths and weaknesses on the job (Drucker, 1999). The introduction of multi-rater feedback, or 360-degree feedback as it is commonly known, is one avenue made available for an individual to receive more information about his or her performance from a variety of feedback sources (i.e., manager, peers, and direct reports). Research by Greller (1980) has already established that workers believe feedback from other sources such as co-workers can be useful information about their work performance. Surprisingly, Greller's study found that workers reported valuing comments from co-workers even more than comments received from their boss. Furthermore, workers expect to receive some level of feedback concerning their performance on the job. A laboratory study by Zuckerman, Brown, Fischler, Fox, Lathin, and Minasian (1979) demonstrated that individuals who were paid for their performance on a task, as workers are in most organizations, had a greater preference for receiving tasks with higher degrees of diagnosticity (i.e., information about their ability in completing the task) on subsequent trials than those individuals who were not paid for their performance.

To date, most of the information on how multi-rater feedback is processed by an individual is largely anecdotal. Classic research by Trope (1975) has shown that people value tasks that provide additional information to them about their own ability. Also, the more achievement motivated an individual tends to be the more likely they will be to seek out tasks that could provide feedback to them. Unfortunately, most tasks completed

by individuals in today's work settings provide little direct feedback about one's own performance. Many tasks completed by individuals, particularly in corporate settings, have subjective standards rather than objective standards for good performance based on the opinion of one person, usually the supervisor. Often, an individual will not know whether the work he or she finished was useful or well done until several months after the assignment was completed, if at all. Individuals in corporate settings rarely see the direct link between their performance and greater organizational outcomes although most workers believe that these links exist. Often, variables internal and external to the organization, beyond an individual's immediate control, may interfere with the successful completion of a project or assignment. For these reasons, multi-rater feedback has been embraced by many companies as another means for individuals to receive feedback concerning their performance from a variety of vantage points (i.e., supervisor, co-workers, subordinates, clients). In addition to workers receiving the added feedback that they may desire, the values and performance standards adopted by an organization may also be broadcast to workers in an efficient manner.

Although multi-rater feedback has been generally assumed to be beneficial, researchers have magnified the need for a better understanding of the parameters related to how multi-rater feedback really works (Borman, 1997; Church & Bracken, 1997; Waldman, Atwater, & Antonioni, 1998). While not conducted in the context of multi-rater feedback environment, early research by Payne and Haughty (1955) explored how various types of feedback (i.e., directive, incitive) influenced performance decrement on a task over time. The findings are worthy of noting here because the incitive feedback used in their study closely mirrors the type of information that individuals receive

through multi-rater feedback. That is, the information is presented in such a way that an individual has a general sense of his or her performance, albeit on a variety of dimensions instead of on a specific task, and the individual has the opportunity to compare his or her own performance against the average performance of other feedback participants. Normative data is typically provided to feedback recipients on their feedback report. Payne and Haughty (1955) found that incitive feedback did result in an immediate improvement in work proficiency, although a performance decrement was noted over time. Surprisingly, even when subjects were given extremely specific, directive feedback throughout the task, performance ultimately declined. Therefore, one could conclude that information of the type presented in a multi-rater feedback situation may be as beneficial as highly directive feedback where participants receive information about their progress every time an action is taken. In other words, the use of multi-rater feedback may be considered an adequate developmental tool even when compared to a highly feedback rich situation where a person receives continuous feedback on every task completed on the job.

Other research by Langer, Blank and Chanowitz (1978) investigated whether the way information was communicated to an individual influenced his or her attention to the message. The researchers found that messages that required an effortful response from the recipient and were structurally novel from previous experience (i.e., differed from typical communications or requests) were more likely to be processed in a non-automatic manner by an individual whether the information was presented in either an oral or written format. This study lends support to the idea that individuals receiving multi-rater feedback may be more likely to absorb the information provided by their feedback

reports if individuals are more intrinsically interested in the feedback and are more willing to attempt to use the information in the future. Also, those individuals not accustomed to receiving feedback from a variety of feedback sources such as from supervisors, co-workers, and subordinates may be more likely to process the information at a deeper level due to the novelty of the experience.

According to Atwater and Waldman (1998), 90 percent of Fortune 1000 firms use some form of multi-source assessment. Waldman and his colleagues (1998), however, have demonstrated that although the use of multi-rater feedback programs has become increasingly prevalent among companies, little research has explored how or even whether 360 feedback really works. Researchers have become more sensitive to the importance of variables such as organizational context and employee needs on the success of multi-rater feedback systems (Funderburg & Levy, 1997). In fact, Funderburg and Levy found that factors such as high self-esteem, internal locus of control, and perceptions of supportiveness for feedback seeking in the environment were positively related to employee attitudes toward a multi-rater feedback system. Many companies have implemented multi-rater feedback programs with the expectation that employee performance will improve and lead to a performance improvement within the entire organization. Due to the time and expense placed into implementing multi-rater feedback programs, many companies are becoming increasingly anxious to realize a return on their investment by making feedback recipients more accountable for performance improvements (Atwater & Waldman, 1998; Haworth, 1998; London, Smither, & Adsit, 1997).

Several organizations have recently considered using the information received from multi-rater feedback for administrative decisions (e.g., pay raises, promotions) rather than only for developmental purposes as has been done in the past (Waldman, et al., 1998). Changing the purpose of multi-rater feedback from being purely developmental to administrative, however, engenders many challenges, some of which may compromise the integrity of the entire multi-rater feedback process. One potential problem with using multi-rater feedback for administrative uses include the raising or lowering of ratings by various rater groups (i.e., supervisors, peers, direct reports) to achieve political agendas beyond the feedback recipient's true performance. Another issue is determining how conflicting feedback from different rater groups on the same criterion will be handled, and still another concern is deciding whether some feedback criterion (e.g., ratings on interpersonal skills from various feedback sources versus objective productivity data) should be weighted differently than others (Atwater & Waldman, 1988; London & Smither, 1995). Due to these problems, some researchers believe that multi-rater feedback is best utilized as a developmental tool to help improve the performance of participants and probably should not be used for administrative decisions (Waldman, et al., 1998). However, even when used purely for developmental purposes, organizations still expect multi-rater feedback to be beneficial to both the individual as well as the organization.

Organizations are left with the challenge of finding ways to ensure that individuals are gaining all they can from the feedback that they have received (London, et al., 1997). Before issues such as accountability can be addressed constructively by organizations, researchers must first gain a better understanding of what information is

being processed, if any, by individuals participating in a multi-rater feedback program. Most of the literature related to multi-rater feedback has concentrated on issues related to participant acceptance and psychometric properties of the feedback from various feedback giving sources (Facteau, Facteau, Schoel, Russell, & Poteet, 1998; Harris & Schaubroeck, 1988; London & Wohlers, 1989). To date, only one known model proposed by Atwater and Yammarino (1996) investigating the influence of locus of control, has begun to explore the role individual difference variables may have on ratings made through the use of multi-source feedback. Little, if any, research has addressed how feedback recipients attend to and process the various pieces of multi-rater feedback information and whether this has any impact on the recipient's subsequent developmental activities and ultimately behavior change. The purpose of the present study was to explore whether the personal attributes and goals of the feedback recipient influence how an individual manages and retains the information received from multiple feedback sources.

In order to understand the impact of multi-rater feedback, more research is needed that begins to probe the type of phenomena previously mentioned. Past research has demonstrated some intriguing findings related to how individuals attend to information in a variety of situations; however, little research of this type has been conducted in the realm of multi-rater feedback. Specifically, more research is needed to better understand how individuals attend to information on a multi-rater feedback report and what if any information is retained by the feedback recipient over time. Furthermore, the role of individual difference variables such as the needs and goals possessed by an individual also need to be explored in the context of multi-rater feedback.

The present study attempted to approach these previously neglected research needs. The goal orientation and work environment needs of the feedback recipients were assessed in order to determine whether some feedback recipients were more likely to attend to the ratings received from one feedback source more than another source. It was expected that the needs of the participant will influence which aspects of the feedback report will be mentally processed by the individual. Previous research has demonstrated that performance goal-oriented individuals value external rewards more than individuals with a learning goal orientation (Pintrich & Garcia, 1991). Therefore, individuals with a performance goal orientation were predicted to attend more to the feedback received from the manager due to the greater access to external rewards possessed by this feedback giver category. Hence, the recall of information received from the manager was expected to be greater than that of other feedback sources due to the feedback giver's ability to meet the needs of the feedback recipient. The purpose of the present study was to gain a better understanding of how individuals process the information received in a multi-rater feedback format.

CHAPTER II

REVIEW OF THE LITERATURE

In today's competitive global market, companies are increasingly searching for ways to increase organizational productivity. The quality of the workforce can be an important contributing factor to the overall effectiveness of the organization. In order to increase the competitive advantage, organizations have become increasingly open to innovative technologies geared toward maximizing the potential of an organization's human resources. One such method has been providing greater amounts of information to the individual about their performance through the use of increased communication and feedback. Many studies have linked the use of feedback with increased productivity for the individual, work group, and organization (Austin, Kessler, Riccobono, & Bailey, 1996; Olivero, Bane, & Kopelman,1997; Pritchard, Jones, Roth, Stuebing, & Ekeberg, 1989). With few exceptions, research has shown that feedback is related to greater productivity. For example, Wilk and Redmon (1998) found that the performance of a clerical staff improved throughout a 55 week period when both verbal direction from the supervisor as well as graphic displays of individual performance were introduced to the workplace.

Although researchers generally believe that feedback can be beneficial, recent studies have demonstrated a need to better understand the role a variety of variables such as motivation and other individual differences may play in the use of feedback (Hillman, Schwandt, & Bartz, 1990; Levinson, 1992). Research by Das (1991) discovered that individual difference variables such as growth need strength can influence the

relationship between worker satisfaction and productivity in a feedback rich environment. Specifically, the study found that a significant relationship between worker satisfaction and productivity existed only for individuals with a high growth need strength. Further research by Das and Mital (1994) explored the influence that production feedback can have on the relationship between worker satisfaction and productivity. Surprisingly, the study found non-significant or inconsistent negative relationships between worker satisfaction and productivity with the introduction of feedback. The researchers concluded that other variables must be involved influencing these relationships. Without a better understanding of the underlying mechanisms determining why certain feedback systems are and are not effective for individuals, programs often quickly become fads. This can sometimes be unfortunate because the useful and beneficial aspects of a system may be given up with the discontinuance of the entire program.

The Role of Monitoring in the Feedback Environment

A seminal article by Ashford and Cummings (1983) proposed the idea of the individual as an active participant in the feedback-seeking process. Previous research by Ilgen, Fisher, and Taylor (1979) describe the feedback recipient as someone who acts in a passive manner simply absorbing the information given to him or her in the work environment as shown in Figure 2.1. The feedback recipient is not actively engaged in obtaining feedback from certain sources in order to meet one's own needs or goals beyond deciding whether the feedback encountered will be accepted. In contrast, Ashford and Cummings (1983) suggest that an individual plays an active role in determining which feedback will and will not be sought out from the environment. Their research closely reflects the ideas of Greller and Herold (1975) and Hanser and

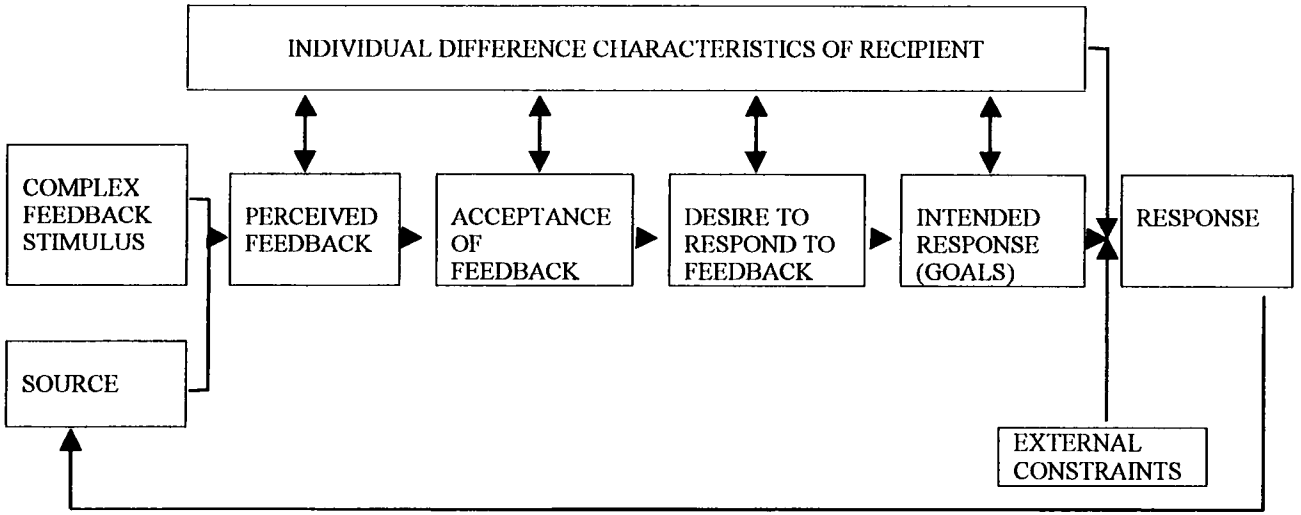


Figure 2.1

Ilgen, Fisher, and Taylor's (1979, p. 352) Model of the Effects of Feedback on Recipients

Muchinsky (1978) which theorizes that an individual plays a much more active role in determining what information from the environment may or may not be critically important. In support of these theories, Bennett, Herold, and Ashford (1990) found that individual difference variables can affect feedback-seeking behavior. These researchers discovered that a person who is experiencing high levels of job-related ambiguity is much more likely to seek additional feedback about their performance than an individual who is able to tolerate job-related ambiguity.

More specifically, Ashford and Cummings (1983) describe two types of feedback-seeking behaviors engaged in by individuals: inquiry and monitoring (see Figure 2.2). Inquiry involves the gathering of information by *directly* asking various feedback sources for information about one's performance in a primarily evaluative sense; whereas, monitoring is characterized by *attending* to and processing information received from the environment. As explained by Ashford and Cummings (1983),

> Meaning is generated within the thinking function using both the environmental cues obtained through monitoring the environment and the various goals an individual may hold as reference conditions. The goals, as reference conditions, form both the standard against which the feedback is compared and a schema useful in making sense out of the wealth of cues available. The meaning attributed to any cue is, thus, not inherent in the cue itself but is at least in part imposed as a function of the individual's goals. (p. 383)

Therefore, monitoring requires a higher level of involvement and interpretation from the individual where he or she must determine which pieces of information are personally relevant and significant. Monitoring is the feedback-seeking stage where meaning is attached to the information received by the individual. Feedback becomes useful to the extent that an individual finds the information to be important to him or her.

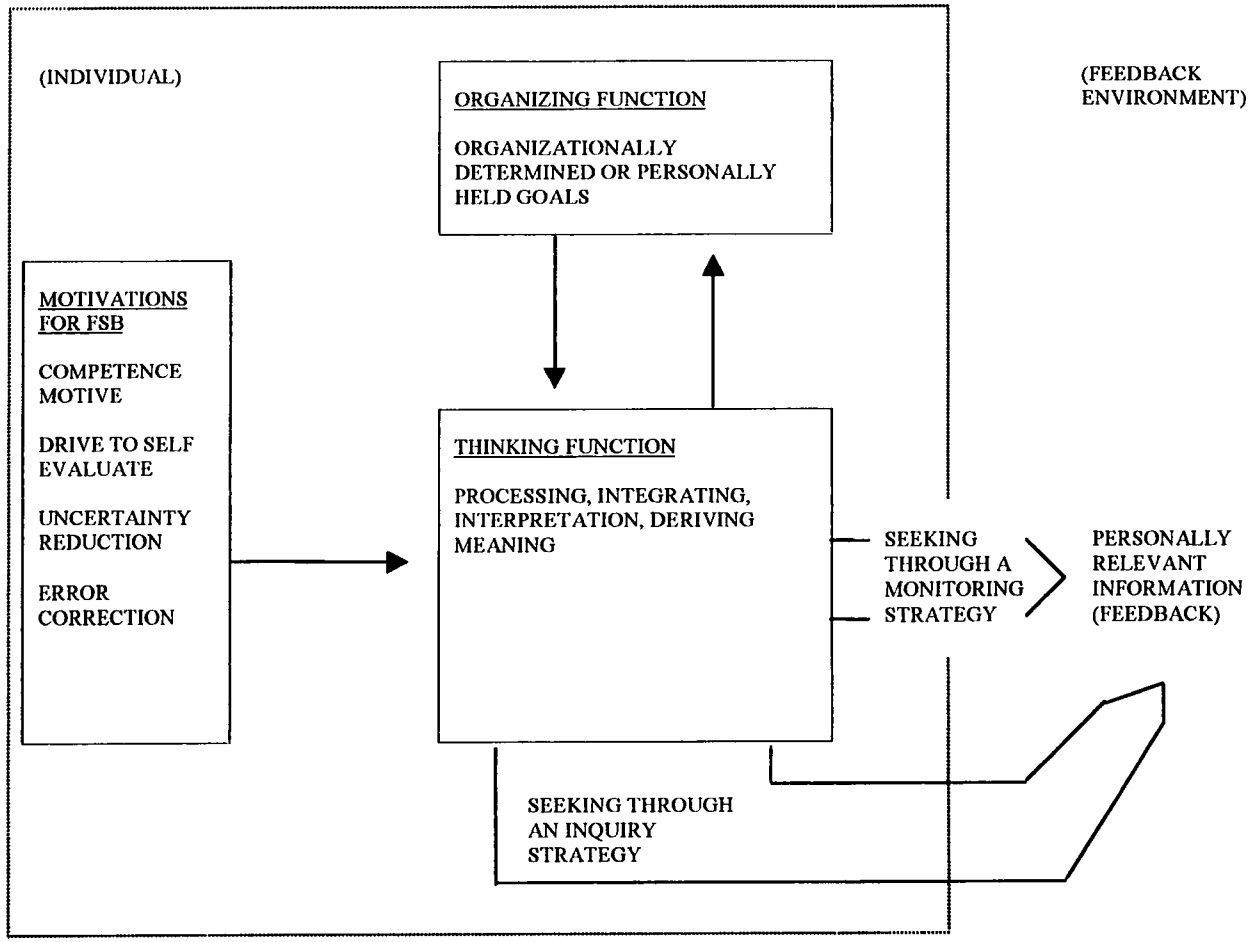


Figure 2.2

Ashford and Cumming's (1983, p. 383) Model of the Feedback Seeking Process

With the use of multi-rater feedback programs, individuals can rapidly obtain feedback about their performance from a variety of sources including their manager, peers, and direct reports. Therefore, in a rather efficient manner the inquiry component of the feedback-seeking process described by Ashford and Cummings (1983) has been easily accomplished. However, the monitoring portion of this process is still left for the individual to address. Greller and Herold (1975) view the feedback recipient as an information processor capable of scanning the environment for relevant information from a variety of sources.

Monitoring the Multi-rater Feedback Report

One avenue an individual may have for monitoring or scanning the environment for personally relevant feedback may be the multi-rater feedback report. The typical multi-rater feedback report presented to feedback recipients in many organizations contains well over 20 pages of information. In a sense, the multi-rater feedback report represents a feedback rich environment that an individual must explore and manage on their own. The amount of information presented is often vast and complex (London & Smither, 1995). A typical feedback report provides a feedback recipient with information at the dimension level and the item level from each feedback source. A graphical representation of data received on the multi-rater feedback report for one dimension is shown in Figure 2.3. In addition, most feedback reports will break out the information even further. Often, the top-rated and bottom-rated dimensions and top-rated and bottom-rated items from each feedback source are displayed. Open-ended comments are also typically provided from each feedback source. All of the information just described is often displayed both pictorially and numerically. Not surprisingly, given the

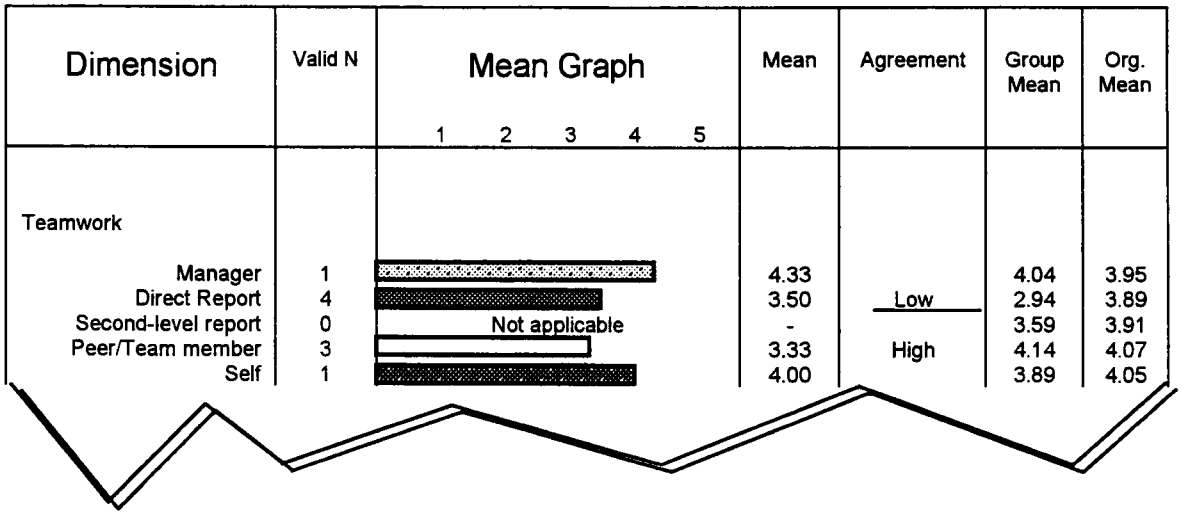


Figure 2.3

Graphical Representation of Data Received on the Multi-rater Feedback Report for One Dimension

variety of information available, individuals may approach their feedback report in unique ways. Information from certain feedback sources (i.e., managers, peers, or direct reports) may be more important to some feedback recipients than to others. The individual goals of the feedback recipient may influence how he or she monitors (i.e., attends to feedback received) the report. Ashford and Cummings state, "The goals an individual holds for himself or herself shape the feedback-seeking behavior process. They play an important role as determinants of the type of feedback information useful to that individual and of the utility of various sources of feedback (e.g., boss, peers, subordinates) in the information environment (p. 378)." Having a better understanding of how this information is being managed by feedback recipients can be valuable particularly when organizations have high expectations for behavior change from individuals participating in multi-source feedback programs. Multi-rater feedback only becomes useful after a feedback recipient receives the information and determines for himself or herself which areas of performance require improvement.

Information Processing and the Recall of Feedback

The cognitive model of information processing describes a sequence of events that an individual follows when encountering new information (Gallotti, 1994). An individual is believed to move through the following progressive steps when receiving information: attention, storage, recall, and action as seen in Figure 2.4. During the attention component of the sequence, a person may be presented with a vast amount of information only some of which will be attended to by the individual. The personal trait-based preferences or goals held by the individual may influence which pieces of information are deemed to be relevant and useful to the person. The storage component

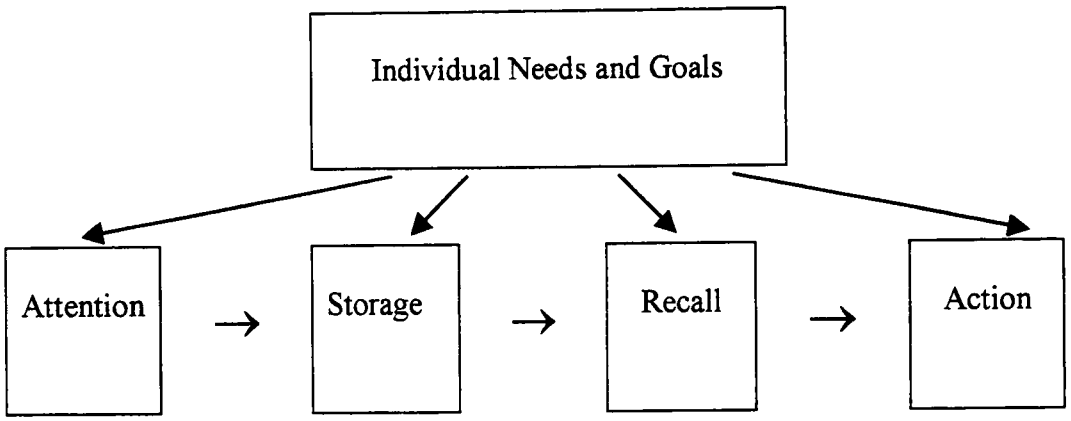


Figure 2.4

Cognitive Model of Information Processing

of the sequence describes a period of time when the individual holds specific pieces of information for future use. During the recall component of the sequence, a person is able to take the information kept in storage and apply it to a situation that currently seems relevant. The action component of the sequence occurs when an individual manifests the information into a behavior. In a multi-rater feedback situation, the described sequence should represent a slower, controlled information processing rather than automatic processing since the information received may be novel, surprising or even threatening to an individual.

The link between the ratings received from multi-rater feedback and the actions taken by an individual after participating in a multi-rater feedback program may be stronger if one can determine which pieces of information a person is attending to in the feedback report. Understanding what a person *recalls* receiving may be more important in predicting actions taken toward behavior change than the information actually presented on the report. Given the variety and complexity of information encountered in multi-rater feedback, one can not expect feedback recipients to absorb every piece of information received nor can we expect all feedback recipients to interpret the feedback in exactly the same way. Early work by Sherif and Cantril (1947) noted that people have the propensity to manipulate and adjust information in their memory in unique and self-serving ways. Therefore, the recall of information acts as a surrogate in understanding which pieces of information have been attended to and stored by an individual. The specific information chosen for further consideration by the individual is believed to be both a function of rational decision making as well the individual's personal preferences and motivations (Lepper, 1988).

Goal Orientation

Trait-based goal orientation as well as other goals deemed to be important by an individual may influence cognitive processes related to feedback-seeking behavior. A person's goal orientation is believed to drive the cost and value perceptions he or she holds regarding feedback seeking on a more global level which ultimately influences whether feedback-seeking behavior will occur at all. For example, some individuals look forward to the opportunity to receive feedback about their work performance whereas others feel threatened by such situations. Two distinct constructs of goal orientation were described by Dweck (1986) and Dweck and Leggett (1988) and construct validated by Button, Mathieu, & Zajac (1996). VandeWalle (1997) contributed to this body of research by introducing the theory of goal orientation more specifically to the work environment. With a learning goal orientation, a person is driven to develop personal competence by the learning of skills and the mastery of new situations; whereas, with a performance goal orientation a person is driven by the need to be perceived as competent through the favorable judgments of others. The quality of learning that takes place is irrelevant as long as others perceive you as capable and successful. An individual with a performance goal orientation may also avoid placing himself or herself in situations where negative judgments about one's competence may occur.

The fundamental difference between the constructs of learning goal orientation and performance goal orientation is described by Lepper (1988) in the following way. Learning goal orientation is based on the concept that involvement in an activity, such as participating in a professional development course for example, is a reward in itself due to feelings of personal mastery that may be experienced by participating in such an

activity; whereas, performance goal orientation is based on the concept that the activity is simply a means to obtaining another more desirable external reward. The external reward may be receiving recognition from others or some other desirable outcome. Therefore, the level of involvement in an activity will be strongly affected by an individual's goal orientation. A learning goal-oriented person finds satisfaction in the task itself so their involvement is greater than a performance-oriented person who puts in the minimum amount of effort required in an activity in order to obtain the maximum level of outcomes. For a performance goal-oriented individual, once the ulterior goal has been accomplished, engagement in the task can be terminated.

Research in the area of goal orientation has generated pervasive trends for a variety of dependent measures (Lepper, 1988). Persistence, risk taking, and selection of performance strategies have all been shown to be influenced by a person's goal orientation and its related constructs of internal and external motivation in the area of learning (Condry & Chambers, 1978; Dweck, 1975; Nolen, 1988; Salomon, 1983). More specifically, Condry and Chambers (1978) investigated the role intrinsic and extrinsic motivation played in a student's willingness to take risks and found that extrinsically-motivated (performance-oriented) students were less willing to take risks than their intrinsically-motivated (learning-oriented) counterparts. Furthermore, the researchers also found that the intrinsically-motivated students used a more logical approach in making decisions and gathering information than the extrinsically-motivated students. Similarly, Salomon (1983) argues that intrinsically-motivated students are more apt to invest greater mental effort in learning a new activity and are more likely to utilize a deeper level of mental processing. In addition, McGraw (1978) illustrates that

extrinsically-motivated individuals will only demonstrate superior performance compared to internally motivated individuals when the activity being undertaken is directly related to the attainment of a desirable goal. Those aspects of the activity that are only peripherally related to goal attainment will be performed at an inferior level relative to the performance of internally motivated individuals.

Other research by Archer (1994) using more direct measures of learning and performance goal orientation found a strong positive correlation between learning goal orientation and the willingness to choose a difficult assignment. The relationship was found to be non-significant for performance goal orientation. In addition, stronger positive correlations were found between learning goal orientation and the propensity to use learning strategies requiring deeper information processing, self-planning, and self-monitoring than was found for performance goal orientation. Archer's results are especially intriguing since similar results were found across three independent samples of students. Other research by Ames and Archer (1988) as well as by Meece, Blumenfeld, and Hoyle (1988) provided additional support for the prediction that learning-oriented individuals are apt to report using more active cognitive learning strategies and more planning than performance-oriented individuals when learning new material. Specifically, Ames and Archer (1988) found that junior high and high school students who perceived their classroom to be mastery oriented as opposed to performance oriented were more likely to respond that they used increased amounts of goal-setting and deeper levels of information processing when studying. Bouffard, Boisvert, Vezeau, and Larouche's (1995) study with college students confirmed the finding that learning goal orientation was related to increased usage of cognitive strategies such as studying class

notes, metacognitive strategies such as self-rehearsal of material being learned, and motivation to learn.

The Dimensionality of Goal Orientation

Goal orientation is believed to operate as primarily a trait-based preference that strongly influences how an individual will approach and interpret a given situation (Dweck & Leggett, 1988). As the concept of goal orientation has developed, however, there has been some question as to whether goal orientation represents a single or multidimensional construct. By working with young children, Dweck and Leggett (1988) identified a phenomenon where some children responded helplessly in a situation of failure and withdrew from an activity; whereas, other children viewed the situation as a challenge and reported enjoying figuring out how their performance could be improved. This scenario led early research to cast goal orientation as a unidimensional construct. However, more recently, researchers have operationalized goal orientation as two distinct constructs (Button et al., 1996; Farr, Hofmann, & Ringenbach, 1993). Furthermore, research by VandeWalle (1997), Archer (1994), and Nolen (1988) has demonstrated that goal orientation may even be a three dimensional construct. Because performance goal orientation has been defined as the desire to prove one's ability as well as avoid unfavorable judgments from others, VandeWalle (1997) divided performance goal orientation into two sub-constructs - a proving dimension and an avoiding dimension in a work context. Similarly, in an academic setting, Nolen (1988) and Archer (1994) distinguished between students who disliked academic tasks and avoided doing the work (avoiding goal orientation) and those students who treated exams as an opportunity to compete with other students and demonstrate their superior abilities to others (proving

goal orientation). VandeWalle's (1997) research has shown evidence for the discriminant validity of the proving and avoiding dimensions of performance goal orientation as well as learning goal orientation.

Goal Orientation and Monitoring the Multi-rater Feedback Report

Expanding on the ideas of Ashford and Cummings (1985), VandeWalle and Cummings (1997) tested whether goal orientation could influence the *inquiry* portion of feedback-seeking behavior in a classroom setting. As predicted, they found that possessing a learning goal orientation was positively related to feedback-seeking behavior and that possessing a performance goal orientation was negatively related to feedback-seeking behavior. Similarly, VandeWalle (1997) found a positive relationship between willingness to seek feedback and learning goal orientation, and a negative relationship between willingness to seek feedback and the avoiding dimension of performance goal orientation for an adult student sample. Furthermore, the relationship between the proving dimension of performance goal orientation and willingness to seek feedback was found to be non-significant. As explained by VandeWalle (1997), "...a learning goal orientation is associated with the belief that ability can be developed, so seeking feedback about how to do so should be of value. In contrast, the prove and avoid orientations are associated with skepticism about ability development, so feedback seeking should have less value." VandeWalle argues that feedback seeking may be perceived as more costly to an individual with an avoiding or proving performance goal orientation because an individual's weaknesses may be revealed. It is believed that such individuals may view feedback as a potential threat to their self-esteem.

Since evidence has been presented that goal orientation is primarily trait driven and can be considered an important characteristic in the inquiry component of the feedback seeking process, it would be logical to assume that goal orientation may also have an important influence on the *monitoring* component of feedback-seeking behavior. The primary difference between these concepts hinges on the question of what an individual does with information that has already been made easily available to them as in the case of receiving a multi-rater feedback report. One of the few studies that has investigated the link between goal orientation and the impact of performance feedback, although in a non-multi-rater feedback environment, found that the positive relationship between learning goal orientation and the motivation to learn continued to exist both before and after performance feedback was received (Colquitt & Simmering, 1998). In contrast, a negative relationship was found between performance goal orientation and the motivation to learn both before and after receiving performance feedback. Interestingly, the researchers were able to demonstrate that the underlying mechanisms for these relationships may be the expectancy held by learning-oriented individuals that putting forth effort will result in understanding the material to be learned. This same expectancy was not found for performance goal-oriented individuals. Lending additional support to these findings, Ames and Archer (1988) also found that students who perceived their classroom to emphasize mastery goals rather than performance goals reported possessing stronger beliefs that academic success is directly linked to one's own efforts.

As explored by Dweck and Leggett (1988), goal orientation is believed to impact a person's view about the controllability of personal attributes such as ability. Individuals with a learning goal orientation are likely to see ability as changeable through

one's own hard work and effort. However, individuals with a performance goal orientation are likely to see ability as a permanent characteristic that is fixed and unmalleable. In fact, an individual with a performance goal orientation may even equate the need to demonstrate extra effort as an admission of failure and low ability. In a laboratory study where goal orientation and perceived ability were manipulated, Elliott and Dweck (1988) found that subjects with learning goal orientations were more likely to persist on the task when faced with difficulty and were generally more interested in challenging tasks regardless of whether they perceived their own ability on the task to be high or low. In a more naturalistic setting, Miller, Behrens, Greene, and Newman (1993) studied the relationship between goal orientation and the use of self-monitoring, persistence, goal-setting, and strategy use of students in an introductory statistics course. The study found that the students with a dominant learning goal orientation and a high perceived level of ability were more likely to monitor their own performance than students with a dominant performance goal orientation and a high perceived level of ability. Also, as predicted, the study found positive correlations between learning goal orientation scores and persistence, goal setting, and the use of strategies. These same relationships were found to be non-significant for performance goal orientation. Since individuals with a learning goal orientation believe that their performance can be improved through their own effort, these individuals may be more likely to pay more attention to and absorb all of the information presented to them on a multi-rater feedback report. Furthermore, research by Hofmann (1993) found that performance on a complex task in a laboratory setting was poorer for individuals with a performance goal orientation due to increased levels of cognitive interference experienced by these individuals.

Individuals may approach the information received from multi-rater feedback differently depending on their dominant goal orientation. For example, one may expect an individual with a learning goal orientation to process the information that is contained in a multi-rater feedback report at a deeper level in order to acquire information about how to make necessary improvements in performance than an individual with a performance goal orientation. A study by Nolen (1988) found that eighth graders who possessed a goal of learning and understanding for its own sake were more likely to use study strategies requiring a deeper processing of information when reading passages; whereas, students with a goal of demonstrating high ability relative to others were more likely to use a surface-level processing of information. Given that goal orientation is believed to be a relatively stable component of one's personality, an adult population with a learning goal orientation may also process the information received on a feedback report at a deeper level (Nolen, 1988). Learning goal-oriented individuals may be more likely to embrace the feedback received from all feedback sources in contrast to an individual with a performance goal orientation who may be more prone to ignore or discount the information received since they may be more likely to find the information threatening to their self-esteem. For example, VandeWalle's (1997) nomological network demonstrated a negative relationship between learning goal orientation and fear of negative evaluation; whereas, a positive relationship between both the proving and avoiding dimensions of performance goal orientation and fear of negative evaluation was found. Simply possessing a fear of evaluation may hinder the depth of information processing exhibited by individuals with a proving or avoiding performance goal orientation.

Note that, as applicable, the following hypotheses have been divided into part a and part b in order to differentiate between feedback recipients who received feedback from their manager and peers only and those individuals who received feedback from their manager, peers, and direct reports. At the organization studied, not all employees had direct reports so they would not be able to receive feedback from this source. This differentiation was necessary due to the increased cognitive demand for recall placed on those individuals with more feedback giver categories.

Hypothesis 1a: For feedback recipients with manager and peer feedback, individuals with a high learning dominant goal orientation will be able to recall both positive and negative feedback received more accurately than individuals with a low learning dominant goal orientation.

Hypothesis 1b: For feedback recipients with manager, peer, and direct report feedback, individuals with a high learning dominant goal orientation will be able to recall both positive and negative feedback received more accurately than individuals with a low learning dominant goal orientation.

Focusing on the information feedback recipient's recall receiving will help ascertain to which feedback source or sources feedback recipient's are attending. As stated by Ashford and Cummings (1983), "...the presence of self- and/or goal-related schemas should affect which part of the environment is thoroughly attended to in soliciting feedback, the interpretation of that feedback, and the memory for various feedback messages" (p. 384). An individual with a proving performance goal orientation is described as being driven by a need to demonstrate one's competence by favorable judgments from others. Therefore, proving performance goal-oriented individuals may focus their attention on the feedback received from the one source that has the power to validate these needs in a significant way. By improving the performance deficiencies

identified by their immediate manager, a performance goal-oriented individual will be more likely to receive favorable judgments from this powerful individual in the future, which could clear the path toward promotions, pay increases, and other favorable recognition. In contrast, a learning goal-oriented individual may be more likely to attend to feedback received from all sources because these individuals value developing skills and mastering new situations. Working constructively with all work groups including managers, peers, and direct reports should be important for an individual with a learning goal orientation.

> *Hypothesis 2a: For feedback recipients with manager and peer feedback, individuals with a low learning dominant goal orientation will be able to recall feedback received from their manager more accurately than feedback received from their peers.*
>
> *Hypothesis 2b: For feedback recipients with manager, peer, and direct report feedback, individuals with a low learning dominant goal orientation will be able to recall feedback received from their manager more accurately than feedback received from their peers or direct reports.*
>
> *Hypothesis 3: Individuals with a low learning dominant goal orientation will report receiving the most valuable feedback from their manager rather than the feedback received from their peers or direct reports.*
>
> *Hypothesis 4: The dimensions chosen for behavior change for individuals with a low learning dominant goal orientation will be related to feedback received from their manager.*

Goals

As previously shown, Ashford and Cummings (1983, 1985) presented and tested a theoretical model of feedback-seeking behavior by individuals in an organizational setting. The authors hypothesized that feedback seeking is important to an individual within a work environment in order to accomplish both performance and nonperformance goals. In addition to the influence of superordinate, trait-based goal orientations

described above, individuals in organizations may also possess a variety of other goals to be accomplished within an organization. As stated by Ashford and Cummings (1983), "Goals such as career advancement, making friends, and being liked may be just as important to an individual as correcting errors in job performance. For any of the set of goals individuals hold, they will look to the information environment for cues and information that allow an assessment of how well they are achieving that goal (p. 378)." Given that the multi-rater feedback report represents an information environment containing feedback about work-related dimensions from a variety of sources, the personal goals held by the feedback recipient may also influence how an individual approaches the information presented in a multi-rater feedback report. As expressed by Brown (1988), the motivational aspects associated with learning should not be ignored.

Cohen and Ebbesen (1979) documented the occurrence that individuals with divergent goals will attend to different aspects of information being presented to them. Results of their study found that each of two specific types of goals (i.e., (a) making an assessment of an actor's personality or (b) learning the information described by an actor) directly influenced the type of information that was recalled by the subjects at a later time. Based on this research, it is logical to assume that some individuals may attend more to the feedback received from certain feedback sources than others due to the type of goals that can be met through the relationship with a particular feedback source.

As indicated by Cohen and Ebbesen (1979), the aspect of the feedback being focused on may be different for individuals with different goals. Typically, the manager has more power and access to external rewards than other feedback sources. For example, in many organizations the manager is responsible for conducting performance

appraisals, determining pay increases, and providing access to resources such as training through control of budgetary allocations. For these reasons, some individuals may pay special attention to feedback received from this source in order to increase one's chances for favorable outcomes in the organization in the future. This may be particularly true for an individual with a proving performance goal orientation because he or she values favorable judgments from others making pay raises, promotion, and professional recognition extremely attractive to this type of individual. Following from this line of research, an individual with a goal of receiving higher pay, promotion, or professional recognition may be more likely to attend to the feedback given by their manager in lieu of attending to feedback received from peers or direct reports. In the present study, the manager had significant control over rewards such as pay and promotion, therefore the following hypotheses were proposed.

Hypothesis 5a: For feedback recipients with manager and peer feedback, individuals with a greater need for pay and promotion will be able to accurately recall feedback received from their manager more than from their peers.

Hypothesis 5b: For feedback recipients with manager, peer, and direct report feedback, individuals with a greater need for pay and promotion will be able to accurately recall feedback received from their manager more than from their peers or direct reports.

Hypothesis 6a: For feedback recipients with manager and peer feedback, individuals with a greater need for professional recognition from their manager will be able to accurately recall feedback received from their manager more than from their peers.

Hypothesis 6b: For feedback recipients with manager, peer, and direct report feedback, individuals with a greater need for professional recognition from their manager will be able to accurately recall feedback received from their manager more than from their peers or direct reports.

Similarly, a person with a need for affiliation in the work environment may be more likely to attend to the feedback given by his or her peers than an individual who does not have a high need for affiliation. In the current study, the feedback recipient was asked to choose six to ten peers as feedback givers. The choice of which individuals to include were left to the discretion of the participant. Due to the control the feedback recipient had over which individuals to include in their peer category of feedback givers, one may assume that the individuals chosen were people that the participant probably liked, trusted, or respected. Therefore, the feedback recipient would most likely be interested in maintaining a good relationship with these individuals in the future. This may be particularly true for an individual with a greater need for affiliation in the work environment perhaps making them more sensitive to the information received from this feedback giver category. A person is likely to focus their attention on the source of feedback that will most efficiently help them meet their individual needs and goals.

Hypothesis 7a: For feedback recipients with manager and peer feedback, there will be a positive relationship between the need for affiliation in the work environment and the ability to accurately recall feedback received from their peers.

Hypothesis 7b: For feedback recipients with manager, peer, and direct report feedback, there will be a positive relationship between the need for affiliation in the work environment and the ability to accurately recall feedback received from their peers.

Covington (1984) has proposed that the accumulation of external rewards such as high grades or other outwardly recognizable signs of success are really an attempt for an individual to camouflage underlying feelings of failure or low self-worth. As a test of this theory, Seifert (1995) has demonstrated through the use of structural equation modeling that these types of emotions (i.e., a need for belongingness and feelings of

frustration and stupidity) are responsible for the formation of a person's goal orientation as opposed to the goal orientation influencing an individual's emotions. Lending additional support for this theory, research by Pintrich and Garcia (1991) found that extrinsic rewards associated with favorable recognition from others, such as receiving a high grade, were particularly valued by students with a performance goal orientation. Therefore, in an attempt to cover feelings of low self-worth, an individual with a performance goal orientation may be more likely to have a higher *need* for outward displays of accomplishment such as pay, promotions and professional recognition from others.

Hypothesis 8: There will be a positive relationship between proving goal orientation and need for pay and promotion.

Hypothesis 9: There will be a positive relationship between proving goal orientation and need for professional recognition from the manager.

Hypothesis 10: There will be a positive relationship between learning goal orientation and need for professional development.

In addition to the hypotheses presented above, six research questions were addressed by the current study. Due to the novelty of the research, these questions explored the relationship among the study variables particularly from the interview portion of the research. For the first time, participants were asked to describe which feedback sources provided the most useful information about their strengths and developmental needs. Also, individuals described their participation in developmental activities approximately two months after participating in the multi-source feedback program. The purpose of the research questions was to determine whether the goal orientation and work environment needs of the feedback recipient influenced which

feedback sources were believed to be more useful by the participant. Also, the relationships between learning goal orientation and active participation in developmental activities as well as need for professional development and active participation in developmental activities were explored.

Research Question 1: Which of the three goal orientation dimensions are related to the ability to accurately recall feedback received on the multi-rater feedback report?

Research Question 2: Which work environment needs are related to the ability to accurately recall feedback received on the multi-rater feedback report?

Research Question 3: Do individuals who choose the manager as the most useful source for feedback about their strengths have different work environment needs than individuals who choose peers or direct reports?

Research Question 4: Do individuals who choose the manager as the most useful source for feedback about their developmental needs have different work environment needs than individuals who choose peers or direct reports?

Research Question 5: Will there be a positive relationship between learning goal orientation and participation in developmental activities based on feedback received from the multi-rater feedback report?

Research Question 6: Will there be a positive relationship between need for professional development and participation in developmental activities based on feedback received from the multi-rater feedback report?

Summary

The purpose of the current study was to gain a better understanding of how individuals interpret the information received in a multi-rater feedback format. Specifically, it was hypothesized that the trait-based goal orientations as well as other goals valued by the feedback recipient would have an important influence on how this information was processed and recalled. Also, the type of dimensions chosen for behavior change by the feedback recipient were hypothesized to be related to the

feedback recipient's perception of the feedback source as a conduit toward goal accomplishment.

A framework for the interpretation of multi-rater feedback from the feedback recipient perspective is shown in Figure 2.5. A summary of study hypotheses are displayed in Figure 2.6. The following chapter describes the methodology used to test these hypotheses. Results, conclusions, and recommendations for future research will be discussed in the final chapters.

Information Environment	Goal Orientation	Personal Goals	Mechanisms for Achieving Goals	Recall of Dimensions	Dimensions Chosen for Behavior Change
Multi-rater Feedback Report	Performance (Proving and Avoiding) Goal Orientation	Pay	Manager		
		Promotion			
			Peer or Direct Report		
	Learning Goal Orientation	Recognition from the Manager			
		Professional Development			
		Affiliation in the Work Environment			

Figure 2.5

Framework for the Interpretation of Multi-rater Feedback from the Feedback Recipient Perspective

Hypothesis 1a:	For feedback recipients with manager and peer feedback, individuals with a high learning dominant goal orientation will be able to recall both positive and negative feedback received more accurately than individuals with a low learning dominant goal orientation.
Hypothesis 1b:	For feedback recipients with manager, peer, and direct report feedback, individuals with a high learning dominant goal orientation will be able to recall both positive and negative feedback received more accurately than individuals with a low learning dominant goal orientation.
Hypothesis 2a:	For feedback recipients with manager and peer feedback, individuals with a low learning dominant goal orientation will be able to recall feedback received from their manager more accurately than feedback received from their peers.
Hypothesis 2b:	For feedback recipients with manager, peer, and direct report feedback, individuals with a low learning dominant goal orientation will be able to recall feedback received from their manager more accurately than feedback received from their peers or direct reports.
Hypothesis 3:	Individuals with a low learning dominant goal orientation will report receiving the most valuable feedback from their manager rather than the feedback received from their peers or direct reports.
Hypothesis 4:	The dimensions chosen for behavior change for individuals with a low learning dominant goal orientation will be related to feedback received from their manager.
Hypothesis 5a:	For feedback recipients with manager and peer feedback, individuals with a greater need for pay and promotion will be able to accurately recall feedback received from their manager more than from their peers.
Hypothesis 5b:	For feedback recipients with manager, peer, and direct report feedback, individuals with a greater need for pay and promotion will be able to accurately recall feedback received from their manager more than from their peers or direct reports.
Hypothesis 6a:	For feedback recipients with manager and peer feedback, individuals with a greater need for professional recognition from their manager will be able to accurately recall feedback received from their manager more than from their peers.

Figure 2.6

Summary of Study Hypotheses and Research Questions

Hypothesis 6b:	For feedback recipients with manager, peer, and direct report feedback, individuals with a greater need for professional recognition from their manager will be able to accurately recall feedback received from their manager more than from their peers or direct reports.
Hypothesis 7a:	For feedback recipients with manager and peer feedback, there will be a positive relationship between the need for affiliation in the work environment and the ability to accurately recall feedback received from their peers.
Hypothesis 7b:	For feedback recipients with manager, peer, and direct report feedback, there will be a positive relationship between the need for affiliation in the work environment and the ability to accurately recall feedback received from their peers.
Hypothesis 8:	There will be a positive relationship between proving goal orientation and need for pay and promotion.
Hypothesis 9:	There will be a positive relationship between proving goal orientation and need for professional recognition from the manager.
Hypothesis 10:	There will be a positive relationship between learning goal orientation and need for professional development.
Research Question 1:	Which of the three goal orientation dimensions are related to the ability to accurately recall feedback received on the multi-rater feedback report?
Research Question 2:	Which work environment needs are related to the ability to accurately recall feedback received on the multi-rater feedback report?
Research Question 3:	Do individuals who choose the manager as the most useful source for feedback about their strengths have different work environment needs than individuals who choose peers or direct reports?
Research Question 4:	Do individuals who choose the manager as the most useful source for feedback about their developmental needs have different work environment needs than individuals who choose peers or direct reports?
Research Question 5:	Will there be a positive relationship between learning goal orientation and participation in developmental activities based on feedback received from the multi-rater feedback report?
Research Question 6:	Will there be a positive relationship between need for professional development and participation in developmental activities based on feedback received from the multi-rater feedback report?

Figure 2.6 (continued)

CHAPTER III

METHOD

Overview

Individuals participated in a multi-rater feedback system as part of a larger organizational change initiative at a large southeastern public utility. Attendance at the organizational change program was mandatory for all employees; however, participation in the multi-rater feedback system was voluntary. The first part of the organizational change program required employees to report off-site for three days of training. During this time, program facilitators explained the purpose of multi-rater feedback to the employees. They allowed employees who expressed interest in participating to select their own group of feedback givers. They were encouraged to select their manager, 6 to 10 peers, and all direct reports (if applicable) as potential feedback givers.

Questionnaires were sent directly to those selected as potential feedback givers via mail from an external vendor. The questionnaire asked each feedback giver to rate the employee (feedback recipient) on the following eleven dimensions: integrity, respect for the individual, teamwork, innovation and continuous improvement, honest communication, leadership, flexibility, judgment and decision making, interpersonal skills, giving feedback, and receiving feedback. The dimensions encompassed the values and other important work behaviors deemed to be important for all employees in the organization. Feedback givers were instructed to return their completed questionnaire in a pre-addressed, postage paid envelope directly to the external vendor for processing. After the questionnaires were returned for a particular feedback recipient, an individual

feedback report was compiled and sent directly to the employee (feedback recipient). Typically, employees received their individual feedback report eight weeks after starting the multi-rater feedback process.

The second part of the organizational change program required employees (feedback recipients) to return for a one day follow-up session approximately 10 weeks after the original three day training session. Those individuals who volunteered to participate in the multi-rater feedback program were instructed to bring their individual feedback reports to this follow-up training session. As part of the one day follow-up session, feedback recipients were instructed regarding the various parts of their multi-rater feedback report. During this time, feedback recipients were also encouraged to develop action plans based on the feedback that they received. However, as part of the confidentiality of the entire multi-rater feedback system, feedback recipients were assured that only they had received a copy of their individual feedback report.

Multi-rater Feedback Report

Each participant in the multi-rater feedback system received a personalized feedback report which was sent directly to them from the external vendor. Each feedback report contained 28 pages of information. The first section of the report displayed the list of individuals who the participant chose to be their feedback givers along with the feedback giver category to which that person belonged (i.e., manager, peer, or direct report). The next page of the report displayed the questionnaire response rate for each feedback giver category. The following section presented an overview of the 11 dimensions comprising the 360-Degree Feedback survey. This page showed each dimension with the mean ratings received from each feedback giver category. This

information was presented both in a bar chart form as well as numerically. The following page provided the participant with an overview of their three highest-rated dimensions and the three lowest rated dimensions from each feedback giver category. Next, the individual was allowed to see the ratings received on each of the three or four items used to represent a given dimension. This section of the individual feedback report also listed the three highest rated items and the three lowest rated items from each feedback giver category on a separate page. The final section of the report provided the individual with written comments received from each feedback giver category. A sample of an individual feedback report is enclosed in Appendix A.

Sample and Procedure

Study participants included 210 individuals who voluntarily participated in a multi-rater feedback program at a large southeastern public utility. The average age of these individuals was 46.68 years (SD = 6.32), and the average organizational tenure was 19.28 years (SD = 6.74). Participants were contacted by telephone and were asked if they would meet with the researcher for 20 to 30 minutes to discuss their perceptions of the multi-rater feedback program in the organization. A list of all individuals participating in the multi-rater feedback program was forwarded to the researcher by an external vendor contracted by the organization. Dates on the list indicated when each participant received the individual multi-rater feedback report.

First, the list of potential interviewees was screened for participants who received complete data from their manager and at least three peers. As part of the multi-rater feedback system, the vendor was instructed by the organization not to report feedback from a particular feedback giver category if less than three feedback givers responded in

that category. For example, if only two peers returned questionnaires for a given feedback recipient, the peer category would be left blank in the individual feedback report. These individuals were eliminated from further consideration in the study. Second, the list was screened by the researcher for the work location of the feedback recipient. Because the organization in the study encompassed several states, three locations were chosen by the researcher for interviews. The one-one-one interviews were conducted over a seven month time span across the three chosen locations. Each interviewee was contacted approximately two months, ($\underline{M}$ = 10.66 weeks, $\underline{SD}$ = 1.17) after receiving their individual feedback report. Of those individuals contacted directly by the researcher, 84.68 percent agreed to participate in the study. A common reason given for those individuals not able to participate in the study was related to scheduling conflicts due to out-of-office travel.

Interview

Each participant met the researcher in a private meeting room for the one-on-one interview. Each interviewee was assured that all responses given during the interview would remain confidential and that the information provided would only be reported in an aggregate form. The interview was divided into three major sections: recall of feedback, open-ended questions, and questionnaire. A sample participant interview packet is provided in Appendix B.

The first part of the interview required the participant to recall the feedback that they received from their individual multi-rater feedback report without being able to refer back to the report. Two grids were provided where each participant was given the following two instructions, "Based on the feedback you received from your 360-degree

feedback report, indicate with a check mark your three highest rated dimensions from each feedback source...," and "Based on the feedback you received from your 360-degree feedback report, indicate with a check mark your three lowest rated dimensions from each feedback source..." Therefore, each participant placed three check marks in each column of the grid indicating their three highest rated dimensions from a given source in the first grid followed by their three lowest rated dimensions from a given source in the second grid. All participants were instructed to do their best and were prompted to guess if necessary. Each grid is displayed in Figures 3.1 and 3.2, respectively.

The second part of the interview required the participant to answer a series of 12 open-ended questions related to the individual multi-rater feedback report that they received. The purpose of the questions was to ascertain what information was most meaningful and useful to the feedback recipient as well as document the types of activities in which the feedback recipient may have participated in order to improve their work performance two months after receiving their individual feedback report. The 12 open-ended questions are displayed in Figure 3.3.

The third part of the interview required the participant to fill out a two-page questionnaire. The first series of questions were items measuring learning, proving, and avoiding goal orientation as shown in Figure 3.4. The second series of questions were items measuring work environment needs such as need for more pay, promotion, professional development, recognition from the manager, and recognition from the co-workers as shown in Figure 3.5.

Based on the feedback you received from your 360-degree feedback report, indicate with a check mark your three highest rated dimensions from each feedback source...

	Manager	Peer	Direct Report
Integrity			
Respect for the Individual			
Teamwork			
Innovation & Continuous Improvement			
Honest Communication			
Leadership			
Flexibility			
Judgment and Decision Making			
Interpersonal Skills			
Giving Feedback			
Receiving Feedback			

Figure 3.1

Grid for the Recall of High-rated Dimensions of Multi-rater Feedback

Based on the feedback you received from your 360-degree feedback report, indicate with a check mark your three lowest rated dimensions from each feedback source...

	Manager	Peer	Direct Report
Integrity			
Respect for the Individual			
Teamwork			
Innovation & Continuous Improvement			
Honest Communication			
Leadership			
Flexibility			
Judgment and Decision Making			
Interpersonal Skills			
Giving Feedback			
Receiving Feedback			

Figure 3.2

Grid for the Recall of Low-rated Dimensions of Multi-rater Feedback

1. After participating in 360-degree feedback, which dimensions have you worked on improving the most. Why?.
2. Describe any type of activities in which you have participated in order to improve the dimensions indicated above. (The following examples were provided after the individual first had a chance to respond on their own: attending training, having a meeting with feedback givers such as your manager, peers, or direct reports (formal or informal), volunteering for developmental work assignments, reviewing materials such as books, magazines, audiotapes, videotapes, self-monitoring one's behaviors in the workplace.)
3. On a scale of 1 to 10 with 10 being the highest, indicate how much effort you have spent utilizing the information you received on your feedback report?
4. Describe any future plans or goals you have for utilizing the 360 feedback you received. Goals for the next month? Goals for the next 3-6 months?
5. Describe a few situations on the job, since participating in 360-degree feedback, where you utilized the information you received in order to improve your work performance.
6. Which feedback source provided you with the most useful information about your strengths in the workplace? Please explain.
7. Which feedback source provided you with the most useful information about your developmental needs (i.e., areas needed for improvement) in the workplace? Please explain.
8. Did you receive open-ended comments when you received your 360 feedback report?
9. Generally, name some topics for which you received open-ended comments.
10. Which feedback source provided you with the most useful open-ended comments?
11. What changes have you made as a result of the open-ended comments you received?
12. Of all of the information on your feedback report that you received about your performance,
a) What information did you find to be the most useful (ratings vs. comments and from which source)?
b) What information has had the greatest impact on any changes you have made or are planning to make on your job? Please explain.

Figure 3.3

Open-ended Interview Questions Related to Perceptions of the Multi-rater Feedback Report

Goal Orientation

Learning Goal Orientation

1. I often read materials related to my work to improve my ability.
2. I am willing to select a challenging work assignment that I can learn a lot from.
3. I often look for opportunities to develop new skills and knowledge.
4. I enjoy challenging and difficult tasks at work where I'll learn new skills.
5. For me, development of my work ability is important enough to take risks.
6. I prefer to work in situations that require a high level of ability and talent.

Proving (Performance) Goal Orientation

1. I would rather prove my ability on a task that I can do well at than to try a new task.
2. I'm concerned with showing that I can perform better than my co-workers.
3. I try to figure out what it takes to prove my ability to others at work.
4. I enjoy it when others at work are aware of how well I am doing.
5. I prefer to work on projects where I can prove my ability to others.

Avoiding (Performance) Goal Orientation

1. I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.
2. Avoiding a show of low ability is more important to me than learning a new skill.
3. I'm concerned about taking on a task at work if my performance would reveal that I had low ability.
4. I prefer to avoid situations at work where I might perform poorly.
5. When I don't understand something at work, I prefer to avoid asking what might appear to others to be "dumb questions" that I should know the answers to already.

Note: Items are rated on a five-point scale (1 = Strongly Disagree to 5 = Strongly Agree).
Source: VandeWalle, D. (1997).

Figure 3.4

Items Measuring Goal Orientation

Work Environment Needs

Need for Pay
1. Increase in my pay level
2. Good pay for my work
3. Frequent raises in pay

Need for Promotion
1. Chances for advancement in my job
2. Frequent promotions
3. Receiving promotions to a higher level job

Need for Professional Development
1. Achieving something that I personally value
2. Challenging work
3. Using my skills to the maximum
4. Extending my range of abilities
5. The opportunity to learn new things

Need for Recognition from Manager
1. Mutual trust with my manager
2. Respect from my manager
3. Openness and honesty between my manager and me
4. Being given recognition for my efforts from my manager when deserved
5. Consideration and understanding from my manager

Need for Recognition from Co-workers
1. Mutual trust with my co-workers
2. Respect from my co-workers
3. Openness and honesty between my co-workers and me
4. Being given recognition for my efforts from my co-workers when deserved
5. Consideration and understanding from my co-workers

Note: Items are rated on a five-point scale with the stem, "Indicate how much more of the following item you would like to have on your job?" (1 = no more, 2= slightly more, 3 = somewhat more, 4 = much more, 5 = very much more).
Source: Need for Pay (Alderfer, 1969); Need for Promotion (Wollack, Goodale, Wijting, & Smith, 1971); Need for Professional Development (Warr, Cook, & Wall, 1975), Need for Recognition from Manager (Alderfer, 1967); Need for Recognition from Co-workers (Alderfer, 1967).

Figure 3.5

Items Measuring Work Environment Needs

Measures

Recall of Multi-rater Feedback Dimensions. The number of feedback dimensions accurately recalled by each participant was measured in order to ascertain which parts of the multi-rater feedback report were attended to by the feedback recipient. All eleven dimensions used in the multi-rater feedback system (i.e., integrity, respect for the individual, teamwork, innovation and continuous improvement, honest communication, leadership, flexibility, judgment and decision making, interpersonal skills, giving feedback, and receiving feedback) were displayed in each of two grids. First, the participant was instructed to check the three highest rated dimensions received from each feedback giving source (i.e., manager, peer, and direct report), as applicable. After completing the first grid, the participant was instructed to check the three lowest rated dimensions received from each feedback giving source in the second grid, as applicable.

Next, the actual ratings that the participant received in their individual feedback report were obtained from the external vendor. The three highest and three lowest dimensions were compared to the three high and three low dimensions recalled by the participant per feedback giving source. With this information, accuracy of recall was tallied for the following six categories: **accurately recalled dimensions (Total)** represents the number of both high and low dimensions recalled across all feedback giving sources, **accurately recalled dimensions (High)** represents the number of high dimensions recalled across all feedback giving sources, **accurately recalled dimensions (Low)** represents the number of low dimensions recalled across all feedback giving sources, **accurately recalled dimensions (Manager)** represents the number of accurately recalled high and low dimensions from the manager, **accurately recalled dimensions**

(Peer) represents the number of accurately recalled high and low dimensions from peers, and **accurately recalled dimensions (Direct Reports)** represents the number of accurately recalled high and low dimensions from direct reports.

Percentage of Recalled Manager Dimensions. Because several hypotheses require the relative comparison of manager dimensions accurately recalled versus the number of dimensions accurately recalled from other feedback sources, the **percentage of recalled manager dimensions** was calculated in the following manner. For each participant, the number of 'accurately recalled dimensions (Manager)' was divided by 'accurately recalled dimensions (Total).' For those individuals with manager and peer feedback only, 'accurately recalled dimensions (Total)' represents the number of accurately recalled dimensions from the manager and peer feedback sources yielding a maximum possible 12 dimensions (i.e., three high and three low from the manager; three high and three low from peers). For those individuals with manager, peer, and direct report feedback, 'accurately recalled dimensions (Total)' represents the number of accurately recalled dimensions from the manager, peer, and direct report feedback sources yielding a maximum possible 18 dimensions (i.e., three high and three low from the manager; three high and three low from peers; three high and three low from direct reports).

Goal Orientation Scales. Goal orientation was measured by three distinct goal orientation dimensions developed and validated by VandeWalle (1997) specifically for the work domain. The three constructs include learning, proving, and avoiding goal orientation. **Learning goal orientation** assesses the degree to which a person is inclined to value opportunities for acquiring new skills in the work environment. Learning goal orientation was measured by a six item scale. Performance goal orientation was

measured by two distinct facets of this broader construct which include proving and avoiding goal orientation. More precisely, **proving goal orientation** consists of a five item scale that measures how important it is for an individual to be seen as a high performer by others on the job; whereas, **avoiding goal orientation** consists of a five item scale that measures the extent to which an individual would choose to avoid attempting a new task or activity in order not to appear incompetent to others. Each of the items for the learning, proving, and avoiding goal orientation scales were measured on a five-point Likert scale ranging from strongly disagree to strongly agree (see Figure 3.4). Higher scores indicate a greater level of agreement with the items in the scale.

Dominant Goal Orientation. In order to further explore the relationship among the learning, proving, and avoiding goal orientation constructs, a **dominant goal orientation** score was computed for each individual modeling the protocol described by VandeWalle and Cummings (1997) in their study assessing the relationship between goal orientation and the feedback-seeking process. Specifically, a difference score was computed by subtracting the response average of the proving and avoiding scales from the learning goal orientation scale. Because a five point Likert scale was used to measure the items for these scales, the possible range of scores for dominant goal orientation was negative four to positive four. Therefore, individuals scoring in the positive range would be considered as having a higher learning dominant goal orientation; whereas, individuals scoring in the negative range would be considered as having a higher performing (i.e., proving/avoiding) dominant goal orientation.

Work Environment Need Scales. Five scales were used to assess a person's need for pay, promotion, professional development, recognition from the manager, and

recognition from co-workers. Based on instructions validated and described by Alderfer (1969), each participant was asked to indicate how much more of a given work environment item (e.g., increases in pay level; respect from the manager) he or she would like to have on the job. The range of response options were as follows: 1 - no more, 2 - slightly more, 3 - somewhat more, 4 - much more, 5 - very much more. The scales used to measure the five work environment needs were derived from pre-existing scales from a variety of sources as follows: **need for pay**, adapted from Alderfer (1969), consists of a three item scale measuring a person's desire for higher wages, **need for promotion** consists of a three item scale modified from Wollack, Goodale, Wijting, and Smith (1971) measuring a person's need for advancement on the job, **need for professional development,** adapted from Warr, Cook, and Wall (1975), is a five item scale measuring a person's desire for extending one's current range of abilities on the job, **need for recognition from the manager** (Alderfer, 1967) is a slightly modified five item scale measuring a person's need for a positive working relationship with their manager, and **need for recognition from co-workers** (Alderfer, 1967) is a slightly modified five item scale measuring a person's need for a positive working relationship with co-workers (see Figure 3.5).

Source that Provided the Most Useful Information about Your Strengths. During the interview portion of the study, individuals were asked to identify which feedback source provided them with the most useful information about their strengths in the work environment. Possible responses were manager, peers, direct reports, a combination of these categories or no sources provided useful information about my strengths. For analysis purposes, responses were coded as 1 if an individual chose the manager

exclusively or 0 if an individual chose the another feedback source (i.e., peers or direct reports) without including the manager in their response.

Source that Provided the Most Useful Information about Your Developmental Needs. During the interview portion of the study, individuals were asked to identify which feedback source provided them with the most useful information about their developmental needs in the work environment. Possible responses were manager, peers, direct reports, a combination of these categories or no sources provided useful information about my strengths. For analysis purposes, responses were coded as 1 if an individual chose the manager exclusively or 0 if an individual chose the another feedback source (i.e., peers or direct reports) without including the manager in their response.

Dimensions Chosen for Behavior Change Based on Manager Feedback. During the interview portion of the study, participants were asked to describe which dimensions they have worked on improving the most since participating in multi-rater feedback. The interviewer documented all responses to the question for each participant. The responses were then typed into categories by a second party, and an overall summary sheet containing the responses from each participant was compiled. Next, two independent raters content analyzed the responses to the question and determined which of the 11 dimensions were being identified by each participant. A satisfactory level of interrater agreement for categorical data was found for the unconsensed evaluation of the responses (Kappa = .884, $p < .001$). Finally, any discrepancies between the raters were resolved through consensus resulting in a final list of dimensions for each participant.

The dimensions chosen for behavior change by each participant were then matched to the actual three lowest ratings received from the manager. Credit was given if

at least one dimension chosen for behavior change matched one of the three lowest rated dimensions from the manager.

Developmental Activities. During the interview portion of the study, participants were asked to describe any type of activities in which they have participated in order to improve the dimensions chosen for behavior change. This question followed the previous question where dimensions for behavior change were identified by the participant. Interviewees were allowed to respond freely before several examples of developmental activities were provided. One of the examples included, "monitoring my own behavior in the workplace." This response option was provided for those individuals who did not participate in any developmental activities but who may have felt uncomfortable admitting they had not utilized their multi-rater feedback to the interviewer. The interviewer documented all responses to the question for each participant. The responses were then typed into categories by a second party, and an overall summary sheet containing the responses from each participant was compiled. Next, two independent raters content analyzed the responses to the question and determined which developmental activities were being identified by each participant. Eight general response categories were utilized including: meeting with the manager, meeting with peers, meeting with direct reports, attending training, volunteering for a developmental work assignment, reviewing materials (i.e., books, audiotapes, videotapes), monitoring one's own behavior in the workplace, and no participation in developmental activities. A satisfactory level of interrater agreement for categorical data was found for the unconsensed evaluations (Kappa = .796, $p < .001$). Finally, any discrepancies between the raters were resolved through consensus resulting in a final list

of developmental activities for each participant. Credit was given if the participant engaged in a developmental activity beyond monitoring their own behavior in the workplace.

Analyses

Hypotheses 1a through 10 were tested using Pearson's product-moment correlation. In addition to the use of correlation, hypotheses 2a and 2b were also analyzed with a one-sample t-test, and hypothesis 3 was analyzed with a one-sample chi-square test. Research questions 1 and 2 were answered by multiple regression, and research questions 2 and 3 were addressed by one-way MANOVA. Finally, research questions 5 and 6 were analyzed through the use of correlation.

CHAPTER IV

RESULTS

Section I: Pilot Study

Because the scales were only recently developed (VandeWalle, 1997), a pilot study was conducted to further assess the reliability and correlations among the learning, proving, and avoiding scales of the goal orientation measures used for this research. The other scales were not pilot tested because they were well-established and only minor modifications were made to them.

Ninety-four individuals were surveyed from three independent undergraduate management courses at a large southeastern university. Correlations between the goal orientation measures appear in Table 4.1 with the reliability estimates appearing on the diagonal. Based on Nunnally's (1978) criteria of $\alpha > .70$, results indicated that only the proving goal orientation scale had a slightly lower than desired reliability ($\alpha = .69$). Furthermore, the correlations among the pilot-tested measures were patterned identically to the magnitude and direction of the correlations among the measures described by VandeWalle's (1997) original research. Specifically, the correlation between the learning and proving measures was found to be highly unrelated ($r = -.09$, $p > .05$). In addition, the proving and avoiding scales were moderately positively correlated in the .30 range ($r = .38$, $p < .01$). Also, as expected, the learning and avoiding scales were moderately negatively correlated in the .30 range ($r = -.35$, $p < .01$).

Table 4.1

Correlation of Learning, Proving, and Avoiding Pilot Study Measures

	Measure	1	2	3
1.	Learning Goal Orientation	(.74)		
2.	Proving Goal Orientation	-.09	(.69)	
3.	Avoiding Goal Orientation	-.35**	.38**	(.77)

Note: N = 94; Internal consistency reliabilities are shown on the diagonal in parentheses.
**p < .01

Section II: Statistical Analyses

The results of the data analyses are described in the following sections. In the first section, an evaluation of the measurement system is presented including internal consistency reliability estimates, exploratory factor analysis, and correlations of the study variables. The second section describes results from tests of the main hypotheses. Pearson product moment correlations, point biserial correlations, one sample t-tests, and one-way chi-square tests were conducted to assess the hypotheses. The third section provides the results of supplemental analyses in the form of multiple regression and multivariate analysis of variance in order to address the research questions.

Section III: Evaluation of the Measurement System

An evaluation of the measurement system was conducted in two phases. First, internal consistency reliability estimates were computed among the pre-established study measures for this sample. The results guided the decision process regarding the initial deletion of scale items to increase the reliability of the measures. Second, exploratory factor analyses were conducted to further refine the scales. Based on the conceptual differences between the measures and in order to maintain a reasonable number of items, two separate exploratory factor analyses were conducted, one for the goal orientation measures and the other for the work environment need measures.

Initial internal consistency reliability estimates for goal orientation scales. Initially, the internal consistency reliabilities (coefficient alpha) were computed for the learning, proving and avoiding goal orientation scales. The six items comprising the learning scale yielded an acceptable coefficient alpha of .70 based on Nunnally's (1978) criteria of $\alpha > .70$. The initial reliability estimate of the five item proving scale was .67.

One item (prove4) was deleted from this scale based on a low item-total correlation of .25 resulting in a revised reliability estimate of .70. Finally, the reliability estimate of the five item avoiding scale was computed with a coefficient alpha of .75.

Exploratory factor analysis for goal orientation scales. After computing the initial reliability estimates and deleting one item from the proving scale, the remaining 15 items comprising the learning, proving and avoiding scales were entered into an exploratory factor analysis. Principal components analysis with varimax rotation yielded an initial four component solution for these scales explaining 57.17 percent of the total variance (see Table 4.2). Upon further inspection of the component loadings, three items (learn1, learn6 and avoid5) were deleted due to high cross-loadings on other factors. The remaining 12 items were re-entered into the principal components analysis yielding a three component solution explaining 54.59 percent of the total variance each with eigenvalues greater than 1.0. Each of the items representing the learning, proving and avoiding goal orientation scales loaded satisfactorily on their respective components. As seen in Table 4.3, only learn4 had a cross loading greater than .30; however, the loading of .54 was sufficiently high to warrant its inclusion on the learning component. Internal consistency reliability estimates were recomputed for the learning and avoiding scales. The coefficient alphas for the learning and avoiding scales were .61 and .75, respectively.

Initial internal consistency reliability estimates for work environment need scales. As with the three goal orientation scales, the internal consistency reliabilities were also computed for the five work environment needs scales. All five scales demonstrated moderate to high coefficient alphas ranging from .84 to .95. Specifically, the three item need for pay scale had a coefficient alpha of .92, and the three item need for promotion

Table 4.2

Initial Rotated Component Loadings for Learning, Proving and Avoiding Goal Orientation

	Component			
	1	2	3	4
For me, development of my work ability is important enough to take risks. (learn1)	.415			-.455
I often look for opportunities to develop new skills and knowledge. (learn2)	.639			-.314
I often read materials related to my work to improve my ability. (learn3)	.726			
I prefer to work in situations that require a high level of ability and talent. (learn4)	.586		.315	
I am willing to select a challenging work assignment that I can learn a lot from. (learn5)	.667			
I enjoy challenging and difficult tasks at work where I'll learn new skills. (learn6)	.644	-.425		
I enjoy it when others at work are aware of how well I am doing. (prove1)			.748	
I prefer to work on projects where I can prove my ability to others. (prove2)			.806	
I try to figure out what it takes to prove my ability to others at work. (prove3)			.711	
I'm concerned with showing that I can perform better than my co-workers. (prove5)			.417	.644
Avoiding a show of low ability is more important to me than learning a new skill. (avoid1)		.426		.633
I prefer to avoid situations at work where I might perform poorly. (avoid2)		.789		
I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others. (avoid3)		.779		
I'm concerned about taking on a task at work if my performance would reveal that I had low ability. (avoid4)		.762		
When I don't understand something at work, I prefer to avoid asking what might appear to others to be "dumb questions" that I should know the answers to already. (avoid5)				.553
Eigenvalue	3.44	2.84	1.26	1.03
Percent of total variance	22.96	18.91	8.40	6.89

Note: Prove4 was removed from this analysis due to an unsatisfactory contribution to scale reliability. The solution yielded four principal components with eigenvalues > 1.00. Only loadings greater than .30 are reported.

Table 4.3

Final Rotated Component Loadings for Learning, Proving and Avoiding Goal Orientation

	Component		
	1	2	3
I often look for opportunities to develop new skills and knowledge. (learn2)			.732
I often read materials related to my work to improve my ability. (learn3)			.761
I prefer to work in situations that require a high level of ability and talent. (learn4)		.383	.541
I am willing to select a challenging work assignment that I can learn a lot from. (learn5)			.648
I enjoy it when others at work are aware of how well I am doing. (prove1)		.705	
I prefer to work on projects where I can prove my ability to others. (prove2)		.815	
I try to figure out what it takes to prove my ability to others at work. (prove3)		.736	
I'm concerned with showing that I can perform better than my co-workers. (prove5)		.559	
Avoiding a show of low ability is more important to me than learning a new skill. (avoid1)	.636		
I prefer to avoid situations at work where I might perform poorly. (avoid2)	.814		
I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others. (avoid3)	.755		
I'm concerned about taking on a task at work if my performance would reveal that I had low ability. (avoid4)	.751		
Eigenvalue	2.89	2.43	1.24
Percent of total variance	24.07	20.23	10.30

Note: Prove4 was removed from further analyses due to an unsatisfactory contribution to scale reliability. Learn1, learn6 and avoid5 were removed from this analysis due to cross loadings on other components in the previous analysis. The solution yielded three principal components with eigenvalues > 1.00. Only loadings greater than .30 are reported.

scale had a coefficient alpha of .91. Furthermore, the five item need for professional development scale exhibited a coefficient alpha of .84. The two five item need for recognition from manager and need for recognition from co-workers scales demonstrated satisfactory coefficient alphas of .95 and .88, respectively. Therefore, the initial internal consistency reliability estimates indicated that all 21 items comprising the work environment need scales could be retained for further analyses.

Exploratory factor analysis for the work environment need scales. The 21 items representing the five work environment need scales were entered into an exploratory factor analysis using principal components extraction and varimax rotation. The analysis resulted in a four component solution accounting for 72.97 percent of the total variance. The need for professional development, need for recognition from manager and need for recognition from co-workers items loaded on their respective components as expected with the vast majority of item loadings greater than .70 (see Table 4.4). The need for pay and need for promotion scales; however, loaded together on the same principal component with all item loadings greater than .70. Because respondents viewed the need for these items as conceptually similar, the six items representing need for pay and need for promotion were combined to form one scale titled 'need for pay and promotion.' A new internal consistency reliability estimate was computed for this new scale with a coefficient alpha of .93. Therefore, the original five work environment need scales are now represented by the following four scales: need for pay and promotion, need for professional development, need for recognition from manager and need for recognition from co-workers.

Table 4.4

Rotated Component Loadings for Need for Pay, Promotion, Recognition from Manager, Recognition from Co-workers and Professional Development

	Component			
	1	2	3	4
Increase in my pay level. (pay1)	.839			
Good pay for my work. (pay2)	.787			
Frequent raises in pay. (pay3)	.860			
Chances for advancement in my job. (prom1)	.700			.362
Frequent promotions. (prom2)	.848			
Receiving promotions to a higher level job. (prom3)	.854			
Mutual trust with my manager. (man1)		.844		
Respect from my manager. (man2)		.888		
Openness and honesty between my manager and me. (man3)		.874		
Being given recognition for my efforts from my manager when deserved. (man4)		.766	.313	
Consideration and understanding from my manager. (man5)		.855		
Being given recognition for my efforts from my co-workers when deserved. (cowork1)			.489	
Consideration and understanding from my co-workers. (cowork2)		.304	.711	
Mutual trust with my co-workers. (cowork3)			.833	
Openness and honesty with my co-workers. (cowork4)			.849	
Respect from my co-workers. (cowork5)			.797	
Achieving something that I personally value. (profdev1)				.495
Challenging work. (profdev2)				.789
Using my skills to the maximum. (profdev3)				.810
Extending my range of abilities. (profdev4)				.770
The opportunity to learn new things. (profdev5)	.398			.738
Eigenvalue	8.89	3.07	1.96	1.41
Percent of total variance	42.33	14.60	9.34	6.69

Note: The solution yielded four principal components with eigenvalues > 1.00. Only loadings greater than .30 are reported.

Section IV: Final Measurement System: Internal Consistency Reliability and Descriptive Statistics

A summary of the final measurement system is shown in Table 4.5. Based on the internal consistency reliabilities and exploratory factor analyses, satisfactory scales were derived to measure the hypothesized relationships among the constructs and dependent variables in the study. Means and standard deviations for all items, as well as their respective scales, are depicted in Table 4.6. The correlations between the measures are displayed in Table 4.7 for the entire sample. Additional correlation matrices are presented for individuals receiving feedback from managers and peers only (see Table 4.8), as well as for individuals receiving feedback from managers, peers and direct reports (see Table 4.9). Table 4.10 displays the means and standard deviations of accurately recalled dimensions for the following categories: accurately recalled dimensions (Total), accurately recalled dimensions (High), accurately recalled dimensions (Low), accurately recalled dimensions (Manager), accurately recalled dimensions (Peer), and, where applicable, accurately recalled dimensions (Direct Reports). Finally, Table 4.11 displays the number and corresponding percentage of individuals participating in each of the eight identified categories of developmental activities: meeting with the manager, meeting with peers, meeting with direct reports, attending training, volunteering for a developmental work assignment, reviewing materials (i.e., books, audiotapes, videotapes), monitoring one's own behavior in the workplace, and no participation in developmental activities. In addition, Table 4.12 displays the number of individuals who reported participating in multiple developmental activities (e.g., meeting with the manager as well as attending a training course).

Table 4.5

Summary of the Final Measurement System

Measure	Scale Modification	Coefficient Alpha
Learning Goal Orientation	2 items (learn1 and learn6) deleted based on EFA; final scale 4 items	.61
Proving Goal Orientation	1 item (prove4) deleted based on initial reliability estimate; final scale 4 items	.70
Avoiding Goal Orientation	1 item (avoid5) deleted based on EFA; final scale 4 items	.75
Need for Pay and Promotion	Combined Need for Pay (3 items) and Need for Promotion (3 items) scales to form the Need for Pay and Promotion (6 items) scale based on EFA	.93
Need for Professional Development	Original 5 item scale maintained	.84
Need for Recognition from Manager	Original 5 item scale maintained	.95
Need for Recognition from Co-workers	Original 5 item scale maintained	.88
Accurately Recalled Dimensions (Total)	Number of correctly identified high and low dimensions across all sources providing feedback	-
Accurately Recalled Dimensions (High)	Number of correctly identified high dimensions across all sources providing feedback	-
Accurately Recalled Dimensions (Low)	Number of correctly identified low dimensions across all sources providing feedback	-
Accurately Recalled Dimensions (Manager)	Number of correctly identified high and low dimensions from manager	-
Accurately Recalled Dimensions (Peer)	Number of correctly identified high and low dimensions from peers	-
Accurately Recalled Dimensions (Direct Reports)	Number of correctly identified high and low dimensions from direct reports	-

Table 4.5 (continued)

Summary of the Final Measurement System

Measure	Scale Modification	Coefficient Alpha
Source that Provided the Most Useful Information about Your Strengths	Categorical variable coded as: 1 - manager or 2 - other source (i.e., peers or direct reports)	-
Source that Provided the Most Useful Information about Your Developmental Needs	Categorical variable coded as: 1 - manager or 2 - other source (i.e., peers or direct reports)	-
Dimensions Chosen for Behavior Change based on Manager Feedback	Categorical variable coded as: 1 - manager's lowest rated dimensions chosen for behavior change or 0 - other dimensions chosen for behavior change	-
Developmental Activities	Categorical variable; 1 - developmental activity or 0 - no developmental activity	-

Table 4.6

Means and Standard Deviations of Scales and Items

Measure	Mean	SD
Learning Goal Orientation	**4.02**	**.48**
I often look for opportunities to develop new skills and knowledge.	4.07	.67
I often read materials related to my work to improve my ability.	3.90	.81
I prefer to work in situations that require a high level of ability and talent.	3.89	.74
I am willing to select a challenging work assignment that I can learn a lot from.	4.21	.59
Proving Goal Orientation	**3.24**	**.64**
I enjoy it when others at work are aware of how well I am doing.	3.94	.84
I prefer to work on projects where I can prove my ability to others.	3.61	.90
I try to figure out what it takes to prove my ability to others at work.	2.98	.93
I'm concerned with showing that I can perform better than my co-workers.	2.41	.88
Avoiding Goal Orientation	**2.39**	**.68**
Avoiding a show of low ability is more important to me than learning a new skill.	2.04	.88
I prefer to avoid situations at work where I might perform poorly.	2.73	.98
I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.	2.33	.85
I'm concerned about taking on a task at work if my performance would reveal that I had low ability.	2.47	.92

Note: N = 210; Scale anchors = "Please indicate the degree to which you agree with the following statements" 1 - Strongly Disagree, 2 - Disagree, 3 - Neither Agree nor Disagree, 4 - Agree, 5 - Strongly Agree.

Table 4.6 (continued)

Measure	Mean	SD
Need for Pay and Promotion	**3.04**	**1.04**
Increase in my pay level.	3.42	1.21
Good pay for my work.	3.06	1.16
Frequent raises in pay.	3.00	1.24
Chances for advancement in my job.	3.28	1.20
Frequent promotions.	2.77	1.23
Receiving promotions to a higher level job.	2.74	1.28
Need for Professional Development	**3.24**	**.80**
Achieving something that I personally value.	3.29	.94
Challenging work.	2.92	1.13
Using my skills to the maximum.	3.20	1.04
Extending my range of abilities.	3.31	.92
The opportunity to learn new things.	3.50	1.04
Need for Manager Recognition	**2.29**	**1.12**
Mutual trust with my manager.	2.45	1.32
Respect from my manager.	2.19	1.25
Openness and honesty between my manager and me.	2.22	1.25
Being given recognition for my efforts from my manager when deserved.	2.42	1.19
Consideration and understanding from my manager.	2.18	1.21
Need for Co-worker Recognition	**2.25**	**.87**
Being given recognition for my efforts from my co-workers when deserved.	2.40	1.09
Consideration and understanding from my co-workers.	2.23	1.04
Mutual trust with my co-workers.	2.33	1.11
Openness and honesty with my co-workers.	2.22	1.04
Respect from my co-workers.	2.04	1.00

Note: N = 210; Scale anchors = "Please indicate how much more of the following items you would like to have in your job" 1-No More, 2 - Slightly More, 3 - Somewhat More, 4 - Much More, 5 - Very Much More.

Table 4.7
Correlation of Scales for Entire Sample

	Measure	1	2	3	4	5	6	7	8	9	10	11
1.	Learning Goal Orientation	-										
2.	Proving Goal Orientation	.25**	-									
3.	Avoiding Goal Orientation	-.15*	.26**	-								
4.	Need for Professional Development	.23**	.18**	-.14*	-							
5.	Need for Co-worker Recognition	.11	.32**	.04	.52**	-						
6.	Need for Manager Recognition	.02	.28**	.13	.44**	.64**	-					
7.	Need for Pay and Promotion	.23**	.18**	.03	.47**	.43**	.36**	-				
8.	Dominant Goal Orientation	.65**	-.43**	-.72**	.14*	-.09	-.18**	.06	-			
9.	Source Useful for Strengths	.01	-.13	.02	-.08	.00	-.15	.14	.06	-		
10.	Source Useful for Developmental Needs	-.08	-.09	-.02	-.04	-.17*	-.18*	.04	-.01	.19*	-	
11.	Dimensions Chosen for Change Match Manager Feedback	.11	.04	-.02	-.04	.02	-.06	-.01	.06	-.03	-.16*	-
12.	Developmental Activities	.20**	.11	-.06	.16*	.04	.00	-.00	.11	-.06	-.02	.10

Note: N = 210; "Source Useful for Strengths" and "Source Useful for Developmental Needs" coded as 1 - manager and 0 - peers or direct reports; "Dimensions Chosen for Change Match Manager Feedback" coded as 1 - manager's lowest rated dimensions chosen for behavior change and 0 - other dimensions chosen for behavior change; "Developmental Activities" coded as 1 - developmental activities and 0 - no developmental activities
*p < .05; **p < .01

Table 4.8
Correlation of Study Variables for Participants Receiving Manager and Peer Feedback Only

	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Learning Goal Orientation	-																
2.	Proving Goal Orientation	.26**	-															
3.	Avoiding Goal Orientation	-.14	.25**	-														
4.	Need for Professional Development	.24**	.16*	-.20**	-													
5.	Need for Co-worker Recognition	.11	.33**	.05	.48**	-												
6.	Need for Manager Recognition	.01	.31**	.14	.40**	.63**	-											
7.	Need for Pay and Promotion	.24**	.19**	-.02	.44**	.44**	.33**	-										
8.	Dominant Goal Orientation	.64**	-.42**	-.71**	.19*	-.11	-.21**	.08	-									
9.	Accurately Recalled Dimensions (Total)	-.18*	-.05	.15	-.24**	-.11	-.19*	-.15	-.18*	-								
10.	Accurately Recalled Dimensions (High)	-.19*	-.05	.18*	-.25**	-.19*	-.17*	-.19*	-.19**	.80**	-							
11.	Accurately Recalled Dimensions (Low)	-.11	-.03	.07	-.14	.00	-.14	-.05	-.09	.83**	.32**	-						
12.	Accurately Recalled Dimensions (Manager)	-.17*	-.05	.13	-.19*	-.07	-.14	-.12	-.16*	.81**	.65**	.66**	-					
13.	Accurately Recalled Dimensions (Peer)	-.12	-.04	.10	-.19*	-.10	-.16*	-.11	-.11	.77**	.61**	.65**	.25**	-				
14.	Percentage of Recalled Manager Dimensions	-.00	.03	.03	-.00	.06	.05	.04	-.03	.02	.02	.01	.54**	-.54**	-			
15.	Source Useful for Strengths	-.01	-.12	.02	-.11	.01	-.18*	.05	.05	-.07	-.09	-.02	-.04	-.07	.07	-		
16.	Source Useful for Developmental Needs	-.13	-.16	-.05	.00	-.14	-.15	.03	.01	-.07	-.00	-.10	-.06	-.05	-.03	.20*	-	
17.	Dimensions Chosen for Change Match Manager Feedback	.08	.05	-.04	-.07	.01	-.09	-.03	.05	.17*	.13	.15*	.13	.14	.03	-.05	-.20*	-
18.	Developmental Activities	.18*	.11	-.04	.15	-.00	-.03	.01	.09	-.05	-.09	.00	-.05	-.03	-.05	-.03	.01	.12

Note: N = 178; Variables 9 - 11 are based on values received from two feedback sources (i.e., Manager, Peer)
"Source Useful for Strengths" and "Source Useful for Developmental Needs" coded as 1 - manager and 0 - peers or direct reports; "Dimensions Chosen for Change Match Manager Feedback" coded as 1 - manager's lowest rated dimensions chosen for behavior change and 0 - other dimensions chosen for behavior change; "Developmental Activities" coded as 1 - developmental activities and 0 - no developmental activities
*p < .05; **p < .01

Table 4.9
Correlation of Study Variables for Participants Receiving Manager, Peer and Direct Report Feedback

	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Learning Goal Orientation	-																	
2.	Proving Goal Orientation	.19	-																
3.	Avoiding Goal Orientation	-.22	.30	-															
4.	Need for Professional Development	.18	.34	.16	-														
5.	Need for Co-worker Recognition	.10	.26	.09	.81**	-													
6.	Need for Manager Recognition	.08	.11	.05	.68**	.71**	-												
7.	Need for Pay and Promotion	.29	.06	.27	.59**	.52**	.60**	-											
8.	Dominant Goal Orientation	.68**	-.44*	-.75**	-.11	-.09	-.01	.04	-										
9.	Accurately Recalled Dimensions (Total)	.17	.03	-.18	.15	.09	.15	-.01	.19	-									
10.	Accurately Recalled Dimensions (High)	.09	-.18	-.20	.20	.15	.28	.19	.24	.61**	-								
11.	Accurately Recalled Dimensions (Low)	.13	.19	-.05	.01	-.02	-.06	-.17	.03	.73**	-.10	-							
12.	Accurately Recalled Dimensions (Manager)	.23	-.06	-.34	-.06	-.12	-.13	-.09	.34	.32	.17	.26	-						
13.	Accurately Recalled Dimensions (Peer)	-.00	-.09	.02	-.07	-.06	-.03	-.07	.03	.70**	.35*	.58**	-.14	-					
14.	Accurately Recalled Dimensions (Direct Reports)	.07	.20	-.02	.37*	.32	.40*	.14	-.03	.63**	.49**	.37*	-.23	.24	-				
15.	Percentage of Recalled Manager Dimensions	.07	-.08	-.18	-.20	-.25	-.28	-.13	.17	-.40*	-.27	-.28	.72**	-.62**	-.68**	-			
16.	Source Useful for Strengths	.21	-.34	-.11	.04	.02	.06	.52**	.32	.02	.29	-.27	.07	.04	-.08	.02	-		
17.	Source Useful for Developmental Needs	.27	.16	-.01	-.25	-.24	-.35*	-.04	.12	-.12	-.08	-.08	-.05	.10	-.25	.06	-.17	-	
18.	Dimensions Chosen for Change Match Manager Feedback	.23	.03	.20	.20	.06	.18	.20	.04	.07	.13	-.02	.10	.09	-.07	.03	.26	.13	-
19.	Developmental Activities	.33	.22	-.09	.32	.24	.22	.03	.17	.50**	.24	.42*	.17	.28	.38*	-.16	-.15	-.02	-.10

Note: N = 32; Variables 9 - 11 are based on values received from three feedback sources (i.e., Manager, Peer, Direct Report)
"Source Useful for Strengths" and "Source Useful for Developmental Needs" coded as 1 - manager and 0 - peers or direct reports; "Dimensions Chosen for Change Match Manager Feedback" coded as 1 - manager's lowest rated dimensions chosen for behavior change and 0 - other dimensions chosen for behavior change; "Developmental Activities" coded as 1 - developmental activities and 0 - no developmental activities
*p < .05; **p < .01

Table 4.10

Number of Accurately Recalled Dimensions

	N	Mean	Standard Deviation	Range	Maximum Number of Dimensions to be Recalled
Accurately Recalled Dimensions (Total)	178	7.02	2.08	1 - 11	12
	32	9.97	1.96	7 - 14	18
Accurately Recalled Dimensions (High)	178	3.46	1.24	0 - 6	6
	32	4.75	1.34	2 - 7	9
Accurately Recalled Dimensions (Low)	178	3.57	1.32	0 - 6	6
	32	5.22	1.56	3 - 9	9
Accurately Recalled Dimensions (Manager)	178	3.90	1.36	0 - 6	6
	32	4.06	1.08	2 - 6	6
Accurately Recalled Dimensions (Peer)	178	3.12	1.28	0 - 6	6
	32	2.78	1.24	0 - 5	6
Accurately Recalled Dimensions (Direct Reports)	32	3.13	1.18	0 - 5	6

Note: N = 178 represents individuals receiving feedback from manager and peers; N = 32 represents individuals receiving feedback from manager, peers, and direct reports.

Table 4.11

Number of Individuals Participating in Developmental Activities Based on Information Received in the Multi-Rater Feedback Report

Developmental Activity	Number of Individuals Participating	Percentage of Individuals Participating
Meeting with the manager	50	23.81
Meeting with peers	58	27.62
Meeting with direct reports*	17	53.12
Attending training	22	10.48
Volunteering for a developmental work assignment	27	12.86
Reviewing materials (i.e., books, audiotapes, videotapes)	23	10.95
Monitoring one's own behavior in the workplace	63	30.00
No participation in developmental activities	10	4.76

Note: N = 210; "Monitoring one's own behavior in the workplace" represents individuals who responded they were generally more aware of their strengths and developmental needs but were not participating in any other developmental activities. Overlap in participation of more than one developmental activity may occur.

*N = 32 for "Meeting with direct reports" due to the limited number of individuals with direct reports.

Table 4.12

Number of Individuals Participating in Multiple Developmental Activities Based on Information Received in the Multi-rater Feedback Report

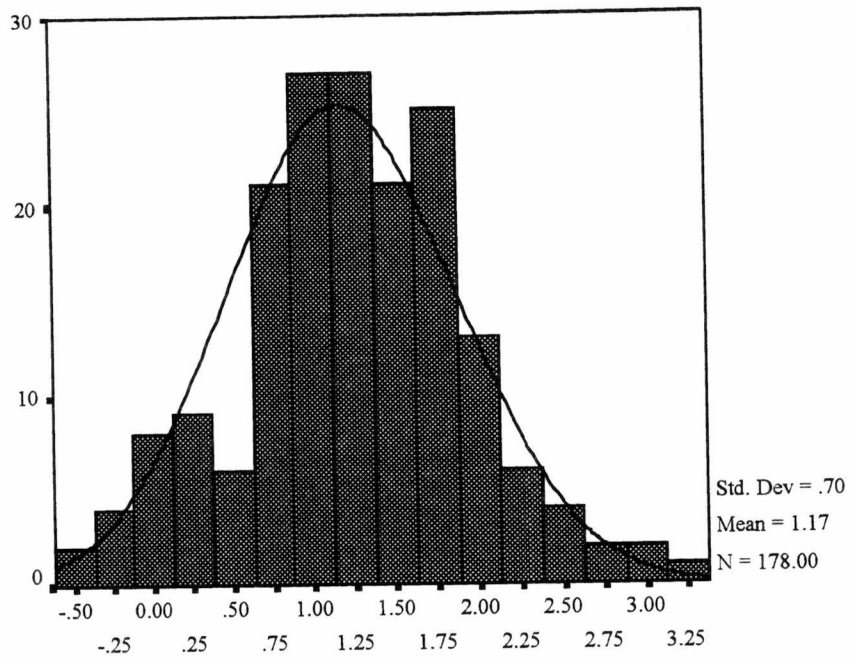
Number of Developmental Activities	Number of Individuals Participating	Percentage of Individuals Participating
0	73	34.76
1	90	42.86
2	36	17.14
3	9	4.29
4	2	.95

N = 210

The distribution of scores as well as the means and standard deviations for dominant goal orientation are depicted in Figure 4.1 for the sample of participants receiving manager and peer feedback only and in Figure 4.2 for the sample of participants receiving manager, peer, and direct report feedback. Although generally normally distributed, the majority of individuals in both samples received positive dominant goal orientation scores indicating that most individuals tended to be more learning dominant than performing dominant. This outcome is similar to the findings of VandeWalle and Cummings (1997) in their study of goal orientation and the feedback seeking process. VandeWalle and Cummings' (1997) subjects were primarily adult students with an average age of 32.2 years enrolled in an evening course at an urban community college. Their mean dominant goal orientation score was also positive with a mean of 1.68 and standard deviation of 1.14 based on a 6-point scale. Also, as displayed in Table 4.13, the correlations between dominant goal orientation and the learning, proving, and avoiding scales found by VandeWalle and Cummings (1997) mirrored the trend of correlations found in the present study. These similarities found between the VandeWalle and Cummings (1997) study and the current study may not be surprising when considering the populations being sampled. Both studies consisted of subjects that were adults who voluntarily chose to participate in activities related to their personal development. This might explain the tendency for having a greater number of learning dominant individuals in each study.

Section V: Hypothesis Tests

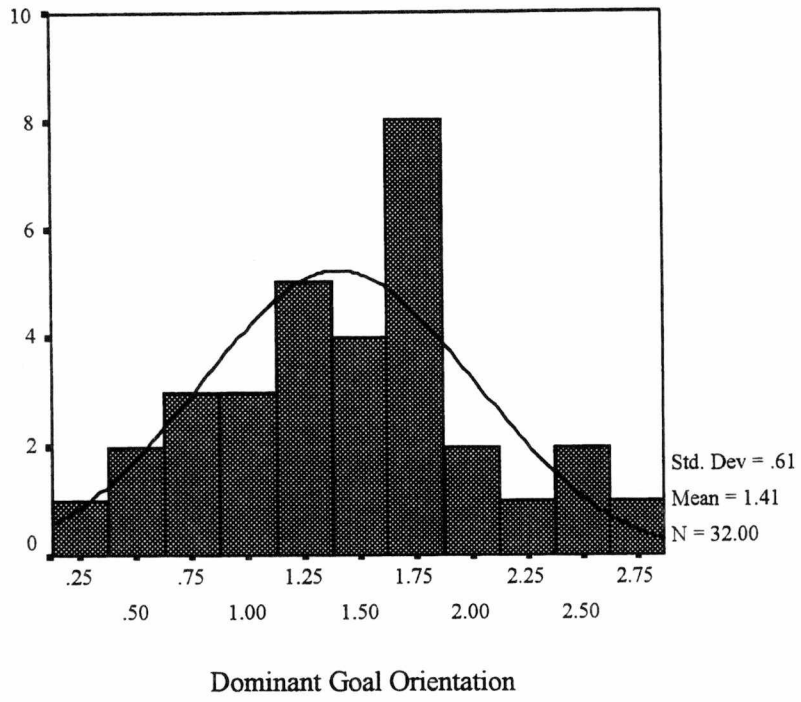
Hypothesis 1a proposed that individuals with a high learning dominant goal orientation would be able to recall both their positive and negative feedback more



Distribution of Dominant Goal Orientation Scores for Individuals Receiving Feedback from the Manager and Peers Only

(Values can range from - 4.00 to 4.00)

Figure 4.1



Distribution of Dominant Goal Orientation Scores for Individuals Receiving Feedback from the Manager, Peers, and Direct Reports

(Values can range from - 4.00 to 4.00)

Figure 4.2

Table 4.13

Comparison of Descriptive Statistics and Correlations for the Current Study and Research by VandeWalle and Cummings

	Variable	Mean V & C	Mean Current Study	SD V & C	SD Current Study	1 V & C	1 Current Study	2 V & C	2 Current Study	3 V & C	3 Current Study
1.	Learning Goal Orientation	2.65	4.02	2.65[?]	.48	-	-				
2.	Proving Goal Orientation	4.52	3.24	.83	.64	-.14	.25*	-	-		
3.	Avoiding Goal Orientation	4.14	2.39	.96	.68	-.35*	-.15*	.37*	.26*	-	-
4.	Dominant Goal Orientation	1.68	1.20	1.14	.69	.80*	.65*	-.52*	-.43*	-.76*	-.72*

Note: The correlation matrix is based on results depicted by VandeWalle and Cummings (1997) based on a 6-point scale ($N = 44$). The numbers in the present study are based on a 5-point scale for the entire sample ($N = 210$).

[?]May be a typographical error on the part of VandeWalle and Cummings (1997).

*$p < .05$

accurately than individuals with a low learning dominant goal orientation. Hypothesis 1a was not supported. In fact, contrary to prediction, individuals with a low learning dominant goal orientation were more likely to accurately recall their positive feedback than high learning dominant individuals ($r = -.194$, $p < .01$) for the sample of individuals receiving feedback from their manager and peers only. However, this contrary finding was not found to be significant when recalling negative feedback received ($r = -.094$, $p > .05$) for this sample.

Hypothesis 1b also investigated the relationship between dominant goal orientation and accuracy of recall of positive and negative feedback this time for the sample of individuals receiving feedback from their manager, peers, and direct reports. The relationship was found to be non-significant for both dominant goal orientation and the recall of positive feedback ($r = .236$, $p > .05$) as well as dominant goal orientation and the recall of negative feedback ($r = .031$, $p > .05$).

Hypothesis 2a examined whether individuals with a low learning dominant goal orientation would be able to recall feedback received from their manager more accurately than feedback received from their peers. In order to test this hypothesis, the percentage of recalled manager feedback was computed for each participant. A value of 50 percent would be expected if individuals could recall both manager and peer feedback equally. Percentages greater than 50 percent would indicate a greater knowledge of manager feedback and percentages less than 50 percent would indicate a greater knowledge of peer feedback. A negative correlation would be expected if individuals with a low learning dominant goal orientation could recall a greater percentage of manager feedback. Hypothesis 2a was not found to be significant ($r = -.029$, $p > .05$). However, a one-

sample t-test using a test value of .50 revealed that all individuals, regardless of dominant goal orientation, could recall a significantly greater amount of feedback received from their manager than from their peers ($t = 4.866$ (177), $p < .001$).

Hypothesis 2b also examined whether individuals with a low learning dominant goal orientation would be able to recall feedback received from their manager more accurately than feedback received from their peers or direct reports. In order to test this hypothesis, the percentage of recalled manager feedback was computed for each participant. A value of 33.3 percent would be expected if individuals could recall feedback received from the manager, peers, and direct reports equally. Percentages greater than 33.3 percent would indicate a greater knowledge of manager feedback and percentages less than 33.3 percent would indicate a greater knowledge of peer or direct report feedback. A negative correlation would be expected if individuals with a low learning dominant goal orientation could recall a greater percentage of manager feedback. Hypothesis 2b was also not found to be significant ($r = .170$, $p > .05$). However, a one-sample t-test using a test value of .333 revealed that all individuals, regardless of dominant goal orientation, could recall a significantly greater amount of feedback received from their manager than from their peers or direct reports ($t = 3.796$ (31), $p < .001$).

Hypothesis 3 proposed that individuals with a low learning dominant goal orientation will report receiving the most valuable feedback from their manager. In order to test this hypothesis, responses from the interviews were coded into two categories (i.e., manager or other feedback source) for the question, "Which feedback source provided you with the most useful information about your strengths?" A point-biserial correlation

between dominant goal orientation and the categorical variable was calculated. Hypothesis 3 was not supported ($r = .063$, $p > .05$). Individuals with a low learning dominant goal orientation did not report receiving significantly more useful information about their strengths from their manager. In order to explore this hypothesis further, responses from the interview were also coded into two categories (i.e., manager or other feedback source) for the question, "Which feedback source provided you with the most useful information about your developmental needs?" Again, a point-biserial correlation between dominant goal orientation and the categorical variable was calculated. Hypothesis 3 was again not supported ($r = -.008$, $p > .05$). Individuals with a low learning dominant goal orientation did not report receiving significantly more useful information about their developmental needs from their manager. Although hypothesis 3 was not supported, a one-sample chi-square test found that, in general, significantly more individuals reported receiving more useful information about their strengths from peers ($\chi^2 = 11.256$ (1), $p < .001$). However, when asked which source provided them with the most useful information about their developmental needs, significantly more individuals chose their manager ($\chi^2 = 8.889$ (1), $p < .01$).

Hypothesis 4 investigated whether the dimensions chosen for behavior change for individuals with a low learning dominant goal orientation will be related to feedback received from their manager. In order to test this hypothesis, responses from the interviews were coded into two categories (i.e., manager's lowest rated dimensions chosen for behavior change or other dimensions chosen for behavior change) for the question, "Which dimensions have you worked on improving the most since participating in multi-rater feedback?" A point-biserial correlation between dominant goal orientation

and the categorical variable was calculated. Hypothesis 4 was not supported (r = -.008, p > .05). Individuals with a low learning dominant goal orientation were not more likely than individuals with a high learning dominant goal orientation to choose the manager's lowest rated dimensions as areas for targeted developmental behavior change.

Hypothesis 5a examined whether individuals with a greater need for pay and promotion would be able to more accurately recall feedback received from their manager than from their peers. For the sample of individuals receiving feedback from their manager and peers only, this hypothesis was not found to be significant (r = .036, p > .05). Thus, hypothesis 5a was not supported.

Hypothesis 5b also examined whether individuals with a greater need for pay and promotion would be able to more accurately recall feedback received from their manager than from their peers. For the sample of individuals receiving feedback from their manager, peers, and direct reports, this hypothesis was also not found to be significant (r = -.130, p > .05). Thus, hypothesis 5b was not supported.

Hypothesis 6a proposed that individuals with a greater need for recognition from the manager would be able to accurately recall feedback received from their manager more than their peers. To test this hypothesis, the need for recognition from the manager variable was correlated with the percentage of accurately recalled dimensions from the manager. For the sample of individuals receiving feedback from their manager and peers only, this hypothesis was not found to be significant (r = .053, p > .05). Thus, hypothesis 6a was not supported.

Hypothesis 6b also proposed that individuals with a greater need for recognition from the manager would be able to accurately recall feedback received from their

manager more than their peers or direct reports. To test this hypothesis, the need for recognition from the manager variable was correlated with the percentage of accurately recalled dimensions from the manager. For the sample of individuals receiving feedback from their manager, peers, and direct reports, this hypothesis was also not found to be significant ($r = -.283$, $p > .05$). Thus, hypothesis 6b was not supported.

Hypothesis 7a investigated the relationship between need for affiliation in the work environment and the ability to accurately recall feedback received from peers. In order to test this relationship, the need for recognition from co-workers variable was correlated with the number of accurately recalled dimensions (Peer). This relationship was not found to be significant ($r = -.102$, $p > .05$) for the sample of individuals receiving feedback from the manager and peers only. Thus, hypothesis 7a was not supported.

Hypothesis 7b investigated the relationship between need for affiliation in the work environment and the ability to accurately recall feedback received from peers. In order to test this relationship, the need for recognition from co-workers variable was again correlated with the number of accurately recalled dimensions (Peer). This relationship was also not found to be significant ($r = -.064$, $p > .05$) for the sample of individuals receiving feedback from the manager, peers, and direct reports. Thus, hypothesis 7b was not supported.

Hypothesis 8 stated that there would be a positive relationship between proving goal orientation and the need for pay and promotion. Hypothesis 8 was supported. Individuals scoring higher on the proving goal orientation scale also reported a greater need for pay and promotion ($r = .181$, $p < .01$).

Hypothesis 9 proposed that there would be a positive relationship between proving goal orientation and need for professional recognition from the manager. Hypothesis 9 was supported. Individuals scoring higher on the proving goal orientation scale also reported a greater need for professional recognition from the manager ($r = .284$, $p < .001$).

Finally, Hypothesis 10 predicted a positive relationship between learning goal orientation and need for professional development. As expected, individuals indicating a higher learning goal orientation also reported a greater need for professional development ($r = .227$, $p < .001$). Thus, hypothesis 10 was supported.

Section VI: Supplemental Analyses

In addition to the above hypotheses, supplemental analyses were conducted to further explore the factors related to the interpretation of a multi-rater feedback report by the following research questions:

> *Research Question 1: Which of the three goal orientation dimensions are related to the ability to accurately recall feedback received on the multi-rater feedback report?*

An analysis was conducted to determine which of the three goal orientation dimensions (i.e., learning, proving, and avoiding) may be related to the ability to accurately recall feedback received on the multi-rater feedback report. This research question was answered by use of multiple regression with the three goal orientation dimensions as independent variables and the number of accurately recalled dimensions (Total) as the dependent variable. Individuals receiving feedback from the manager and peers only were used for this analysis due to the larger sample size ($n = 178$). As shown in Table 4.14, of the three goal orientation dimensions, only learning goal orientation

Table 4.14

Multiple Regression Analysis with Number of Accurately Recalled Dimensions (Total) as Dependent Variable and Goal Orientation Dimensions as Independent Variables

R-square = .050, F = 3.074* (df = 3, 174)

Independent Variables	Beta	T-Value
Learning Goal Orientation	-.152	-1.947*
Proving Goal Orientation	-.048	-.594
Avoiding Goal Orientation	.137	1.751

* $p < .05$

contributed significantly to the prediction of accurately recalled dimensions (Total), (β = - .152, $p < .05$). Surprisingly, a negative relationship between learning goal orientation and the number of accurately recalled dimensions (Total) was found. This indicated that individuals with a greater learning orientation were less likely to accurately recall the feedback they received from their manager and peers.

Research Question 2: Which work environment needs are related to the ability to accurately recall feedback received on the multi-rater feedback report?

An analysis was conducted to determine which of the four work environment needs (i.e., need for professional development, need for co-worker recognition, need for manager recognition, and need for pay and promotion) may be related to the ability to accurately recall feedback received on the multi-rater feedback report. This research question was answered by use of multiple regression with the four work environment needs as independent variables and the number of accurately recalled dimensions (Total) as the dependent variable. Individuals receiving feedback from the manager and peers only were used for this analysis due to the larger sample size (n = 178). As shown in Table 4.15, of the four work environment needs, only the need for professional development contributed significantly to the prediction of accurately recalled dimensions (Total), (β = - .206, $p < .05$). Again, surprisingly, a negative relationship between the need for professional development and the number of accurately recalled dimensions (Total) was found. This indicated that individuals with a higher need for professional development were less likely to accurately recall feedback received from their manager and peers.

Table 4.15

Multiple Regression Analysis with Number of Accurately Recalled Dimensions (Total) as Dependent Variable and Work Environment Needs as Independent Variables

R-square = .074, F = 3.466** (df = 4, 173)

Independent Variables	Beta	T-Value
Need for professional development	-.206	-2.345*
Need for co-worker recognition	.109	1.071
Need for manager recognition	-.159	-1.676
Need for pay and promotion	-.049	-.574

* $p < .05$
** $p < .01$

Research Question 3: Do individuals who choose the manager as the most useful source for feedback about their strengths have different work environment needs than individuals who choose peers or direct reports?

In order to address this research question, a one-way MANOVA was conducted with the four work environment needs as dependent measures and the feedback giver category chosen as most useful for providing feedback about strengths as the independent variable. An omnibus test was found to be significant ($F = 3.53$, $p < .01$), therefore additional univariate tests were conducted to assess which dependent measures were affected as shown in Table 4.16. Because adjustments were made to take into account the problem of inflated Type 1 error, the univariate tests did not reach significance. Therefore, no statistically significant differences were found between feedback giver category chosen as most useful for feedback about strengths and need for professional development ($F = 1.07$, ns), need for recognition from co-workers ($F < 1.00$, ns), need for recognition from the manager ($F = 3.77$, ns), and need for pay and promotion ($F = 3.16$, ns).

Research Question 4: Do individuals who choose the manager as the most useful source for feedback about their developmental needs have different work environment needs than individuals who choose peers or direct reports?

In order to address this research question, a one-way MANOVA was conducted with the four work environment needs as dependent measures and the feedback giver category chosen as most useful for providing feedback about developmental needs as the independent variable. An omnibus test was found to be significant ($F = 2.69$, $p < .05$), therefore additional univariate tests were conducted to assess which dependent measures were affected as shown in Table 4.17. Adjustments were made to take into account the

Table 4.16

One-way MANOVA with Work Environment Needs as Dependent Variables and Feedback Giver Category Chosen for Most Useful Information about Strengths as Independent Variable

Omnibus F = 3.526** (df = 4, 167)

Dependent Variables	F	Sig.	Category	Mean
Need for professional development	1.07	.30	Manager	3.21
			Peer/Direct Report	3.33
Need for co-worker recognition	.00	.99	Manager	2.27
			Peer/Direct Report	2.27
Need for manager recognition	3.77	.05	Manager	2.15
			Peer/Direct Report	2.49
Need for pay and promotion	3.16	.08	Manager	3.24
			Peer/Direct Report	2.96

**p < .01

Table 4.17

One-way MANOVA with Work Environment Needs as Dependent Variables and Feedback Giver Category Chosen for Most Useful Information about Developmental Needs as Independent Variable

Omnibus F = 2.687* (df = 4, 175)

Dependent Variables	F	Sig.	Category	Mean
Need for professional development	.24	.63	Manager	3.21
			Peer/Direct Report	3.27
Need for co-worker recognition	5.38	.02	Manager	2.12
			Peer/Direct Report	2.43
Need for manager recognition	6.18**	.01	Manager	2.14
			Peer/Direct Report	2.57
Need for pay and promotion	.29	.59	Manager	3.03
			Peer/Direct Report	2.95

*$p < .05$
**$p < .01$

problem of inflated Type 1 error and a threshold of $p < .01$ was established for each univariate test. Statistically significant differences were found between feedback giver category chosen as most useful for feedback about developmental needs and need for recognition from the manager ($F = 7.61$, $p < .01$). Specifically, individuals who chose peers or direct reports as providing the most useful feedback about developmental needs demonstrated a greater need for more recognition from the manager. Statistically significant differences were not found between feedback giver category chosen as most useful for feedback about developmental needs and need for professional development ($F = .14$, ns), need for recognition from co-workers ($F = 5.38$, ns), and need for pay and promotion ($F = .293$, ns).

Research Question 5: Will there be a positive relationship between learning goal orientation and participation in developmental activities based on feedback received from the multi-rater feedback report?

In order to answer this research question, responses from the interviews were coded into two categories (i.e., developmental activities or no developmental activities) for the question, "Describe any type of activities in which you have participated in order to improve the dimensions indicated (from the previous question)." A point-biserial correlation between learning goal orientation and the categorical variable was calculated. A significantly positive correlation was found between learning goal orientation and participation in a developmental activity based on feedback received from one's multi-rater feedback report ($r = .202$, $p < .01$). Individuals with a higher learning goal orientation were more likely than individuals with a lower learning goal orientation to actively participate in a developmental activity after receiving multi-rater feedback.

Research Question 6: Will there be a positive relationship between need for professional development and participation in developmental activities based on feedback received from the multi-rater feedback report?

In order to answer this research question, responses from the interviews were coded into two categories (i.e., developmental activities or no developmental activities) for the question, "Describe any type of activities in which you have participated in order to improve the dimensions indicated (from the previous question)." A point-biserial correlation between learning goal orientation and the categorical variable was calculated. A significantly positive correlation was found between the need for professional development and participation in a developmental activity based on feedback received from one's multi-rater feedback report ($r = .161$, $p < .05$). Individuals with a greater need for professional development were more likely than individuals with a lesser need for professional development to actively participate in a developmental activity after receiving multi-rater feedback.

CHAPTER V

DISCUSSION

Overview

Recently, researchers and practitioners alike have begun to inquire whether multi-rater feedback programs are more beneficial for some individuals than others. What information do feedback recipients attend to after participating in the multi-rater feedback process? Do individual difference variables play a role in determining how a multi-rater feedback report is interpreted? The purpose of the present study was to address these largely neglected areas of research within the realm of an organizational multi-rater feedback environment.

Feedback recipients have been described as information processors who are required to "digest" a large array of data points from a variety of feedback sources (Brutus, Fleenor, & London, 1998). Although important, much of the past research in the area of multi-rater feedback has focused on issues such as the rating tendencies among various feedback giver categories. In particular, topics such as determining why rating discrepancies exist among the manager, peers, direct reports, and self have been explored (London & Wohlers, 1991). Also, issues related to the acceptance of feedback have been investigated. Variables including the level of agreement among feedback sources, the consistency of the ratings received, and the general favorableness of the ratings have been considered by researchers (London, 1995). Although topics such as these contribute to our understanding of the potential usefulness of multi-rater feedback, the missing link between these studies and the one undertaken here involves obtaining a better

understanding of what information has actually been processed by the individual. Little, if any research, has addressed which pieces of multi-rater feedback are viewed as significant to the feedback recipient and why. As stated by Brutus, et al. (1998), "Unfortunately, what we know about the integration of the large amount of data generated by 360-degree feedback is limited" (pp. 24-25). How multi-rater feedback is managed and utilized by the feedback recipient at a later time is largely unknown.

A strength of the present study was its attempt to begin answering some of these questions several months after employees received their feedback report. Specifically, the role that variables such as goal orientation or other work environment needs may play in the interpretation of the multi-rater feedback report was examined. In addition, for the first time, an attempt was made to understand how the information contained within a feedback report was processed by an individual through the use of a recall measure. As indicated by cognitive models of information processing, one may question whether a feedback recipient utilizes (i.e., retrieves from memory) feedback received from various raters if the participant is unable to accurately recall the report (i.e., areas identified as strengths or weaknesses by their feedback givers).

Researchers have long acknowledged that some people are more open to receiving feedback from others. These individuals tend to value learning more about themselves even when received through the reactions or assessments of another party. Contrarily, other people are less interested in receiving feedback from others, and still others seem to find receiving feedback threatening. These individuals may be less likely to internalize and learn from the feedback that they receive (Brutus, et al., 1998). For some, their primary interest in feedback is to simply ensure that others are viewing them

in a favorable light in order to accomplish a secondary goal such as an external reward (e.g., pay, praise, etc.). Research by Dweck (1986) and Dweck and Leggett (1988) crystallized the phenomenon of goal orientation as it relates to learning. Specifically, learning goal-oriented individuals tend to welcome receiving feedback and find this type of information helpful for making an accurate self-evaluation with an underlying motive for self-improvement; whereas, performance goal-oriented individuals are less interested in receiving feedback because of the increased opportunity for their weaknesses to be exposed.

Research by VandeWalle and Cummings (1997) found goal orientation to be an important variable for predicting feedback-seeking behavior. That is, individuals with a high dominant (learning) goal orientation were found to be more likely to seek feedback from the course instructor as well as from classmates in an academic setting than low dominant (performance) goal-oriented individuals. Therefore, one may logically assume that goal orientation may also play a meaningful role during the information processing (i.e., monitoring) phase of feedback seeking. One might expect these dissimilar types of individuals to focus on the various parts of the multi-rater feedback report in varying ways.

Hypothesis Tests

In the present study, it was hypothesized that individuals with a high learning dominant goal orientation would be able to recall both their positive and negative feedback more accurately than individuals with a low learning dominant goal orientation. This hypothesis was based on past research which found that individuals with a learning goal orientation reported engaging in a deeper level of information processing when

learning new information than individuals with a performance goal orientation (Nolen, 1988). Also, Miller, Behrens, Greene, and Newman (1993) discovered that possessing a dominant learning goal orientation was positively associated with increased levels of self-monitoring of one's performance. Furthermore, research by Hofmann found that learning goal-oriented individuals experienced lower levels of cognitive interference when learning a complex task than performance goal-oriented individuals. Surprisingly, in the current study the high learning dominant individuals in the present study were not able to recall their positive or negative feedback more accurately than the low learning dominant individuals. Interestingly, the low learning dominant participants were able to recall their positive feedback more accurately than the high learning dominant participants. This finding may not be entirely surprising when one considers that low learning dominant individuals are believed to be more concerned with appearing competent in the eyes of others. In fact, VandeWalle's (1997) nomological network demonstrated a positive relationship between performance goal orientation and fear of negative evaluations. Apparently, the low learning dominant individuals were interested in ascertaining how others were viewing their strengths in the workplace; however, this same level of attention was not present when faced with learning about one's weaknesses in the workplace.

Past research has also suggested that an individual with a performance goal orientation is primarily interested in receiving favorable recognition and judgments from others in order to receive access to valued external rewards (Pintrich & Garcia, 1991). Studies have shown that the additional external rewards are useful for individuals with a performance goal orientation in order to mask underlying feelings of low self-worth

(Covington, 1984; Seifert, 1995). The manager typically has greater access to rewards than other feedback sources. For this reason, individuals with a low learning dominant goal orientation were expected to be able to recall feedback received from their manager more accurately than feedback received from other sources. In the context of multi-rater feedback investigated in this study, there was no evidence that individuals with a low learning dominant goal orientation attended more to the feedback received from the manager than from other feedback givers when accuracy of dimensions recalled was used as the dependent measure.

Interestingly, however, individuals in general did indicate valuing the feedback from one source more than another when asked which feedback giver category provided them with the most useful information about their strengths or developmental needs. More specifically, a greater number of feedback recipients chose peers or direct reports as providing the most useful information about their strengths in the workplace. In interviews, employees indicated that they often had closer day-to-day working relationships with the other feedback giver categories such as with certain peers or direct reports than with their own manager. Essentially, individuals seemed to feel that peers in particular were more familiar with their daily work activities. Conversely, when asked which feedback source provided the most useful information about their developmental needs, a significant majority of feedback recipients chose their manager. Commonly cited reasons for choosing their manager were that individuals believed the manager is an important person to please and that he or she was more familiar with issues related to professional development. As one interviewee stated, *"He (the manager) knows my capabilities and gives me a better idea of where I need to go."* In addition, participants

felt that the manager had a better overview of the strategic direction of the work unit and thus had a better understanding of where developmental activities for individuals need to be targeted.

To recapitulate, for either purposes of identifying strengths or developmental needs, individuals with a low learning dominant goal orientation did not find the feedback received from the manager to be more useful than individuals with a high learning dominant goal orientation. Similarly, individuals with a low learning dominant goal orientation were also not more likely to choose those dimensions rated low by their manager as areas to target for behavior change. Although these hypotheses were not supported, evidence was provided that feedback recipients in general differentiated between the purpose of the feedback (i.e., identification of strengths or developmental needs) and the usefulness of the feedback giver category providing the feedback.

In addition to the influence of trait-based goal orientations, other researchers have suggested that a person's work environment needs may play an important role in how individuals manage the feedback that they receive. Ashford and Cummings (1983) theorized that the goals possessed by an individual should influence the *inquiry* and *monitoring* phases of the feedback seeking process. Monitoring occurs when an individual begins to make sense of the various feedback messages to which he or she is being exposed to in the workplace. In this way, the receipt of a multi-rater feedback report may approximate the monitoring situation described by Ashford and Cummings (1983). A great deal of information is available to the feedback recipient yet sorting through the information is left up to the personal preferences of the individual.

In the current study, four work environment needs (i.e., need for more pay and promotion, need for recognition from the manager, need for affiliation, and need for professional development) were investigated in order to determine their specific relationship to the feedback monitoring process. Previous research has indicated that these needs should also be meaningfully related to an individual's goal orientation. As expected, a significant positive relationship was found between learning goal orientation and the need for more professional development. Also, positive relationships were found between proving goal orientation and an individual's need for more professional recognition from the manager as well as the need for increases in pay and promotions. As expected, a non-significant relationship was found between learning goal orientation and recognition from the manager. Somewhat surprising, however, was the positive relationship between learning goal orientation and the need for pay and promotion. It seems that some types of external rewards are desired by individuals with a high learning goal orientation. This finding may deserve further investigation particularly since other researchers have indicated that only performance goal orientation should be related to the desire for external rewards (Covington, 1984; Pintrich & Garcia, 1991). The study by Pintrich and Garcia was conducted in a classroom setting where external rewards such as grades were at stake. Perhaps when more tangible rewards such as pay or promotion are at risk, the influence of one goal orientation over the other becomes less pronounced.

Some of the work environment needs are more directly controlled by certain feedback sources than others. In particular, in a traditional work setting, the manager can often directly determine whether an individual will receive a pay raise or whether an individual will be recommended for other positions within the organization. Even if an

individual chooses to leave the current organization for a job elsewhere, an individual may still depend on receiving a positive referral from the previous manager. Therefore, one might assume that a person with a greater need for pay and promotion or for professional recognition from the manager may spend more effort attending to the feedback received from the manager relative to the other feedback giving sources. For this reason, positive relationships were expected between need for pay and promotion as well as need for recognition from the manager and the percentage of accurately recalled feedback received from the manager. Surprisingly, these relationships were not found to be significant. Furthermore, a positive relationship was predicted between a person's need for more affiliation in the work environment and the ability to accurately recall feedback received from peers. This relationship was also not found to be significant.

Research Questions

The first research question addressed whether, in a general sense, any of the three goal orientation measures (i.e., learning, proving, and avoiding) were related to the ability to accurately recall information received through multi-rater feedback. As may be expected, through the use of multiple regression, learning goal orientation was the only measure that significantly predicted the ability to accurately recall feedback received; however, most surprisingly, the relationship was found to be negative. That is, those individuals with a greater learning goal orientation were *less* likely to be able to identify the specific ratings received from the various feedback giver categories. Given that past research has suggested that learning goal orientation is related to deeper levels of information processing when learning new information, these results are counterintuitive (Ames & Archer, 1988). Due to the tendency for learning-oriented individuals to engage

in increased effort and more self-rehearsal in learning situations, one might have expected individuals with a greater learning goal orientation to be more familiar with their feedback, not less familiar, as was found in the current study.

The relationship between the four work environment needs and the ability to accurately recall one's multi-rater feedback were examined. Only need for professional development emerged as significantly related to accurate recall. Again, surprisingly, a negative relationship was found between a person's need for professional development and the ability to accurately recall one's feedback in a global sense. Individuals with a greater need for professional development were generally *less* familiar with the variety of information presented on the multi-rater feedback report. It is difficult to explain these findings in light of the past research on goal orientation. The increased levels of self-rehearsal when learning new information reported in other studies does not seem to be evident here (Bouffard, Boisvert, Vezeau, & Larouche, 1995).

In order to explain these results, two theories may be plausible. Perhaps individuals with a greater learning goal orientation do not find the information contained in a multi-rater feedback environment as particularly useful for them. Therefore, their interest in learning is manifested in other areas of their work life such as fine-tuning their technical skills for example. More effort may be spent participating in developmental activities directly related to these types of performance competencies (e.g., enhancing computer skills, learning about new safety procedures, etc.) Although technical skills can and have been assessed through the use of multi-rater feedback, in the present study, the dimensions chosen for assessment were the core behavioral skill areas applicable to all jobs in the organization (e.g., leadership, teamwork, interpersonal skills).

A second plausible explanation for these findings may be that individuals with a learning goal orientation internalize the specific feedback into overall improvement areas. Perhaps these individuals are more likely to simply choose one or two dimensions for development and then concentrate their energy in this direction. The actual dimensions chosen for development may be based on personal interest, a trend identified from the ratings received or some other criterion. Evidence for this theory is provided by the finding that learning goal orientation correlated positively with the tendency to participate actively in a developmental activity based on information received in the multi-rater feedback report. More specifically, those individuals with a higher learning goal orientation were more likely to either meet with their manager, peers and direct reports to discuss their feedback, attend training, volunteer for a developmental work assignment, or review materials such as books, audio-tapes and video-tapes. Similarly, individuals with a greater need for professional development were also more likely to report participation in a developmental activity based on the feedback received in their multi-rater feedback report.

Finally, additional analyses were also conducted to determine whether those individuals who chose the manager as the most useful source for feedback about their strengths or developmental needs have different work environment needs than individuals who chose peers or direct reports. Significant differences were not found when individuals were differentiating between the sources for useful information about their strengths. When asked about developmental needs, however, individuals who chose peers as the most useful feedback source indicated a significantly greater need for recognition from the manager. Significant differences were not found for the remaining

three work environment needs (i.e., need for recognition from co-workers, need for pay and promotion, need for professional development). Therefore, it seems that those individuals who chose feedback from peers or direct reports as being useful to them may be experiencing a strained or problematic relationship with their immediate supervisor. For example, one individual chose peers because, *"I have more respect for them including their judgment."* Another interviewee said, *"Peers because they know me well and are honest with me about my weaknesses."* Interestingly, the choice of a non-traditional feedback giver category as being useful for information about developmental needs was not related to an individual's openness to feedback from other sources but rather evidence of a problematic relationship with the manager. For example, the feedback recipient may perceive the manager as being less comfortable providing open and honest feedback than peers.

Contributions and Future Research

The present study made several contributions to the understanding of how feedback recipients manage the information received on a multi-rater feedback report. To date, no known research has investigated whether individual difference variables such as an individual's goal orientation or personal work environment needs may influence the management of information received within a multi-rater feedback context. Furthermore, no studies to date have investigated these type of research questions with the use of a direct, objective recall measure. Prior to this study, researchers in the area of multi-rater feedback could not indicate that the information provided on the feedback report was being processed or absorbed by feedback recipients.

Another contribution of the current study was that the research was conducted in a naturalistic setting within a controlled time frame. Each participant was interviewed approximately two months after receiving an individual multi-rater feedback report. The interviews allowed for the assessment of dimensions chosen for behavior change by the feedback recipient as well as an assessment of the developmental activities undertaken by each participant.

Although the hypotheses related to the recall measures used within this study were mostly not supported, future research may benefit from asking similar research questions within the context of a multi-rater feedback program used for administrative purposes. When the feedback received is more directly linked to tangible external rewards such as pay and promotions, differential attention to the various feedback sources may become more pronounced. This may be particularly true if certain rewards are more strongly tied to the ratings received from certain feedback sources.

Also, future research should examine whether feedback recipients find the dimensions chosen by the organization for the report to be the most important ones. They may instead believe that feedback on the more technical or specific job-related skills would have greater utility to them. In addition, more longitudinal research is needed to examine the value feedback recipients place on their feedback reports and the developmental activities or behaviors they engage in six months to a year after receiving the report. While the present study did examine perceptions and reported behaviors two months after receiving the feedback report, also assessing these issues after more time has elapsed may be important. Clearly, practitioners would be interested to know what employees do in the year after receiving their feedback report and prior to receiving their

next report. Another interesting time period to examine for possible developmental behaviors might be the two to three months prior to receiving their *next* feedback report. Maybe some individuals do not engage in any developmental or behavioral changes until right before they will receive their next feedback report. They may do this if they believe raters will be influenced by "recency effect" and perhaps rate them higher once observing recent behavioral activities. Research in this area seems warranted.

Having a better understanding of why certain dimensions are chosen over others for behavior change could use further investigation. In this study, it was determined that the dimensions chosen for behavior change were not linked to the low ratings received from the manager, at least as this variable relates to an individual's dominant goal orientation. If feedback recipients are expected to use the feedback received for their own development, it may be more important to know what feedback recipients *recall* receiving as their high and low dimensions rather than the actual ratings that they received. The actual ratings given for the various dimensions may be irrelevant if the feedback recipient does not choose a particular dimension as a developmental need. How these decisions are made should be explored further.

In addition, future research may benefit from exploring how other individual difference variables such as self-esteem, impression management, and self-monitoring may influence how an individual attends to information received on a multi-rater feedback report. One may expect that these variables could play an important role in how multi-rater feedback is interpreted. For example, individuals who generally engage in greater amounts of impression management or self-monitoring may be more sensitive to their multi-rater feedback in attempt to further influence people's opinions. This

tendency may become even more pronounced if ratings are lower than expected from one feedback giver category than from another. Future research on the relationship among individual difference variables and perceptions of multi-rater feedback and subsequent behavior change is needed.

Limitations

Although care was taken that a sound methodology was used in the current study through the use of a variety of data collection methods (i.e., an objective recall measure, interviews content analyzed by outside raters, and a psychometrically sound questionnaire), several limitations were still evident. A major limitation of the study was that the dominant goal orientation measure failed to produce a large enough sample of individuals who truly fell into a performance dominant goal orientation. This may have occurred because of the type of individuals involved in developmental activities such as multi-rater feedback. Because the program investigated was truly voluntary, a self selection of individuals who were already interested in developmental activities may have occurred. The results may have been different if the program had not been voluntary. Interestingly, however, a similar phenomenon has occurred for other researchers using the dominant goal orientation measure (Miller, et al., 1993). Miller, et al.'s (1993) also noted the small *n* size found for the dominant performance goal orientation condition. The researchers suggested that it may be more difficult to find large samples of this type of individual in more natural settings such as the one used in the current study. Miller, et al. (1993) suggested that perhaps larger samples of performance goal orientation may only be found in a laboratory condition such as the one used by Elliott and Dweck (1988) where individuals are given manipulated feedback forcing an individual into a

performance-oriented mindset. In a work setting, perhaps using a sample of new or less-tenured employees might reveal greater variance in the goal orientation measure. The employees in the current study had approximately 20 years tenure with the organization and hence, have already survived layoffs and firings due to performance problems. Perhaps newer employees in a firm would experience greater variance in performance and goal orientation.

A second major limitation is the use of a difference score to calculate the dominant goal orientation measure. In the current study, the two performance goal orientation measures (i.e., proving and avoiding) were averaged together and then subtracted from the learning goal orientation subscale. Although this method has been used by previous researchers (Miller, et al., 1993; VandeWalle, 1997), the reliability of the newly computed measure may come into question. The reliability of the dominant goal orientation measure in the current study was found to be $\alpha = .304$ which is significantly problematic. Crocker and Algina (1986), however, have indicated that difference scores may not be as troublesome if the subscales (i.e., learning, proving, avoiding) used are reliable and not highly correlated with each other as they were in the present study. In order to avoid this type of calculation to measure dominant goal orientation, Miller et al. (1993) have suggested the use of an alternative measurement system such as a forced-choice format. Individuals would then have to determine whether there preferences in a series of situations would lean them toward either a learning or performance goal orientation. Clearly, future research using alternative methods for measuring dominant goal orientation is needed.

A third limitation of the study was the possibility that the individuals may not have been highly ego-involved in learning about the feedback received. Since participants knew that participation in the multi-rater feedback program was strictly voluntary and the information received was confidential, perhaps individuals did not believe it was necessary to review the information as thoroughly as they might have in another situation. Perhaps greater ego-involvement would occur if individuals were required to doing something with the feedback received. Research by Miller (1976) in the area of ego-involvement found that subjects' attributions were more pronounced when a bogus social-perceptiveness test was presented as being important. More than a passing interest in the feedback may be necessary in order for an individual to become more engaged in the multi-rater feedback report. Although this is a possibility that could influence the role of individual difference variables such as goal orientation and work environment needs, the average participant was able to recall 7 out of the 12 possible high and low dimensions across the manager and peer feedback sources suggesting a certain amount of attention spent reviewing the feedback report.

A fourth limitation of the current study was that the multi-rater feedback participants were mostly in their mid to late 40's and have worked for the organization for approximately 20 years. After having worked for an organization for such an extended period of time, the participants may have already had a good idea of how their work was evaluated by others. This may be particularly true for individuals with a high learning dominant goal orientation because they may have already sought feedback from their manager (e.g., perhaps during performance appraisal periods) and other sources making the information received in the multi-rater feedback report less surprising to

them. Because the information was not novel, individuals with a high learning dominant goal orientation may not have processed *all* of the information on the report as thoroughly as they might have if the information was unique. They may have chosen just one or two dimensions for further development and not focused their attention on the entire report. Greater support is given to this explanation due to the positive relationship found between learning goal orientation and active participation in developmental activities based on the feedback received. Individuals with a low learning goal orientation, however, may have simply been interested in finding out what people thought about them which was demonstrated by their greater ability to accurately recall their overall feedback. Since individuals with a high learning goal orientation seem to be less familiar with their feedback as a whole, future research may benefit from determining why certain dimensions are chosen for development by individuals with a high learning goal orientation. New measures other than recall may need to be developed. Perhaps studies could be conducted where verbal protocols are used and an individual informs the researcher which areas of the report are being attended to at the time when they first receive the report.

Practical Implications

The current study demonstrated that feedback recipients, in general, were aware of the feedback that they received from their raters. This finding lends support for the overall impact of multi-rater feedback because participants were able to recall feedback that they received two months after obtaining their individual feedback report. In fact, feedback recipients could correctly identify over half of their three highest and three lowest dimensions from each rating source (i.e., manager, peers, direct reports). This

finding was remarkable because there were 11 dimensions for which individuals received ratings from each applicable feedback source in the current study. The ability to recall ratings provided evidence that individuals do attend to the feedback received in a multi-source feedback context. Also, because dimensions have been shown to be accurately identified, there seems to be a greater likelihood that the information received through multi-rater feedback has entered the conscience of the feedback recipient. If people are aware of their feedback, as they seem to be in this study, there is a possibility that the feedback is being used by the feedback recipient even if this does not occur through a formal developmental activity. Simply being aware of one's feedback could be helpful in guiding a person's behaviors within an organization. For example, if an individual is able to remember that they were rated low on the flexibility dimension, perhaps this information will be used the next time an individual is faced with a work situation requiring flexibility.

Also important for practice was the finding that individuals will distinguish between the purpose of the feedback (i.e., identification of one's strengths versus identification of one's developmental needs) and the usefulness of the source providing that feedback. When designing multi-rater feedback systems, one should carefully consider why certain feedback sources may or may not be useful in providing an individual with feedback. It is possible that the feedback may not be accepted by feedback recipients if the purpose of the feedback (e.g., identification of deficient technical skills) does not correspond appropriately with the perceived expertise of the source providing the information. Further research in this area may provide more interesting insights in the utility of multi-rater feedback.

Conclusion

In summary, dominant goal orientation and an individual's work environment needs did not generally result in a differential processing of information from one feedback source relative to another as measured by recall. Interestingly, however, individuals with a low learning dominant goal orientation were generally more familiar with their feedback in a global sense than individuals with a high learning dominant goal orientation. In particular, low learning dominant individuals were more familiar with the positive feedback that they received than the negative feedback. This may be associated with a low learning dominant individual's general fear of negative evaluation as demonstrated by VandeWalle's (1997) nomological network of goal orientation measures and other related constructs. As previously mentioned, the proving and avoiding scales both correlated positively with fear of negative evaluation ($\underline{r} = .37$, $p < .001$ and $\underline{r} = .36$, $p < .001$, respectively). Since low learning dominant goal orientation was composed of individuals scoring higher on the proving and avoiding scales relative to the learning scale than other participants, evidence from this study demonstrated that these individuals did seem to be focusing more of their attention on their positive feedback than their negative feedback from their feedback givers.

Also interesting was the finding that feedback recipients differentiated between the usefulness of the information received from a particular feedback giver category depending on the purpose for the information. For example, when asked which feedback giver category provided the most useful information about their strengths, a majority of individuals chose peers or direct reports. The opposite was found when individuals were asked to identify the feedback giver category that provided them with the most useful

information about their developmental needs. In this case, a significant number of individuals chose the manager. Upon further exploration of this phenomenon, it was discovered that those individuals who chose peers or direct reports as providing the most useful information about their developmental needs also indicated wanting a significantly greater amount of recognition from their manager than they were currently experiencing.

Individuals with a higher learning goal orientation were more likely to participate actively in a developmental activity based on the information received in the multi-rater feedback report. Similar results were found for individuals with a higher need for professional development. These findings indicate that, although high learning-oriented individuals are less likely to process all of the information presented in a multi-rater feedback report, they may be more likely to actually choose a particular dimension to work on and follow through with the developmental activity. For this reason, multi-rater feedback does seem to be a worthwhile program particularly for those individuals with a higher learning goal orientation. In fact, the use of a multi-rater feedback program may communicate to learning-oriented individuals that the organization is interested in an individual's professional development. Providing programs such as multi-rater feedback with accompanying opportunities for training may help an organization retain learning-oriented individuals in the future. This could ultimately be beneficial for the organization due to the positive characteristics associated with individuals who possess a learning goal orientation such as the tendency to engage in more planning, increased effort, and more challenging goal selection (VandeWalle, Brown, Cron, & Slocum, 1999).

In conclusion, this study explored the relationship between individual difference variables such as goal orientation and work environment needs and their influence on the

information processing of an individual's multi-rater feedback report. This was thought to be important in order to gain a better understanding of how multi-rater feedback is managed by the feedback recipient given the prevalence of this type of feedback in many organizations. Future research on the utility and effectiveness of multi-rater systems seems to be warranted as organizations continue to adopt 360-degree feedback and multi-rater programs for developmental and administrative purposes.

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APPENDICES

APPENDIX A

SAMPLE MULTI-RATER FEEDBACK REPORT

Feedback Report

PAT SAMPLE

Date: November 1998

PAT SAMPLE

SECTION I: Response Rates

Questionnaires Sent and Returned

Feedback Giver Category	Number Responding	Number Sent
Manager	1	1
Direct report	3	3
Second-level report	3	7
Peer/Team member	5	5
Self	1	1

PAT SAMPLE

SECTION I: Response Rates

Feedback Givers Selected	
PAT SAMPLE 1	Peer/Team mem.
PAT SAMPLE 2	Second-level
PAT SAMPLE 3	Second-level
PAT SAMPLE 4	Peer/Team mem.
PAT SAMPLE 5	Direct report
PAT SAMPLE 6	Direct report
PAT SAMPLE 7	Peer/Team mem.
PAT SAMPLE 8	Peer/Team mem.
PAT SAMPLE 9	Peer/Team mem.
PAT SAMPLE 10	Second-level
PAT SAMPLE 11	Manager
PAT SAMPLE 12	Second-level
PAT SAMPLE 13	Second-level
PAT SAMPLE 14	Second-level
PAT SAMPLE 15	Second-level
PAT SAMPLE 16	Direct report

PAT SAMPLE
SECTION II: Dimension Results

The Values

Dimension	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
Integrity						
Manager	1		4.00	-	3.56	3.95
Direct report	3		3.58	LOW	3.68	3.95
Second-level report	3		3.33	LOW	4.23	3.93
Peer/Team member	5		4.35	MED	3.95	4.04
Self	1		3.75	-	3.98	4.10
Respect for the Individual						
Manager	1		3.75	-	3.58	3.75
Direct report	3		3.42	LOW	3.63	3.83
Second-level report	3		3.17	LOW	4.14	3.81
Peer/Team member	5		3.85	MED	3.79	3.88
Self	1		3.00	-	3.77	3.90
Teamwork						
Manager	1		3.75	-	3.67	3.79
Direct report	3		3.67	LOW	3.74	3.85
Second-level report	3		3.73	LOW	4.40	3.82
Peer/Team member	5		4.05	MED	3.83	3.90
Self	1		3.00	-	3.76	3.81
Innovation and Continuous Improvement						
Manager	1		4.00	-	3.48	3.54
Direct report	3		3.42	LOW	3.59	3.74
Second-level report	3		3.80	LOW	4.23	3.73
Peer/Team member	5		4.45	HIGH	3.68	3.69
Self	1		3.00	-	3.67	3.59
Honest Communication						
Manager	1		3.75	-	3.53	3.72
Direct report	3		3.55	LOW	3.55	3.70
Second-level report	3		3.55	LOW	4.03	3.72
Peer/Team member	5		3.80	MED	3.69	3.85
Self	1		2.33	-	3.79	3.72
Leadership						
Manager	1		4.25	-	3.15	3.49
Direct report	3		3.67	LOW	3.48	3.62
Second-level report	3		3.80	LOW	4.21	3.66
Peer/Team member	5		3.90	HIGH	3.63	3.66
Self	1		2.50	-	3.62	3.55
Flexibility						
Manager	1		4.00	-	3.44	3.58
Direct report	3		3.56	LOW	3.67	3.79
Second-level report	3		3.44	LOW	4.22	3.79
Peer/Team member	5		4.20	HIGH	3.72	3.70
Self	1		3.00	-	3.69	3.63

PAT SAMPLE
SECTION II: Dimension Results

Supplemental Dimensions

Dimension	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
Judgment and Decision Making						
Manager	1		4.00	-	3.27	3.67
Direct report	3		3.58	LOW	3.53	3.86
Second-level report	3		3.42	LOW	4.12	3.83
Peer/Team member	5		4.25	HIGH	3.68	3.84
Self	1		3.25	-	3.75	3.75
Interpersonal Skills						
Manager	1		3.75	-	3.42	3.60
Direct report	3		2.92	LOW	3.41	3.64
Second-level report	3		3.42	LOW	4.03	3.59
Peer/Team member	5		3.55	HIGH	3.62	3.73
Self	1		2.75	-	3.63	3.59
Giving Feedback						
Manager	1		3.00	-	2.97	3.33
Direct report	3		3.22	LOW	3.27	3.38
Second-level report	3		2.78	LOW	3.70	3.42
Peer/Team member	5		3.60	HIGH	3.49	3.49
Self	1		2.00	-	3.36	3.14
Receiving Feedback						
Manager	1		3.00	-	3.06	3.48
Direct report	3		2.89	LOW	3.25	3.50
Second-level report	3		2.89	LOW	3.73	3.51
Peer/Team member	5		3.67	HIGH	3.51	3.58
Self	1		3.00	-	3.52	3.37

PAT SAMPLE

SECTION II: Dimension Results

Summary of Dimension Results

- The dimensions rated **highest** by your **Manager** were:
  - Leadership (4.25)
  - Integrity (4.00)
  - Innovation and Continuous Improvement (4.00)
  - Flexibility (4.00)
  - Judgment and Decision Making (4.00)

- The dimensions rated **lowest** by your **Manager** were:
  - Receiving Feedback (3.00)
  - Giving Feedback (3.00)
  - Interpersonal Skills (3.75)
  - Honest Communication (3.75)
  - Teamwork (3.75)
  - Respect for the Individual (3.75)

- The dimensions rated **highest** by your **Direct report** were:
  - Teamwork (3.67)
  - Leadership (3.67)
  - Integrity (3.58)
  - Judgment and Decision Making (3.58)

- The dimensions rated **lowest** by your **Direct report** were:
  - Receiving Feedback (2.89)
  - Interpersonal Skills (2.92)
  - Giving Feedback (3.22)

- The dimensions rated **highest** by your **Second-level report** were:
  - Innovation and Continuous Improvement (3.80)
  - Leadership (3.80)
  - Teamwork (3.73)

- The dimensions rated **lowest** by your **Second-level report** were:
  - Giving Feedback (2.78)
  - Receiving Feedback (2.89)
  - Respect for the Individual (3.17)

- The dimensions rated **highest** by your **Peer/Team member** were:
  - Innovation and Continuous Improvement (4.45)
  - Integrity (4.35)
  - Judgment and Decision Making (4.25)

- The dimensions rated **lowest** by your **Peer/Team member** were:
  - Interpersonal Skills (3.55)
  - Giving Feedback (3.60)
  - Receiving Feedback (3.67)

PAT SAMPLE

SECTION II: Dimension Results

Summary of Dimension Results

- The dimensions rated **highest** by your **Self** were:
  - Integrity (3.75)
  - Judgment and Decision Making (3.25)
  - Respect for the Individual (3.00)
  - Teamwork (3.00)
  - Innovation and Continuous Improvement (3.00)
  - Flexibility (3.00)
  - Receiving Feedback (3.00)

- The dimensions rated **lowest** by your **Self** were:
  - Giving Feedback (2.00)
  - Honest Communication (2.33)
  - Leadership (2.50)

PAT SAMPLE

SECTION III: Item Results

Integrity

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
1. Following through on work commitments.						
Manager	1		5.00	-	3.50	3.92
Direct report	3		4.00	LOW	3.69	3.90
Second-level report	3		3.33	LOW	4.25	3.94
Peer/Team member	5		4.60	HIGH	3.95	4.03
Self	1		4.00	-	3.90	3.91
2. Conducting work activities according to the highest ethical standards.						
Manager	1		4.00	-	3.58	4.08
Direct report	3		3.67	LOW	3.68	4.05
Second-level report	3		3.33	LOW	4.44	3.99
Peer/Team member	5		4.40	MED	4.08	4.13
Self	1		3.00	-	4.00	4.21
3. Acting fairly toward all employees.						
Manager	1		3.00	-	3.42	3.87
Direct report	3		3.00	LOW	3.54	3.81
Second-level report	3		3.67	LOW	4.22	3.82
Peer/Team member	5		3.80	LOW	3.82	3.98
Self	1		4.00	-	3.91	4.07
4. Taking responsibility for his/her actions.						
Manager	1		4.00	-	3.75	3.95
Direct report	3		3.67	LOW	3.83	4.04
Second-level report	3		3.00	LOW	4.00	4.00
Peer/Team member	5		4.60	HIGH	3.95	4.04
Self	1		4.00	-	4.09	4.22

PAT SAMPLE

SECTION III: Item Results

Respect for the Individual

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
5. Supporting a work environment which values a broad range of experiences, backgrounds, and points of view.						
Manager	1		4.00	-	3.58	3.76
Direct report	3		3.33	LOW	3.74	3.86
Second-level report	3		3.00	LOW	4.00	3.86
Peer/Team member	5		3.60	HIGH	3.79	3.90
Self	1		3.00	-	3.64	3.93
6. Recognizing the importance of everyone's work.						
Manager	1		3.00	-	3.42	3.73
Direct report	3		3.67	LOW	3.58	3.80
Second-level report	3		3.33	LOW	4.22	3.79
Peer/Team member	5		4.20	MED	3.83	3.85
Self	1		3.00	-	3.73	3.86
7. Treating every employee with dignity and respect.						
Manager	1		4.00	-	3.75	3.87
Direct report	3		3.33	LOW	3.61	3.92
Second-level report	3		3.33	LOW	4.22	3.90
Peer/Team member	5		4.00	HIGH	3.84	3.98
Self	1		3.00	-	3.90	4.04
8. Realizing the benefits of diverse opinions.						
Manager	1		4.00	-	3.58	3.63
Direct report	3		3.33	LOW	3.61	3.74
Second-level report	3		3.00	LOW	4.11	3.70
Peer/Team member	5		3.60	LOW	3.71	3.80
Self	1		3.00	-	3.82	3.77

PAT SAMPLE

SECTION III: Item Results

Teamwork

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
9. Cooperating with others to achieve goals.						
Manager	1		4.00	-	4.08	3.86
Direct report	3		3.67	LOW	3.84	4.00
Second-level report	3		3.33	LOW	4.33	3.99
Peer/Team member	5		4.20	MED	3.97	4.00
Self	1		4.00	-	3.91	3.97
10. Developing positive working relationships with other employees.						
Manager	1		3.00	-	3.50	3.81
Direct report	3		3.67	LOW	3.62	3.77
Second-level report	3		3.67	LOW	4.33	3.76
Peer/Team member	5		4.00	HIGH	3.77	3.91
Self	1		3.00	-	3.73	3.92
11. Working to turn conflict into "win-win" situations.						
Manager	1		4.00	-	3.50	3.59
Direct report	3		3.67	LOW	3.69	3.70
Second-level report	3		3.33	LOW	4.22	3.69
Peer/Team member	5		3.60	LOW	3.65	3.72
Self	1		2.00	-	3.80	3.57
12. Contributing actively to group projects.						
Manager	1		4.00	-	3.58	3.89
Direct report	3		3.67	LOW	3.81	3.92
Second-level report	2	Fewer than 3 valid cases	-	-	4.75	3.86
Peer/Team member	5		4.40	MED	3.94	3.95
Self	1		3.00	-	3.60	3.78

PAT SAMPLE

SECTION III: Item Results

Innovation and Continuous Improvement

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
13. Developing original, creative, innovative approaches to work situations.						
Manager	1		4.00	-	3.67	3.58
Direct report	3		3.33	LOW	3.62	3.75
Second-level report	3		3.67	LOW	4.22	3.71
Peer/Team member	5		4.40	HIGH	3.71	3.75
Self	1		3.00	-	3.64	3.61
14. Taking calculated risks to improve work processes.						
Manager	1		4.00	-	3.42	3.41
Direct report	3		3.33	LOW	3.49	3.66
Second-level report	3		3.33	LOW	3.86	3.65
Peer/Team member	5		4.60	HIGH	3.64	3.56
Self	1		3.00	-	3.64	3.49
15. Using mistakes as opportunities for learning.						
Manager	1		4.00	-	3.67	3.62
Direct report	3		3.33	LOW	3.57	3.76
Second-level report	2	Fewer than 3 valid cases	-	-	4.43	3.76
Peer/Team member	5		4.20	MED	3.62	3.74
Self	1		3.00	-	3.73	3.73
16. Monitoring progress toward high-quality outcomes.						
Manager	1		4.00	-	3.17	3.55
Direct report	3		3.67	LOW	3.68	3.78
Second-level report	2	Fewer than 3 valid cases	-	-	4.38	3.81
Peer/Team member	5		4.60	HIGH	3.77	3.73
Self	1		3.00	-	3.70	3.52

PAT SAMPLE

SECTION III: Item Results

Honest Communication

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
17. Communicating honestly with everyone, regardless of level or functional area.						
Manager	1		4.00	-	4.08	3.89
Direct report	3		3.33	LOW	3.47	3.81
Second-level report	3		3.00	LOW	3.89	3.80
Peer/Team member	5		4.00	MED	3.77	3.97
Self	1		3.00	-	4.09	3.99
18. Sharing appropriate information with other employees in a timely manner.						
Manager	1		4.00	-	3.25	3.67
Direct report	3		3.67	LOW	3.35	3.58
Second-level report	3		3.33	LOW	3.89	3.63
Peer/Team member	5		3.60	LOW	3.56	3.80
Self	1		2.00	-	3.60	3.79
19. Listening attentively to others' concerns or ideas.						
Manager	1		3.00	-	3.17	3.64
Direct report	3		3.33	LOW	3.59	3.63
Second-level report	3		3.33	LOW	4.11	3.66
Peer/Team member	5		3.60	HIGH	3.68	3.81
Self	1		2.00	-	3.55	3.48
20. Accurately sharing relevant information with individuals external to						
Manager	1		4.00	-	3.64	3.70
Direct report	2	Fewer than 3 valid cases	-	-	3.89	3.84
Second-level report	2	Fewer than 3 valid cases	-	-	4.33	3.81
Peer/Team member	5		4.00	HIGH	3.74	3.84
Self	0	Did not respond	-	-	3.90	3.61

PAT SAMPLE

SECTION III: Item Results

Leadership

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
21. Communicating a clear direction and vision to others.						
Manager	1		5.00	-	3.33	3.36
Direct report	3		4.33	LOW	3.54	3.61
Second-level report	3		3.67	LOW	4.11	3.66
Peer/Team member	5		3.80	MED	3.56	3.60
Self	1		2.00	-	3.27	3.41
22. Inspiring others to achieve their full potential.						
Manager	1		4.00	-	3.08	3.33
Direct report	3		3.33	LOW	3.43	3.52
Second-level report	2	Fewer than 3 valid cases	-	-	4.38	3.60
Peer/Team member	5		4.00	HIGH	3.59	3.53
Self	1		2.00	-	3.50	3.44
23. Recognizing others for their contributions.						
Manager	1		4.00	-	3.08	3.64
Direct report	3		3.33	LOW	3.46	3.70
Second-level report	3		3.33	LOW	4.00	3.67
Peer/Team member	5		3.60	HIGH	3.71	3.77
Self	1		3.00	-	3.90	3.72
24. Leading by example.						
Manager	1		4.00	-	3.08	3.64
Direct report	3		3.67	LOW	3.49	3.67
Second-level report	2	Fewer than 3 valid cases	-	-	4.38	3.73
Peer/Team member	5		4.20	HIGH	3.67	3.73
Self	1		3.00	-	3.82	3.64

PAT SAMPLE

SECTION III: Item Results

Flexibility

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
25. Seeing change and uncertainty as new opportunities for improvement.						
Manager	1		4.00	-	3.25	3.44
Direct report	3		3.67	HIGH	3.67	3.76
Second-level report	3		3.33	LOW	4.11	3.78
Peer/Team member	5		4.40	HIGH	3.67	3.60
Self	1		3.00	-	3.73	3.52
26. Adapting quickly to meet changing organizational needs.						
Manager	1		4.00	-	3.50	3.63
Direct report	3		4.00	MED	3.81	3.84
Second-level report	3		3.67	LOW	4.33	3.84
Peer/Team member	5		4.60	HIGH	3.87	3.75
Self	1		3.00	-	3.73	3.67
27. Remaining open to new ideas.						
Manager	1		4.00	-	3.58	3.66
Direct report	3		3.00	LOW	3.54	3.77
Second-level report	3		3.33	LOW	4.22	3.74
Peer/Team member	5		3.60	HIGH	3.62	3.75
Self	1		3.00	-	3.60	3.72

PAT SAMPLE

SECTION III: Item Results

Judgment and Decision Making

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
28. Making decisions in a timely manner.						
Manager	1		4.00	-	3.17	3.59
Direct report	3		4.00	MED	3.62	3.74
Second-level report	3		3.33	LOW	4.00	3.79
Peer/Team member	5		4.40	HIGH	3.65	3.74
Self	1		4.00	-	3.82	3.64
29. Using factual information when making decisions.						
Manager	1		4.00	-	3.08	3.69
Direct report	3		3.00	LOW	3.65	3.87
Second-level report	3		3.33	LOW	4.12	3.80
Peer/Team member	5		4.40	HIGH	3.69	3.87
Self	1		3.00	-	3.82	3.81
30. Considering alternative courses of action for challenging problems.						
Manager	1		4.00	-	3.50	3.62
Direct report	3		3.67	LOW	3.61	3.83
Second-level report	3		3.67	LOW	4.12	3.81
Peer/Team member	5		4.00	HIGH	3.62	3.78
Self	1		3.00	-	3.82	3.70
31. Thinking in a logical manner.						
Manager	1		4.00	-	3.33	3.78
Direct report	3		3.67	LOW	3.65	3.99
Second-level report	3		3.33	LOW	4.22	3.91
Peer/Team member	5		4.20	MED	3.75	3.94
Self	1		3.00	-	3.55	3.87

PAT SAMPLE

SECTION III: Item Results

Interpersonal Skills

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
32. Developing trust and openness with coworkers.						
Manager	1		4.00	-	3.50	3.72
Direct report	3		2.33	LOW	3.38	3.62
Second-level report	3		3.33	LOW	4.00	3.59
Peer/Team member	5		3.20	HIGH	3.63	3.82
Self	1		3.00	-	3.82	3.83
33. Interacting effectively with all types of individuals.						
Manager	1		4.00	-	3.75	3.67
Direct report	3		2.67	LOW	3.47	3.63
Second-level report	3		3.33	LOW	4.00	3.62
Peer/Team member	5		3.60	HIGH	3.71	3.78
Self	1		3.00	-	3.73	3.71
34. Focusing objectively on the facts in conflict situations.						
Manager	1		4.00	-	3.25	3.51
Direct report	3		3.33	LOW	3.37	3.67
Second-level report	3		3.33	LOW	4.00	3.62
Peer/Team member	5		3.80	HIGH	3.57	3.69
Self	1		2.00	-	3.40	3.50
35. Expressing opposing viewpoints in a tactful manner.						
Manager	1		3.00	-	3.17	3.50
Direct report	3		3.33	LOW	3.43	3.63
Second-level report	3		3.67	LOW	4.11	3.55
Peer/Team member	5		3.60	MED	3.56	3.63
Self	1		3.00	-	3.55	3.33

PAT SAMPLE

SECTION III: Item Results

Giving Feedback

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
36. Giving other employees an appropriate amount of feedback about their work performance.						
Manager	1		3.00	-	3.00	3.31
Direct report	3		3.33	LOW	3.37	3.40
Second-level report	3		3.00	LOW	3.78	3.47
Peer/Team member	5		3.60	HIGH	3.57	3.50
Self	1		2.00	-	3.27	3.09
37. Motivating others through the use of feedback.						
Manager	1		3.00	-	2.92	3.29
Direct report	3		3.00	LOW	3.20	3.32
Second-level report	3		2.67	LOW	3.67	3.36
Peer/Team member	5		3.60	HIGH	3.43	3.44
Self	1		2.00	-	3.45	3.14
38. Providing specific work-oriented feedback.						
Manager	1		3.00	-	3.00	3.39
Direct report	3		3.33	LOW	3.25	3.42
Second-level report	3		2.67	LOW	3.67	3.43
Peer/Team member	5		3.60	HIGH	3.49	3.52
Self	1		2.00	-	3.36	3.20

PAT SAMPLE

SECTION III: Item Results

Receiving Feedback

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
39. Encouraging other employees to give him/her work-related feedback.						
Manager	1		3.00	-	3.00	3.42
Direct report	3		3.00	LOW	3.25	3.47
Second-level report	3		3.00	LOW	3.78	3.51
Peer/Team member	5		3.80	HIGH	3.52	3.55
Self	1		3.00	-	3.36	3.27
40. Accepting feedback from all types of employees.						
Manager	1		3.00	-	3.17	3.48
Direct report	3		2.67	LOW	3.29	3.56
Second-level report	3		3.00	LOW	3.75	3.57
Peer/Team member	5		3.60	HIGH	3.51	3.60
Self	1		4.00	-	3.73	3.44
41. Making appropriate changes based on input from others.						
Manager	1		3.00	-	3.00	3.53
Direct report	3		3.00	LOW	3.23	3.46
Second-level report	3		2.67	LOW	3.67	3.45
Peer/Team member	5		3.60	HIGH	3.49	3.60
Self	1		2.00	-	3.45	3.39

PAT SAMPLE

SECTION III: Item Results

Top Items
Manager

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
1. Following through on work commitments. (Integrity)	1		5.00	-	3.50	3.92
21. Communicating a clear direction and vision to others. (Leadership)	1		5.00	-	3.33	3.36
2. Conducting work activities according to the highest ethical standards. (Integrity)	1		4.00	-	3.58	4.08
4. Taking responsibility for his/her actions. (Integrity)	1		4.00	-	3.75	3.95
5. Supporting a work environment which values a broad range of experiences, backgrounds, and points of view. (Respect for the Individual)	1		4.00	-	3.58	3.76
7. Treating every employee with dignity and respect. (Respect for the Individual)	1		4.00	-	3.75	3.87
8. Realizing the benefits of diverse opinions. (Respect for the Individual)	1		4.00	-	3.58	3.63
9. Cooperating with others to achieve goals. (Teamwork)	1		4.00	-	4.08	3.86
11. Working to turn conflict into "win-win" situations. (Teamwork)	1		4.00	-	3.50	3.59
12. Contributing actively to group projects. (Teamwork)	1		4.00	-	3.58	3.89
13. Developing original, creative, innovative approaches to work situations. (Innovation and Continuous Improvement)	1		4.00	-	3.67	3.58
14. Taking calculated risks to improve work processes. (Innovation and Continuous Improvement)	1		4.00	-	3.42	3.41

PAT SAMPLE

SECTION III: Item Results

Top Items
Manager

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
15. Using mistakes as opportunities for learning. (Innovation and Continuous Improvement)	1		4.00	-	3.67	3.62
16. Monitoring progress toward high-quality outcomes. (Innovation and Continuous Improvement)	1		4.00	-	3.17	3.55
17. Communicating honestly with everyone, regardless of level or functional area. (Honest Communication)	1		4.00	-	4.08	3.89
18. Sharing appropriate information with other employees in a timely manner. (Honest Communication)	1		4.00	-	3.25	3.67
20. Accurately sharing relevant information with individuals external to . (Honest Communication)	1		4.00	-	3.64	3.70
22. Inspiring others to achieve their full potential. (Leadership)	1		4.00	-	3.08	3.33
23. Recognizing others for their contributions. (Leadership)	1		4.00	-	3.08	3.64
24. Leading by example. (Leadership)	1		4.00	-	3.08	3.64
25. Seeing change and uncertainty as new opportunities for improvement. (Flexibility)	1		4.00	-	3.25	3.44
26. Adapting quickly to meet changing organizational needs. (Flexibility)	1		4.00	-	3.50	3.63
27. Remaining open to new ideas. (Flexibility)	1		4.00	-	3.58	3.66
28. Making decisions in a timely manner. (Judgment and Decision Making)	1		4.00	-	3.17	3.59

PAT SAMPLE

SECTION III: Item Results

Top Items
Manager

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
29. Using factual information when making decisions. (Judgment and Decision Making)	1		4.00	-	3.08	3.69
30. Considering alternative courses of action for challenging problems. (Judgment and Decision Making)	1		4.00	-	3.50	3.62
31. Thinking in a logical manner. (Judgment and Decision Making)	1		4.00	-	3.33	3.78
32. Developing trust and openness with coworkers. (Interpersonal Skills)	1		4.00	-	3.50	3.72
33. Interacting effectively with all types of individuals. (Interpersonal Skills)	1		4.00	-	3.75	3.67
34. Focusing objectively on the facts in conflict situations. (Interpersonal Skills)	1		4.00	-	3.25	3.51

PAT SAMPLE

SECTION III: Item Results

Bottom Items
Manager

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
41. Making appropriate changes based on input from others. (Receiving Feedback)	1		3.00	-	3.00	3.53
40. Accepting feedback from all types of employees. (Receiving Feedback)	1		3.00	-	3.17	3.48
39. Encouraging other employees to give him/her work-related feedback. (Receiving Feedback)	1		3.00	-	3.00	3.42
38. Providing specific work-oriented feedback. (Giving Feedback)	1		3.00	-	3.00	3.39
37. Motivating others through the use of feedback. (Giving Feedback)	1		3.00	-	2.92	3.29
36. Giving other employees an appropriate amount of feedback about their work performance. (Giving Feedback)	1		3.00	-	3.00	3.31
35. Expressing opposing viewpoints in a tactful manner. (Interpersonal Skills)	1		3.00	-	3.17	3.50
19. Listening attentively to others' concerns or ideas. (Honest Communication)	1		3.00	-	3.17	3.64
10. Developing positive working relationships with other employees. (Teamwork)	1		3.00	-	3.50	3.81
6. Recognizing the importance of everyone's work. (Respect for the Individual)	1		3.00	-	3.42	3.73
3. Acting fairly toward all employees. (Integrity)	1		3.00	-	3.42	3.87

PAT SAMPLE

SECTION III: Item Results

Top Items
Direct report

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
21. Communicating a clear direction and vision to others. (Leadership)	3		4.33	LOW	3.54	3.61
1. Following through on work commitments. (Integrity)	3		4.00	LOW	3.69	3.90
26. Adapting quickly to meet changing organizational needs. (Flexibility)	3		4.00	MED	3.81	3.84
28. Making decisions in a timely manner. (Judgment and Decision Making)	3		4.00	MED	3.62	3.74
2. Conducting work activities according to the highest ethical standards. (Integrity)	3		3.67	LOW	3.68	4.05
4. Taking responsibility for his/her actions. (Integrity)	3		3.67	LOW	3.83	4.04
6. Recognizing the importance of everyone's work. (Respect for the Individual)	3		3.67	LOW	3.58	3.80
9. Cooperating with others to achieve goals. (Teamwork)	3		3.67	LOW	3.84	4.00
10. Developing positive working relationships with other employees. (Teamwork)	3		3.67	LOW	3.62	3.77
11. Working to turn conflict into "win-win" situations. (Teamwork)	3		3.67	LOW	3.69	3.70
12. Contributing actively to group projects. (Teamwork)	3		3.67	LOW	3.81	3.92
16. Monitoring progress toward high-quality outcomes. (Innovation and Continuous Improvement)	3		3.67	LOW	3.68	3.78
18. Sharing appropriate information with other employees in a timely manner. (Honest Communication)	3		3.67	LOW	3.35	3.58

PAT SAMPLE

SECTION III: Item Results

Top Items
Direct report

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
24. Leading by example. (Leadership)	3		3.67	LOW	3.49	3.67
25. Seeing change and uncertainty as new opportunities for improvement. (Flexibility)	3		3.67	HIGH	3.67	3.76
30. Considering alternative courses of action for challenging problems. (Judgment and Decision Making)	3		3.67	LOW	3.61	3.83
31. Thinking in a logical manner. (Judgment and Decision Making)	3		3.67	LOW	3.65	3.99

PAT SAMPLE

SECTION III: Item Results

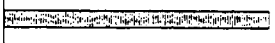
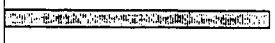
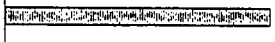
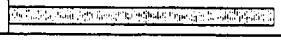
Bottom Items
Direct report

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
32. Developing trust and openness with coworkers. (Interpersonal Skills)	3		2.33	LOW	3.38	3.62
40. Accepting feedback from all types of employees. (Receiving Feedback)	3		2.67	LOW	3.29	3.56
33. Interacting effectively with all types of individuals. (Interpersonal Skills)	3		2.67	LOW	3.47	3.63
41. Making appropriate changes based on input from others. (Receiving Feedback)	3		3.00	LOW	3.23	3.46
39. Encouraging other employees to give him/her work-related feedback. (Receiving Feedback)	3.		3.00	LOW	3.25	3.47
37. Motivating others through the use of feedback. (Giving Feedback)	3		3.00	LOW	3.20	3.32
29. Using factual information when making decisions. (Judgment and Decision Making)	3		3.00	LOW	3.65	3.87
27. Remaining open to new ideas. (Flexibility)	3		3.00	LOW	3.54	3.77
3. Acting fairly toward all employees. (Integrity)	3		3.00	LOW	3.54	3.81

PAT SAMPLE

SECTION III: Item Results

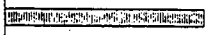
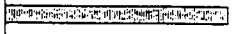
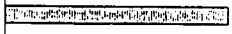
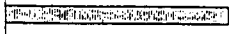
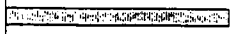
Top Items
Second-level report

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
3. Acting fairly toward all employees. (Integrity)	3		3.67	LOW	4.22	3.82
10. Developing positive working relationships with other employees. (Teamwork)	3		3.67	LOW	4.33	3.76
13. Developing original, creative, innovative approaches to work situations. (Innovation and Continuous Improvement)	3		3.67	LOW	4.22	3.71
21. Communicating a clear direction and vision to others. (Leadership)	3		3.67	LOW	4.11	3.66
26. Adapting quickly to meet changing organizational needs. (Flexibility)	3		3.67	LOW	4.33	3.84
30. Considering alternative courses of action for challenging problems. (Judgment and Decision Making)	3		3.67	LOW	4.12	3.81
35. Expressing opposing viewpoints in a tactful manner. (Interpersonal Skills)	3		3.67	LOW	4.11	3.55

PAT SAMPLE

SECTION III: Item Results

Bottom Items
Second-level report

Items	Valid N	Mean Graph 1 2 3 4 5	Mean	Agreement	Group Mean	Mean
41. Making appropriate changes based on input from others. (Receiving Feedback)	3		2.67	LOW	3.67	3.45
38. Providing specific work-oriented feedback. (Giving Feedback)	3		2.67	LOW	3.67	3.43
37. Motivating others through the use of feedback. (Giving Feedback)	3		2.67	LOW	3.67	3.36
40. Accepting feedback from all types of employees. (Receiving Feedback)	3		3.00	LOW	3.75	3.57
39. Encouraging other employees to give him/her work-related feedback. (Receiving Feedback)	3		3.00	LOW	3.78	3.51
36. Giving other employees an appropriate amount of feedback about their work performance. (Giving Feedback)	3		3.00	LOW	3.78	3.47
17. Communicating honestly with everyone, regardless of level or functional area. (Honest Communication)	3		3.00	LOW	3.89	3.80
8. Realizing the benefits of diverse opinions. (Respect for the Individual)	3		3.00	LOW	4.11	3.70
5. Supporting a work environment which values a broad range of experiences, backgrounds, and points of view. (Respect for the Individual)	3		3.00	LOW	4.00	3.86
4. Taking responsibility for his/her actions. (Integrity)	3		3.00	LOW	4.00	4.00

PAT SAMPLE

SECTION III: Item Results

Top Items
Peer/Team member

Items	Valid N	Mean Graph 1 2 3 4 5	Mean	Agreement	Group Mean	Mean
1. Following through on work commitments. (Integrity)	5		4.60	HIGH	3.95	4.03
4. Taking responsibility for his/her actions. (Integrity)	5		4.60	HIGH	3.95	4.04
14. Taking calculated risks to improve work processes. (Innovation and Continuous Improvement)	5		4.60	HIGH	3.64	3.56
16. Monitoring progress toward high-quality outcomes. (Innovation and Continuous Improvement)	5		4.60	HIGH	3.77	3.73
26. Adapting quickly to meet changing organizational needs. (Flexibility)	5		4.60	HIGH	3.87	3.75

PAT SAMPLE

SECTION III: Item Results

Bottom Items
Peer/Team member

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
32. Developing trust and openness with coworkers. (Interpersonal Skills)	5		3.20	HIGH	3.63	3.82
41. Making appropriate changes based on input from others. (Receiving Feedback)	5		3.60	HIGH	3.49	3.60
40. Accepting feedback from all types of employees. (Receiving Feedback)	5		3.60	HIGH	3.51	3.60
38. Providing specific work-oriented feedback. (Giving Feedback)	5		3.60	HIGH	3.49	3.52
37. Motivating others through the use of feedback. (Giving Feedback)	5		3.60	HIGH	3.43	3.44
36. Giving other employees an appropriate amount of feedback about their work performance. (Giving Feedback)	5		3.60	HIGH	3.57	3.50
35. Expressing opposing viewpoints in a tactful manner. (Interpersonal Skills)	5		3.60	MED	3.56	3.63
33. Interacting effectively with all types of individuals. (Interpersonal Skills)	5		3.60	HIGH	3.71	3.78
27. Remaining open to new ideas. (Flexibility)	5		3.60	HIGH	3.62	3.75
23. Recognizing others for their contributions. (Leadership)	5		3.60	HIGH	3.71	3.77
19. Listening attentively to others' concerns or ideas. (Honest Communication)	5		3.60	HIGH	3.68	3.81
18. Sharing appropriate information with other employees in a timely manner. (Honest Communication)	5		3.60	LOW	3.56	3.80
11. Working to turn conflict into "win-win" situations. (Teamwork)	5		3.60	LOW	3.65	3.72

PAT SAMPLE

SECTION III: Item Results

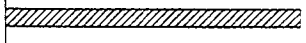
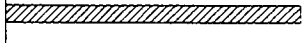
Bottom Items
Peer/Team member

Items	Valid N	Mean Graph 1 2 3 4 5	Mean	Agreement	Group Mean	Mean
8. Realizing the benefits of diverse opinions. (Respect for the Individual)	5		3.60	LOW	3.71	3.80
5. Supporting a work environment which values a broad range of experiences, backgrounds, and points of view. (Respect for the Individual)	5		3.60	HIGH	3.79	3.90

PAT SAMPLE

SECTION III: Item Results

Top Items
Self

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
1. Following through on work commitments. (Integrity)	1		4.00	-	3.90	3.91
3. Acting fairly toward all employees. (Integrity)	1		4.00	-	3.91	4.07
4. Taking responsibility for his/her actions. (Integrity)	1		4.00	-	4.09	4.22
9. Cooperating with others to achieve goals. (Teamwork)	1		4.00	-	3.91	3.97
28. Making decisions in a timely manner. (Judgment and Decision Making)	1		4.00	-	3.82	3.64
40. Accepting feedback from all types of employees. (Receiving Feedback)	1		4.00	-	3.73	3.44

PAT SAMPLE

SECTION III: Item Results

Bottom Items
Self

Items	Valid N	Mean Graph (1 2 3 4 5)	Mean	Agreement	Group Mean	Mean
41. Making appropriate changes based on input from others. (Receiving Feedback)	1		2.00	-	3.45	3.39
38. Providing specific work-oriented feedback. (Giving Feedback)	1		2.00	-	3.36	3.20
37. Motivating others through the use of feedback. (Giving Feedback)	1		2.00	-	3.45	3.14
36. Giving other employees an appropriate amount of feedback about their work performance. (Giving Feedback)	1		2.00	-	3.27	3.09
34. Focusing objectively on the facts in conflict situations. (Interpersonal Skills)	1		2.00	-	3.40	3.50
22. Inspiring others to achieve their full potential. (Leadership)	1		2.00	-	3.50	3.44
21. Communicating a clear direction and vision to others. (Leadership)	1		2.00	-	3.27	3.41
19. Listening attentively to others' concerns or ideas. (Honest Communication)	1		2.00	-	3.55	3.48
18. Sharing appropriate information with other employees in a timely manner. (Honest Communication)	1		2.00	-	3.60	3.79
11. Working to turn conflict into "win-win" situations. (Teamwork)	1		2.00	-	3.80	3.57

PAT SAMPLE

SECTION IV: Comments

This employee should start doing... because...

Manager

There were no comments for this group

Direct report

[-----] should start acting like an adult instead of a [****] child because it is distracting at work.

Second-level report

There were no comments for this group

Peer/Team member

There were no comments for this group

Self

There were no comments for this group

PAT SAMPLE

SECTION IV: Comments

This employee should continue doing... because...

Manager

There were no comments for this group

Direct report

[-----] should continue providing good feedback to his team members.

Demonstrating his leadership abilities by taking charge of projects.

Second-level report

There were no comments for this group

Peer/Team member

There were no comments for this group

Self

There were no comments for this group

PAT SAMPLE

SECTION IV: Comments

This employee should stop doing... because...

Manager

There were no comments for this group

Direct report

[-----] should stop fighting with [-----] about work assignments.

Second-level report

There were no comments for this group

Peer/Team member

There were no comments for this group

Self

There were no comments for this group

APPENDIX B

SAMPLE PARTICIPANT INTERVIEW PACKET

Multi-rater Feedback Structured Interview

Name _____

Date _____

Date when Feedback Report was received _____

Based on the feedback you received from your 360-degree feedback report, indicate with a check mark your three highest rated dimensions from each feedback source...

	Manager	Peer	Direct Report	Second-level Report
Integrity				
Respect for the Individual				
Teamwork				
Innovation & Continuous Improvement				
Honest Communication				
Leadership				
Flexibility				
Judgment and Decision Making				
Interpersonal Skills				
Giving Feedback				
Receiving Feedback				

Based on the feedback you received from your 360-degree feedback report, indicate with a check mark your three lowest rated dimensions from each feedback source...

	Manager	Peer	Direct Report	Second-level Report
Integrity				
Respect for the Individual				
Teamwork				
Innovation & Continuous Improvement				
Honest Communication				
Leadership				
Flexibility				
Judgment and Decision Making				
Interpersonal Skills				
Giving Feedback				
Receiving Feedback				

1. *After participating in 360-degree feedback, which dimensions have you worked on improving the most. Why?.*

2. *Describe the type of activities in which you have participated in order to improve the dimensions indicated above. (Examples may include, attending training, having a meeting with feedback givers such as your manager, peers, or direct reports (formal or informal), volunteering for developmental work assignments, reviewing materials such as books, magazines, audiotapes, videotapes, self-monitoring one's behaviors in the workplace.)*

3. *On a scale of 1 to 10 with 10 being the highest, indicate how much effort you have spent utilizing the information you received on your feedback report?*

4. *Describe any future plans or goals you have for utilizing the 360 feedback you received? Goals for the next month? Goals for the next 3-6 months?*

5. *Describe a few situations on the job, since participating in 360-degree feedback, where you utilized the information you received in order to improve your work performance.*

6. *Which feedback source provided you with the most useful information about your strengths in the workplace? Please explain.*

7. *Which feedback source provided you with the most useful information about your developmental needs (i.e., areas needed for improvement) in the workplace? Please explain.*

8. *Did you receive open-ended comments when you received your 360 feedback report?*

9. *Generally, name some topics for which you received open-ended comments?*

10. *Which feedback source provided you with the most useful open-ended comments?*

11. *What changes have you made as a result of the open-ended comments you received?*

12. *Of all of the information on your feedback report that you received about your performance,*

a) *what information did you find to be the most useful (ratings vs. comments and from which source)*

b) *what information has had the greatest impact on any changes you have made or are planning to make on your job. Please explain.*

Work Environment Preference Questionnaire

Part I: Please indicate the degree to which you agree with the following statements.

1 - Strongly Disagree
2 - Disagree
3 - Neither Agree nor Disagree
4 - Agree
5 - Strongly Agree

1.	For me, development of my work ability is important enough to take risks	1	2	3	4	5
2.	I enjoy it when others at work are aware of how well I am doing	1	2	3	4	5
3.	Avoiding a show of low ability is more important to me than learning a new skill	1	2	3	4	5
4.	I often look for opportunities to develop new skills and knowledge	1	2	3	4	5
5.	I often read materials related to my work to improve my ability	1	2	3	4	5
6.	I prefer to avoid situations at work where I might perform poorly	1	2	3	4	5
7.	I prefer to work in situations that require a high level of ability and talent	1	2	3	4	5
8.	I prefer to work on projects where I can prove my ability to others	1	2	3	4	5
9.	I am willing to select a challenging work assignment that I can learn a lot from	1	2	3	4	5
10.	I try to figure out what it takes to prove my ability to others at work	1	2	3	4	5
11.	I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others	1	2	3	4	5
12.	I would rather prove my ability on a task that I can do well at than to try a new task	1	2	3	4	5
13.	I'm concerned about taking on a task at work if my performance would reveal that I had low ability	1	2	3	4	5
14.	I enjoy challenging and difficult tasks at work where I'll learn new skills	1	2	3	4	5
15.	I'm concerned with showing that I can perform better than my coworkers	1	2	3	4	5
16.	When I don't understand something at work, I prefer to avoid asking what might appear to others to be "dumb questions" that I should know the answers to already	1	2	3	4	5

Part II: Please indicate how much more of the following items you would like to have in your job.

1 - No More
2 - Slightly More
3 - Somewhat More
4 - Much More
5 - Very Much More

1. Achieving something that I personally value	1	2	3	4	5
2. Being given recognition for my efforts from my co-workers when deserved	1	2	3	4	5
3. Challenging work	1	2	3	4	5
4. Mutual trust with my manager	1	2	3	4	5
5. Chances for advancement in my job	1	2	3	4	5
6. Consideration and understanding from my co-workers	1	2	3	4	5
7. Respect from my manager	1	2	3	4	5
8. Using my skills to the maximum	1	2	3	4	5
9. Working in an environment where the feelings of others are considered	1	2	3	4	5
10. Doing my own work and letting others do theirs	1	2	3	4	5
11. Extending my range of abilities	1	2	3	4	5
12. Openness and honesty between my manager and me	1	2	3	4	5
13. Frequent promotions	1	2	3	4	5
14. Increase in my pay level	1	2	3	4	5
15. Mutual trust with my co-workers	1	2	3	4	5
16. Being given recognition for my efforts from my manager when deserved	1	2	3	4	5
17. Good pay for my work	1	2	3	4	5
18. Openness and honesty with my co-workers	1	2	3	4	5
19. Opportunity to talk to those around me	1	2	3	4	5
20. Receiving promotions to a higher level job	1	2	3	4	5
21. Respect from my co-workers	1	2	3	4	5
22. Frequent raises in pay	1	2	3	4	5
23. The opportunity to learn new things	1	2	3	4	5
24. Consideration and understanding from my manager	1	2	3	4	5
25. Working in group settings	1	2	3	4	5

Part III: Please rank order the importance of each of these items to you.

_____ Pay
_____ Promotion
_____ Professional development
_____ Professional recognition from my co-workers
_____ Professional recognition from my manager
_____ Working together with others

APPENDIX C

POWER ANALYSIS

POWER ANALYSIS

Significance criterion	$p < .05$
Desired power	.80
	.85
	.90
k_b(number of independent variables)	4[a]
L[b]	11.94 for power of .80
	13.42 for power of .85
	15.41 for power of .90
f^2; effect size	$f^2 = .15$[c]
n^*; number of subjects[d]	85 subjects for power of .80
	95 subjects for power of .85
	108 subjects for power of .90

[a]based on largest equation
[b]from Table E.2 in Cohen and Cohen (1983)
[c]based on a medium effect size as defined by Cohen (1988)
[d]based on the following equation from Cohen and Cohen (1983): $n^* = L/f^2 + k + 1$

VITA

VITA

Sabine B. Maetzke was born in Berlin, Germany on July 29, 1967. In 1971, she and her parents immigrated to the United States of America and settled in Cape Coral, Florida. She attended elementary, middle, and high school in Cape Coral and graduated from Cape Coral High School in 1985. She received her Bachelor of Science Degree in Psychology from the University of Florida in 1989. She received a Master of Science Degree in Industrial and Organizational Psychology from the University of Central Florida. While completing her Master's Degree, Sabine participated in two internships. The first was a summer internship in the Corporate Compensation Department of the Coca Cola Company in Atlanta, Georgia. The second internship was completed at Wilson Learning Corporation in Orlando, Florida during her second year in the Master's program. In August 1993, Sabine entered the Industrial and Organizational Psychology Program at the University of Tennessee.

While completing her degree, Sabine has been involved in a variety of applied projects including working on research contracts with the Quaker Oats Company and the Frito Lay Company where she supervised an undergraduate student in research. She has also taught an undergraduate management course and participated as an assessor for the Executive MBA and Physician's MBA programs at the University of Tennessee. Additionally, Sabine has worked in the Corporate Human Resources department of the Tennessee Valley Authority for three years. During her tenure at the university, Sabine has also been an independent consultant for the Tennessee Assessment Center.

As a student at the University of Tennessee, Sabine has published a refereed journal article, a book section, and presented numerous papers at national and regional conferences. She is affiliated with the Society for Industrial and Organizational Psychology and the Southern Management Association.