

PRELIMINARY INVESTIGATION INTO THE RELATIONSHIP  
BETWEEN OCCUPATIONAL ATTRIBUTIONAL  
STYLES AND EMPLOYEE REACTION TO  
MULTISOURCE FEEDBACK

by

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A Dissertation Presented in Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Philosophy

Capella University

December 2005

UMI Number: 3205717

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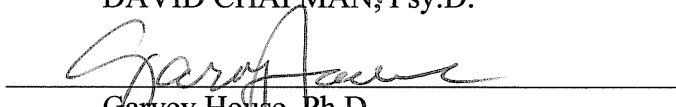
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## Abstract

The study conducted a preliminary investigation into the relationship between participants' occupational attributional styles, measured by the revised Occupational Attributional Style Questionnaire, and how participants assigned specific attributional explanations, measured by the Causal Dimension Scale II, to a positive and negative hypothetical multisource feedback performance appraisal. The research study was undertaken to find out if occupational attributional style could be considered a cognitive moderator involved in determining how multisource feedback recipients resolve the self-other discrepancies associated with receiving multisource feedback. A secondary purpose of the research study was to test the Occupational Attributional Style Questionnaire's ability to predict participants' attributional explanations to specific events. The study utilized a quasi-experimental approach that used a mixed, within-subject and matched-subject, research design. The independent variables consisted of a positive and a negative hypothetical multisource feedback performance appraisal, and the dependent variables consisted of participants' subscale and composite scores on the Causal Dimension Scale II. A convenience sample of 43 working adults completed the study. Results indicated that many participants drifted away from their occupational attributional style when assigning specific attributional explanations to a positive and negative hypothetical multisource feedback performance appraisal; hence, occupational attributional style does not appear to be a significant enough cognitive moderator for practitioners to use in anticipating or predicting how recipients may react to multisource feedback. The implication of the study indicates that the revised Occupational Attributional Style Questionnaire is not a more robust attributional style measure than previously developed global or specific attributional style measures.

## Dedication

I dedicate the dissertation to my wife Karen, for all the hours she spent correcting grammar and sentence structure. She was truly my second set of eyes. In addition, I dedicate the dissertation to my sons Ryan, age 14, and Jaymon, age 11.

## Acknowledgments

I would like to thank Dr. David Chapman, my faculty mentor and dissertation chair, and committee members Dr. Phyliss Cooke, Dr. Donna DiMatteo, and Dr. Robert Hockin for their assistance and scholarly feedback.

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## CHAPTER 1. INTRODUCTION

A preliminary study was conducted to investigate the relationship between participants' occupational attributional styles and their attributional explanations to a positive and negative hypothetical multisource feedback (MSF) performance appraisal. The primary purpose of the study was to find out if occupational attributional style acts as a cognitive moderator involved in determining how MSF recipients reconcile the self-other discrepancies associated with receiving MSF. A secondary purpose of the study was to test a relatively new attributional style measure, the revised Occupational Attributional Style Questionnaire (r-OASQ), on its ability to predict participants' specific attributional explanations, measured with the Causal Dimension Scale II (CDSII), to a positive and negative hypothetical MSF performance appraisal. Statistically significant results would preliminarily indicate that occupational attributional style acts as a cognitive moderator in determining how recipients resolve the self-other discrepancies associated with MSF, and would preliminarily indicate that the r-OASQ is a more robust measure of attributional style than previously developed global or specific attributional style measures, which have not been able to predict individuals' attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991). This study is significant because no research study to date has investigated the relationship between participants' occupational attributional styles, as measured by the r-OASQ, and how those attributional styles may act upon the cognitive processes participants utilize to resolve MSF self-other discrepancies, as measured by the CDSII.

## Background

### *Multisource Feedback*

The present day conceptualization of multisource feedback can be traced to the human relations movement of the 1950s and 1960s, when organizations attempted to improve organizational processes through various communication strategies, which included surveys and feedback processes (Waldman, Atwater, & Antonioni, 1998). The first measure to incorporate MSF was developed by Edward Lawler in 1967 (Hedge, Borman, & Birkeland, 2001). In that year, Edward Lawler published an article on a measure he called the Multitrait-Multirater approach to measuring job performance of managers (Hedge et al.). Lawler touted that his approach was superior to more traditional single rater methods of evaluating managerial performance (Hedge et al.). In 1985, the term *360-degree feedback* was first introduced and registered as a trademark by the American consulting firm Teams International (Bracken, Timmreck, & Church, 2001; Jansen & Vloeberghs, 1999). Since 1985 the term 360-degree feedback and multisource feedback processes have spread rapidly throughout the business industry (Bracken et al.; Jansen & Vloeberghs, 1999).

As a performance improvement tool, MSF has become a popular human resource intervention and continues to grow in popularity (Brett & Atwater, 2001; Wimer, 2002). Antonioni (1996) identified in a survey of 280 Midwest companies that 25% used annual upward performance appraisals, 18% used peer performance appraisals, and about 12% used full 360-degree performance appraisals. More recent data by Bracken et al. (2001) estimates that over one-third of companies in the United States use some type of MSF process for managers in their organizations. Examples of organizations that use multisource feedback include Chrysler, AT&T, and Bank of America (Antonioni, 1996). In regards to organizations outside of the

United States, Fletcher (1998) reports that since the early 1990s, multirater feedback has spread quickly in both the private and public sectors in the United Kingdom.

Pfau and Kay (2002) state that organizations have widely accepted MSF as an effective performance management tool. One reason for this occurrence relates to the fact that many organizations recognize the multidimensional nature of jobs; thus, making it necessary to give employees multiple types of feedback to assist them in their development and performance improvement process (London & Smither, 1995). A second reason for MSF becoming widely accepted is due to its unique ability to be utilized for a variety of purposes including performance appraisals, management and executive development, succession planning, team development, and reorganization (Bracken et al. 2001; Church & Bracken, 1997).

#### *Research Lags Behind Multisource Feedback Growth*

Research has been slow to catch up with multisource feedback's fast expansion. As a result, researchers do not yet have a clear idea of why some recipients react positively or negatively to MSF, and why MSF is sometimes effective and why it is sometimes ineffective in creating performance improvement. Yammarino and Atwater (1997) state that there remains much to be learned about the processes involved in multisource feedback. Church and Bracken (1997) state that MSF systems have become one of the most popular but least understood management interventions in recent years, and that research has only begun to identify all the significant moderators involved in MSF. Becton and Schraeder (2004) state that despite the increasing popularity of MSF, practical research related to it is relatively scant.

#### *Multisource Feedback Theory*

Researchers have theorized that the underlying psychological process involved in multisource feedback is the act of reconciling the difference between self-image compared to



other-image (Yammarino & Atwater, 1997). In other words, when a discrepancy exists between how recipients view their performance and how others view their performance, i.e., a self-other discrepancy, a psychological process occurs which leads to a positive or negative reaction within the recipient. Yammarino and Atwater (1997) developed four different typologies of self-other discrepancies that could occur as a result of receiving multisource feedback: over-estimators, under-estimators, in-agreement good, and in-agreement poor.

### *Attributional Style*

The concept of attributional style is well established in the psychological literature (Heaven, 1994), and it can best be defined as a person's tendency to make consistent causal explanations across events and situations (Abramson, Seligman, & Teasdale, 1978; Kent & Martinko, 1995; Martinko, Gundlach, & Douglas, 2002). Martinko et al. (2002) states, "The notion of attributional style suggests that style is a trait-like individual difference factor that biases the types of attributions individuals are likely to make across situations" (p. 44).

Seligman (1990) defines attributional style as a developmentally acquired personality characteristic divided into two basic typologies, the optimistic explanatory style type and the pessimistic explanatory style type. The optimistic style type tends to create attributional explanations for failures that are related to external, unstable, and specific factors; where as, the pessimistic style type tends to create attributional explanations for failures that are related to internal, stable, and global factors (Seligman, 1990).

### *Attributional Style as a Cognitive Moderator*

Martinko and Thomson (1998) report that over the past 25 years a substantial body of literature has been conducted in an attempt to explain the role attributions play in organizational settings. A review of the body of literature revealed extensive research available on the role

attributions play as a cognitive moderator in how supervisors rate and provide feedback to subordinates and how subordinates self-rate and receive feedback. Lacking, however, was research on whether occupational attributional style acts as a cognitive moderator in how individuals resolve the self-other discrepancies resulting from MSF performance appraisal information. Consequently, it appeared to be a logical connection that an investigation was needed into the role that occupational attributional style plays in how individuals resolve the self-other discrepancies associated with receiving multisource feedback.

### Statement of the Problem

#### *Multisource Feedback: Not a Simple Intervention*

The common assumption that feedback will improve performance may not always be true (DeNisi & Kluger, 2000). Managers, practitioners, and even scholars commonly believe, without question, that the simple act of providing employees with performance feedback will create performance improvement (DeNisi & Kluger, 2000). However, numerous researchers have found that the act of providing feedback is not a simple intervention to improve employee performance. Kluger and DeNisi (1996) conducted a historical review and meta-analysis of traditional and multisource feedback and found that in over one-third (38%) of feedback cases, no matter if it was positive or negative, feedback actually lowered subsequent performance. Consequently, Kluger and DeNisi (1996) concluded in their meta-analysis that it is wrong to simply assume that providing feedback to recipients will always improve performance.

Three additional researchers also found problems with either the long term acceptance of MSF or with its general effectiveness. (A) Fletcher (1998) found that as many as half of all U.S. firms that implemented MSF appraisal systems dropped them, within two years, due to negative

attitudes from employees and inflated performance ratings. (B) Smither, London, and Reilly (2005) conducted a meta-analysis of 24 longitudinal MSF studies and found generally small recipient performance improvement. As a result, Smither et al. state that practitioners should not expect to see extensive performance gains after recipients receive MSF. (C) Seifert, Yukl, and McDonald (2003) reviewed 14 multisource studies that assessed the effects of MSF on managers and leaders. Only 4 of the 14 studies used experimentally controlled conditions, and of those 4 studies only 1 study found clear evidence that MSF was successful.

The above listed research outcomes point out the need for further investigation into the impact MSF has upon recipients and organizations that utilize MSF to evaluate employee and manager performance. Without further research, organizations are likely to continue dropping the use of MSF altogether, or minimize its utilization to the point of limiting its potential to improve work performance and workplace relationships.

#### *Multisource Feedback Theory Lacks a Cognitive Explanation*

Although Yammarino and Atwater's (1997) four typologies of self-discrepancies help to explain the different reactions that develop in recipients as a result of receiving MSF, they do not explain the cognitive processes underlying how recipients develop or resolve the self-other discrepancies. For example, the typologies do not explain the cognitive processes over-estimators and under-estimators engage in to become over-estimators or under-estimators of their own performance. Additionally, the typologies do not explain the cognitive processes over-estimators or under-estimators engage in to resolve discrepancies between their own self-performance evaluation and how others evaluate their performance. As a final point, a literature review revealed that the general body of research literature on MSF does not provide an explanation, in cognitive terms, of how recipients develop or resolve self-other discrepancies.

*Attributional Style Measures are Poor Predictors of Attributional Explanations*

Research has demonstrated that when global and specific attributional trait measures have attempted to predict specific causal attributions, no relationship has been found between individuals' attributional styles and attributional explanations for specific events (Russell, 1991). Maher and Nordstrom (1996) state that one would expect that a global attributional trait measure would be related to attributions for specific events; however, contrary to expectations this is not the case. Instead, research has indicated that global and specific measures of attributional styles are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991).

The poor track record that both global and specific attributional trait measures have in predicting individuals' specific attributional explanations, questions whether the concept of an attributional style is a valid construct. In other words, the inability of both global and specific attributional trait measures to predict attributional explanations suggests that either an accurate style measure has not yet been developed or the concept of people having a distinct attributional style is simply an invalid construct.

## Purpose of the Study

*Attributional Style as a Multisource Feedback Cognitive Moderator*

Brett and Atwater (2001) made the recommendation that future multisource feedback research should focus on obtaining a better understanding of the emotional and cognitive reactions that develop within recipients as a result of receiving multisource feedback. Consequently, the main purpose of this research study was to investigate whether or not occupational attributional style acts as a cognitive moderator involved in determining how

recipients resolve the self-other discrepancies that result from receiving multisource feedback. If occupational attributional style is identified as a cognitive moderator involved in the reconciliation of self-other discrepancies, then a significant MSF cognitive moderator would have been identified. As a result, the term *occupational attributional style moderator* should then be regarded as a factor for consideration prior to implementing MSF, in order to aid in preventing negative outcomes.

An additional benefit of identifying a cognitive moderator, is that a cognitive process explanation may provide further insight into why MSF is generally ineffective and does not produce the performance increase hoped for by employers (Lockyer, Violato, & Fidler, 2003; Seifert et al. 2003; Smither, London, & Reilly, 2005). Hence, a cognitive process explanation may assist in shedding light on why numerous research studies have found MSF to be generally ineffective and why some recipients develop negative reactions to MSF.

The second purpose of the study was to test the ability of the r-OASQ, as a specific attributional style measure, to predict participants' attributional explanations to a positive and negative MSF performance appraisal. Past research has shown that global and specific attributional style measures have failed to predict causal attributions to specific events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991). Therefore, if the r-OASQ is able to predict recipients' attributional explanations to specific events, it would suggest that the r-OASQ is a more robust attributional style measure than previously developed global and specific attributional style measures.

### Research Question

The basic research question under investigation was whether occupational attributional styles, measured by the r-OASQ, are significantly related to how recipients provide specific causal explanations, in terms of attributional dimensions, measured by the CDSII, to a positive and negative hypothetical multisource feedback performance appraisal.

To answer the research question, one would expect to see a consistent level of similarity and distinction in how participants define their occupational attributional style, i.e., optimistic, pessimistic, or mixed style. For example, one would expect that optimistic style participants would assign similar attributions to r-OASQ events and to MSF appraisals as other optimistic style participants. Likewise, one would expect that pessimistic and mixed style participants would assign similar attributions to r-OASQ events and to MSF appraisals as other pessimistic and mixed style participants. Conversely, one would also expect to see that participants of different styles would assign distinctively different attributions to r-OASQ events and to MSF appraisals when compared to styles other than their own. Consequently, the study's first hypothesis relates to finding a level of congruency between participants' occupational attribution styles.

Secondly, to answer the research question, one would expect to see a significant level of consistency between how participants define their occupational attributional style and how participants assign attributional explanations, at the subscale and composite level on the CDSII, after reading a positive and negative MSF appraisal. For example, one would expect that optimistic style participants would assign comparable optimistic attributions across all four CDSII attributional dimensions. Similarly, one would expect that pessimistic style participants would assign comparable pessimistic attributions across all four CDSII attributional dimensions.

Finally, one would expect that mixed style participants would assign comparable optimistic or pessimistic style responses to a positive and negative MSF appraisal, as they assigned to positive and negative events on the r-OASQ. Consequently, the study's second hypothesis relates to finding consistency between participants' occupational attributional styles and how participants assign specific attributional explanations after receiving a positive and negative MSF appraisal.

### Nature of the Study

The study was quasi-experimental in nature and utilized a mixed, within-subject and matched-subject, research design. A quasi-experimental approach was used because a convenience sample of participants were recruited for the study and all group comparisons were between nonequivalent groups. A mixed research design approach was undertaken because a mixed design allows for additional statistical test to be utilized to test for differences between the independent variables (Ray, 1997). Therefore, a within-subject design was utilized so that the participants' own performance scores could act as a source of comparison, and a match-subject design was utilized so that group score comparisons could be undertaken.

### *Quasi-Experimental Design*

Cook and Campbell (1979) state that the quasi-experimental research method is the most typical research method chosen by researchers in the social science field. Although a quasi-experimental design lacks the experimental rigors of a true experimental approach, a quasi-experimental design is still, to some extent, able to establish causation by showing significant differences in outcome variables between treatment groups that are approximately equal but not equivalent (Cook & Campbell, 1979). Causal statements become correlational statements in quasi-experimental research; therefore, it is important that researchers, who use

quasi-experimental designs, have a strong theoretical model to help them interpret the results (Rudestam & Newton, 2001). This study relies on attribution theory, for which an extensive body of research already exists, to help interpret and give meaning to the results.

A nonequivalent group design (NEGD) was utilized in the study because equivalent groups were not available to the researcher. The NEGD is probably the most frequently used design in social science research (Trochim, 2002). The NEGD is structured like a randomized pretest-posttest design; however, since the groups are not randomized, the NEGD must rely on the groups being as similar as possible (Trochim, 2002). In this study, a group of optimistic occupational attributional style participants were compared to a similar but nonrandomized group of mixed occupational attributional style participants.

#### *Independent and Dependent Variables*

The two independent variables consisted of two different hypothetical MSF performance appraisal scenarios. One scenario consisted of a negative MSF employee performance appraisal and the other scenario consisted of a positive MSF employee performance appraisal. Work performance was defined, in general terms, as a combination of achieving work results, organizational citizenship, and the work relationships maintained with coworkers/subordinates.

The dependent variables consisted of subscale and composite scores on the CDSII. High subscale and composite scores (above the midpoint) on the CDSII indicated participants who utilized a higher degree of locus of causality, external control, stability, and personal control in determining their explanations to a positive and negative MSF performance appraisal than participants with lower scores. Low subscale and composite scores (below the midpoint) on the CDSII indicated participants who utilized a lower degree of locus of causality, external control,



stability, and personal control in determining their explanations to a positive and negative MSF performance appraisal than participants with higher scores.

### *Within and Matched Subject Design*

The research design consisted of a within-subject and matched-subject research strategy. The study applied a within-subject design since it allowed for all participants to take the r-OASQ and receive both levels of the independent variable, i.e., a positive and a negative MSF performance appraisal. In a within-subject design the participant's own performance is the source of comparison (Ray, 1997).

Ray (1997) points out three primary advantages of using a within-subject research design. (A) Within-subject designs increase the statistical sensitivity of the study to treatment effects because it decreases error variance resulting from participant differences, since each participant receives both levels of the independent variable. (B) Within-subject designs require fewer participants than between-subject designs. (C) Since the same participants serve in each experimental group, in within-subject designs, it ensures that all groups are essentially equal on every factor at the beginning of the experiment.

Ray (1997) points out two primary disadvantages of using a within-subject research design. (A) Participant performance could be negatively impacted by fatigue in within-subject designs; for example, by the time the participant experiences the second independent variable, the participant has already been fatigued by the first independent variable. (B) Participant performance could be negatively impacted by practice in within-subject designs. In order to control the impact of fatigue and practice on the outcome of the experiment, the study counterbalanced the presentation of the independent variables and the order of the independent

and dependent variables. Ray (1997) states that counterbalancing can be used to control but not completely eliminate the effects of fatigue and practice.

The study applied a matched-subject design in order to assess significant group differences on how participants defined their attributional styles, and how participants reacted to a positive and negative MSF appraisal. Participants were matched on how they scored on the r-OASQ. One group was composed of participants whose scores identified them as having optimistic attributional styles, another group was composed of participants whose scores identified them as having pessimistic attributional styles, and the final group was composed of participants whose scores identified them as having mixed attributional styles. However, due to a lack of pessimistic style identified participants in the study, only two groups, the optimistic and mixed attributional style groups had their scores compared. These two groups had their scores compared to their own scores, within-subject design, and had their scores compared to each other, match-subject design.

#### *Hypothetical Scenarios*

The study utilized hypothetical descriptions of positive and negative MSF performance appraisals for two reasons. (A) Hypothetical descriptions of events or situations provide participants with a rich and controlled context to which they apply their own reactions and/or implicit theories about social behavior (Leung, Su, & Morris, 2001). (B) Hypothetical descriptions of events or situations allow researchers to exercise control over numerous potentially confounding variables that would be more difficult to control in nonhypothetical research (Leung et al.).

Leung et al. (2001) utilized hypothetical scenarios in their research on participants' attributional reactions to negative supervisory feedback. The researchers developed eight

slightly different hypothetical scenarios, each reflecting a different independent variable.

The participants were asked to assume the role of the subordinate receiving the feedback and then respond to a set of questions.

Liden and Mitchell (1985) utilized hypothetical scenarios in their research on how participants reacted to specific versus nonspecific feedback, and whether the feedback participants received pointed to an internal or external attributional cause for performance. The researchers developed nine different hypothetical scenarios each reflecting a different independent variable for a total of 27 different conditions. Each scenario asked participants to imagine that they just received a *D* letter grade in an important course in their major. After reading each scenario, participants responded to six different questions regarding the hypothetical feedback they received (Liden & Mitchell, 1985).

### Significance of the Study

Statistically significant results would preliminarily indicate that occupational attributional style may be considered an underlying cognitive moderator involved in determining how individuals resolve the self-other discrepancies associated with MSF. A literature review revealed no past research studies that have attempted to identify whether or not occupational attributional style acts as a cognitive moderator involved in determining how individuals react to MSF or resolve the self-other discrepancies associated with MSF.

If occupational attributional style is a cognitive moderator involved in determining how participants assign attributional explanations to a positive and a negative MSF performance appraisal, then it may be possible to train employees or managers to change their attributional styles prior to receiving MSF. Forsterling (1985) reviewed 15 attributional training studies and

concluded that attributional retraining methods have been consistently successful in increasing persistence and performance. Furnham (2003) also reports that research results indicate that attributional style is trainable; thus, training employees to develop different attributional styles is a valuable way of improving individual and organizational performance.

Secondly, statistically significant results would preliminarily indicate that the r-OASQ is a different, perhaps more robust, attributional style measure than previously developed global and specific attributional style measures. This would be a significant finding because previous research has indicated that measures of both global and specific attributional styles have not been able to predict individuals' attributional explanations for specific events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991). In addition, it would be a significant finding since a literature review found no past research studies comparing the r-OASQ and its ability to predict individuals' attributional explanations, as measured by the CDSII, to any specific type of event.

### Definitions of Terms

#### *Multisource Feedback*

The terminology *360-degree feedback* implies that recipients receive performance feedback from all possible sources. However, since recipients frequently do not get feedback from all available sources, which the term *360-degree* implies, the more flexible terminology *multisource feedback* is utilized in the study. Bracken et al. (2001) reports that the term *multisource feedback* implies that recipients receive additional feedback from another source beyond their supervisor. Similarly, Dalessio (1998) defines *multisource feedback* as evaluations gathered about a focal recipient from two or more rating sources that may include self,

supervisor, subordinates, coworkers, and internal/external customers of the organization.

This study incorporates both Bracken et al. and Dalessio's multisource feedback definitions, and therefore incorporates all multisource terminology that indicates recipients are not just receiving feedback from their supervisor; such as, upward (subordinate to supervisor) feedback, multirater feedback, and 360-degree feedback.

#### *Attributional Dimensions of the r-OASQ*

*Externality.* High scorers on this scale tend to view events as being caused by outside factors and not by their own actions, and low scorers tend to view events as being caused by more internal factors (Furnham, 2003). Optimistic attributional styles tend to view positive events as caused by internal factors and negative events as caused by outside factors; where as, pessimistic attributional styles tend to view positive events as caused by outside factors, which they have little control over, and negative events as caused by internal factors (Furnham, 2003).

*Globality.* High scorers on this scale tend to view factors related to events as widespread and encompassing, and low scorers tend to view factors related to events as specific to the situation surrounding the event (Furnham, 2003). Optimistic attributional styles tend to view positive events with high globality and negative events with low globality, and pessimistic attributional styles tend to view positive events with low globality and negative events with high globality (Furnham, 2003).

*Internality.* High scorers on this scale tend to view events as caused by internal factors that they can influence, and low scorers tend to view events as caused by outside factors that they have little influence or control over (Furnham, 2003). Optimistic attributional styles tend to internalize positive but not negative factors related to events, and pessimistic attributional styles tend to internalize negative but not positive factors related to events (Furnham, 2003).

*Personal Control.* High scorers tend to believe that they can control the events that impact their lives, and low scorers tend to believe they have little to no control over the events in their lives (Furnham, 2003). Optimistic attributional styles tend to view positive events as being in their control and negative events as being out of their control; where as, pessimistic attributional styles tend to view positive events as being out of their control and negative events as being in their control (Furnham, 2003).

*Stability.* High scorers on this scale tend to view factors involved in events as being permanent and fixed, and low scorers tend to view factors involved in events as flexible and changeable (Furnham, 2003). Optimistic attributional styles tend to view events as being permanent and fixed for positive events but not for negative events; where as, pessimistic attributional styles tend to view events as being permanent and fixed for negative events but not for positive events (Furnham, 2003). Table 1 summarizes the r-OASQ's five attributional dimensions.

Furnham (2003) describes two different types of attributional styles, i.e., optimistic and pessimistic. What Furnham did not define or categorize are individuals who are composed of a mixture of optimistic and pessimistic styles. For example, individuals who obtain high internality scores, high stability scores, high globality scores, low externality scores, and high personal control scores have an optimistic style for positive events according to the r-OASQ. However, if these same individuals assign the same attributional dimensional outcomes for negative events, they now have a pessimistic attributional style for negative events (Table 1). Hence, these individuals have an optimistic style for positive events but switch to a pessimistic style when the event is negative.

The opposite outcome is also possible. Individuals who obtain low internality scores, low stability scores, low globality scores, high externality scores, and low personal control scores have a pessimistic style for positive events according to the r-OASQ. However, if these same individuals assign the same attributional dimensional outcomes for negative events, they now have an optimistic attributional style for negative events (Table 1). Hence, these individuals have a pessimistic style for positive events but switch to have an optimistic style when the event is negative.

The mixed attributional style category is consistent with Xenikou and Furnham's (1997) findings that attributional styles for positive and negative events should be viewed as separate and independent styles; in other words, attributions for positive and negative events should not be considered as being polar opposite attributional styles. For example, because an individual obtains an optimistic style for positive events by scoring low on the externality dimension and high on the dimensions of internality, stability, globality, and personal control; it does not mean that the individual will automatically score high on the externality dimension and low on the dimensions of internality, stability, globality, and personal control; thus, obtaining an optimistic style for negative events. Similarly, because an individual obtains a pessimistic style for positive events by scoring high on the externality dimension and low on the dimensions of internality, stability, globality, and personal control; it does not mean that the individual will automatically score low on the externality dimension and high on the dimensions of internality, stability, globality, and personal control; thus, obtaining a pessimistic style for negative events.

Xenikou and Furnham's (1997) findings support the concept that individuals are able to obtain an attributional style that is mixed, i.e., individuals can have both an optimistic and pessimistic style. Hence, the same individual can have an optimistic style for positive events and

a pessimistic style for negative events, or the individual can have an optimistic style for negative events and a pessimistic style for positive events.

Table 1

*Attributional Styles for Positive and Negative Events*

Optimistic/Pessimistic/Mixed Styles	Attributional Dimensional Outcomes
Optimistic Style for Positive Events	High internality, high stability, high globality, low externality, and high personal control.
Optimistic Style for Negative Events	Low internality, low stability, low globality, high externality, and low personal control.
Pessimistic Style for Positive Events	Low internality, low stability, low globality, high externality, and low personal control.
Pessimistic Style for Negative Events	High internality, high stability, high globality, low externality, and high personal control.
Mixed Style: Optimistic for Positive Events and Pessimistic for Negative Events	High internality, high stability, high globality, low externality, and high personal control.
Mixed Style: Pessimistic for Positive Events and Optimistic for Negative Events	Low internality, low stability, low globality, high externality, and low personal control.



*CDSII Attributional Dimensions*

*External Control.* High scores (above the midpoint) indicate individuals who attribute the cause of a specific event as being controlled by others (McAuley et al. 1992). Low scores (below the midpoint) indicate individuals who attribute the cause of a specific event as not being under the control of others (McAuley et al.).

*Locus of Causality.* High scores (above the midpoint) indicate individuals who perceive the cause of a specific event as residing internally, i.e., the cause of an event has to do with them versus other people or the environment (McAuley, Duncan, & Russell, 1992). Low scores (below the midpoint) indicate individuals who perceive the cause of a specific event as residing externally, i.e., the situation or environment is the cause of the event (McAuley et al.).

*Personal Control.* High scores (above the midpoint) indicate individuals who attribute the cause of a specific event as being something they can manage, regulate, and have the power to change (McAuley et al. 1992). Low scores (below the midpoint) indicate individuals who attribute the cause of a specific event as being something they cannot manage, regulate, or change (McAuley et al.).

*Stability.* High scores (above the midpoint) indicate individuals who attribute the cause of a specific event as being permanent and unchangeable (McAuley et al. 1992). Low scores (below the midpoint) indicate individuals who attribute the cause of a specific event as being temporary and changeable (McAuley et al.).

### Assumptions and Limitations of the Study

#### *Assumptions*

1. Participants in the research study reacted to hypothetical positive and negative MSF performance appraisals similarly to receiving a positive or negative MSF performance appraisal in real life.
2. The nonrandomly selected participants reflected similar outcomes to the general population.
3. Participants truthfully responded to the questions on the r-OASQ and CDSII measures.
4. Past influences from traditional and MSF upon participants did not significantly influence the findings in this study.
5. Participants assigned attributions in a similar manner on the CDSII as they did on the r-OASQ. The differences in scales would not affect participant attributional assignment.

#### *Limitations*

The study's findings were limited by its quasi-experimental nature and its usage of correlational measures; therefore, only concluding statements of relationship and not causation could be applied to the findings. Secondly, since a nonrandomized relatively small convenience sample was utilized, the study's findings have limited generalization applicability to other populations. Thirdly, the study did not attempt to control for influences upon or lack of influences upon participants from either past positive or negative traditional or MSF performance appraisals. These limitations were acceptable given the preliminary nature of the research. If one or more of the study's hypotheses are confirmed, further research will need to be conducted to establish causation.

### Summary

Due to the rapid expansion of multisource feedback, research has not been able to keep pace; as a result, negative reactions have developed to multisource feedback and many organizations have abandoned its use. Multisource feedback researchers currently postulate the theory that recipients of multisource feedback must resolve self-other discrepancies that occur as a result of receiving multisource feedback. Yammarino and Atwater (1997) developed four different typologies of self-other discrepancies that could occur as a result of receiving multisource feedback: over-estimators, under-estimators, in-agreement good, and in-agreement poor. Although researchers have defined the four self-other discrepancies, research has not explained how MSF recipients develop and resolve the self-discrepancies, in terms of a cognitive process, associated with receiving MSF. Hence, the purpose of this study was to conduct a preliminary investigation on whether occupational attributional style acts as a cognitive moderator utilized by recipients to resolve the self-other discrepancies associated with multisource feedback.

In order to answer the hypotheses posed by the study, the study utilized a quasi-experimental approach which incorporated a mixed within-subject and matched-subject research design. The study's independent variables consisted of one positive and one negative hypothetical multisource feedback performance appraisal. The dependent variables consisted of the participant's subscale and composite scores on the CDSII. Hypothetical multisource feedback appraisals were utilized because hypothetical examples provide participants with a rich and controlled context to apply their own reactions or implicit theories (Leung, et al. 2001).

In terms of the study's significance, if one or more occupational attributional styles, identified by the r-OASQ, are identified as predicting participants' causal attributions to a

positive or negative multisource feedback appraisal; then a possible cognitive moderator would have been identified to explain how MSF recipients resolve the self-other discrepancies associated with MSF. In addition, significant findings would indicate that the r-OASQ is a more robust attributional style measure than past attributional style measures, which have not been able to predict causal attributions to specific events.

### Organization of the Remainder of the Study

Chapter 2 discusses the related literature associated with multisource feedback, attributions, and the development of attributional style measures. Chapter 3 describes and discusses the study's design, research methodology, target population, experimental procedures, instruments, data collection procedures, and data analysis methods. Chapter 4 reports the study's results. Chapter 5 discusses the study's findings, conclusions, and the implications of the findings. In addition, chapter 5 discusses the study's limitations and makes recommendations for future research.

## CHAPTER 2. LITERATURE REVIEW

The first part of the literature review focuses on multisource feedback. The review succinctly covers the definitions and major elements of multisource feedback, how multisource feedback differs from traditional feedback, and the underlying assumptions of multisource feedback. The review also examines the theoretical underpinning of multisource feedback, reports research related to the theoretical constructs, and examines recent outcome studies on the effectiveness of multisource feedback. Part one ends with a review of research reporting negative reactions to multisource feedback, and the changes researchers recommend in order to prevent negative reactions to multisource feedback. The second part of the literature review focuses on attributional style. The review covers the antecedents of attributional style and the connection attributional style has with the theory of learned helplessness. In addition, the review covers how attributional style has been measured, assesses the research conducted with various attributional measures, and reviews an attributional measure of outcome causality. Part two of the review ends with a discussion of the validity of attributional style and examines the effectiveness of attributional style to predict how individuals assign attributional explanations to specific events.

### Multisource Feedback

#### *Definition and Elements of Multisource Feedback*

The term *multisource feedback* refers to the process of evaluating employee performance through the collection of recipients' self-ratings and the collection of one or more additional ratings from various source(s), e.g., coworkers, subordinates, and internal/external customers (Ghorpade, 2000; London & Smither, 1995). Hence, the main difference between MSF and

traditional supervisor to subordinate form of feedback, is that recipients of MSF receive suggested areas for skill development and performance improvement from a source or sources beyond just their supervisor (Tornow, 1993).

Multisource feedback is usually provided to recipients in the form of a report that contains descriptive performance information along with graphical presentations comparing their self-rating with ratings from other sources (Seifert, Yukl, & McDonald, 2003). A well designed MSF report provides recipients with an introduction about its purpose, identifies key areas of strengths along with developmental needs, provides a gap analysis showing the difference between ratings and benchmarks, provides verbatim comments, and gives suggestions on how recipients can develop or improve upon their performance (Dalessio & Vasilopoulos, 2001).

As an instrument, a MSF evaluation, on one end of the spectrum, can be developed specifically for a particular organization by using specific contextual information about the organization and employees (Ghorpade, 2000). On the other end of the spectrum, a MSF instrument can be an off-the-shelf measure composed of generic information; thereby, making it available for any organization to utilize (Ghorpade, 2000). Finally, MSF instruments can vary from being quantitative, i.e., asking participants to complete scaling questions, to being qualitative, i.e., asking participants to complete open-ended questions (Ghorpade, 2000).

#### *Multisource Feedback vs. Traditional Feedback*

A multisource feedback performance appraisal differs from a traditional superior to subordinate performance appraisal in five important ways. (A) Multisource feedback is collected anonymously from various sources whereas supervisory feedback is not anonymous (London & Smither, 1995; Yammarino & Atwater, 1997). (B) Employees who receive MSF have considerably more information to interpret and integrate than employees given traditional

supervisor to subordinate feedback (London & Smither, 1995). (C) Multisource feedback is influenced more by interpersonal affect than is downward (supervisor to subordinate) feedback (Antonioni & Park, 2001). (D) Recipients are more likely to receive conflicting information from a MSF evaluation than from a traditional supervisor evaluation. Correlation ratings from different MSF sources generally are low; consequently, the performance ratings of the same recipient assessed by the supervisor, coworkers, and customers are likely to be inconsistent with one another (Mabe & West, 1982). As a result, recipients are more likely to receive conflicting evaluation reports or scores under a MSF evaluation than in a traditional evaluation.

(E) Multisource feedback is frequently intended to provide recipients with only developmental feedback; whereas, supervisory feedback gives the recipient feedback on their job performance (London & Smither, 1995). However, this clear distinction is not always the case, London & Smither (1995) conducted a survey and found that 50% of respondents reported that they do use MSF as part of a formal performance appraisal to help determine job placement, assist in making pay decisions, and in making downsizing decisions.

#### *Underlying Assumptions of Multisource Feedback*

The first assumption holds that performance observations obtained from multiple sources yields more valid and reliable performance information than from a single source; thus, making the information more meaningful and useful for the recipient being evaluated than from traditional feedback (Church & Bracken, 1997).

The second assumption driving MSF is the notion that behavioral change is obtained through the process of enhancing self-awareness (Church & Bracken, 1997). Multisource feedback is assumed to work by helping recipients better understand how they are viewed by

others, which helps recipients to develop a more accurate sense of goal accomplishment (London & Smither, 1995). London and Smither (1995) report that the MSF model holds that recipients filter feedback through their own self-image and behavioral schemes in order to evaluate how to set future goals, decide what behavior to change, and determine how to improve their performance. Consequently, recipients who never receive feedback may retain inaccurate self-perceptions because they remain unaware of the perceptions that others hold about them (Yammarino & Atwater, 1997).

The third assumption holds that the degree of agreement or consensus between the recipient's self-rating and how others rate the recipient becomes a key (cognitive) component in a MSF system (Yammarino & Atwater, 1997). The MSF model suggests that recipients compare their feedback from others to their own self-perception (London & Smither, 1995); as a result, when recipients of MSF compare their own self-image or perception with how others see them, they are forced into a cognitive evaluation process (Church and Bracken, 1997). Therefore, the basic underlying cognitive process that occurs in a MSF intervention is the reconciliation of how others perceive the recipient and the recipient's own self-perception (Yammarino & Atwater, 1997).

#### *Multisource Feedback Theory*

Multisource feedback theory postulates that the basic underlying cognitive process involved in MSF is the reconciliation of the recipient's self-perception with how others perceive the recipient, i.e., the self-other discrepancy (Yammarino & Atwater, 1997). In order to further clarify the theory, Yammarino and Atwater (1997) outlined four different typologies of how MSF recipients could potentially develop self-other discrepancy. (A) Over-Estimators:

Employees in this category usually over inflate their own self-evaluations. Over-estimators tend



to discount or rationalize away negative feedback and accept positive feedback as more accurate (Yammarino & Atwater, 1997). Mabe and West (1982) found self-ratings to be frequently inflated compared to ratings from others. In fact, self-rating overestimation is so common that it should be considered more normal than unusual (Jensen & Vloeberghs, 1999). (B) In-Agreement Good: These employees' self-ratings and other-ratings are both positive and in agreement. Employees in this category use feedback from others constructively to alter their behavior as needed (Yammarino & Atwater, 1997). (C) In-Agreement Poor: These employees' self-ratings are low but in agreement with low other-ratings. Employees in this category agree and admit their weaknesses, yet they take few if any actions to improve their performance (Yammarino & Atwater, 1997). (D) Under-Estimators: In this category, employees' self-ratings are lower than the ratings they receive from others. Under-estimators either do not recognize their own strengths or are overly modest (Yammarino & Atwater, 1997). These employees will raise their self-ratings when given feedback, yet they may or may not improve their performance (Yammarino & Atwater, 1997).

#### *Self-Other Discrepancy Theory Research*

Antonioni (1996) found evidence for the self-other discrepancy theory by finding significant discrepancies between how recipients rated their performance and how others rated their performance during a MSF appraisal. Antonioni (1996) found that about 15 to 20% of all upward and peer appraisal multisource feedback was unexpected (over-estimators). Antonioni (1996) also found that about 25% of the ratees expected positive feedback and received positive feedback (in-agreement good), 30% of the ratees expected negative feedback but received unexpected positive feedback (under-estimators), and 20 to 30% of the ratees expected negative feedback and received negative feedback (in-agreement poor).

Brett and Atwater (2001) found support for the self-other discrepancy theory. The researchers provided developmental only, not administrative, MSF to 125 students in a master's of business administration program two to four months after they left the program (Brett & Atwater, 2001). Brett and Atwater (2001) found that students who were high self-raters but received ratings that were lower than expected (over-estimators), saw the feedback as not accurate or useful; in other words, the feedback did not result in enlightenment or awareness, but instead it created the negative reactions of anger and discouragement. Secondly, the researchers found that high other-ratings for individuals who were high self-raters (in-agreement good) were not related to positive reactions, as one might think, but merely were related to the absence of negative reactions (Brett & Atwater, 2001). Lastly, Brett and Atwater (2001) found that students who self-rated low and received high other-ratings (under-estimators) did not, as a whole, react positively to self-other discrepancy MSF. The main conclusion reached by the researchers was that recipients who were in most need of MSF, over-estimators, were the least receptive to it and found it the least useful (Brett & Atwater, 2001).

Johnson and Ferstl (1999) conducted a study of 2,171 managers in a large accounting firm and found that managers identified as over-raters improved their performance over managers identified as under-raters. Moreover, the more discrepancy present between the over-rating managers (over-estimators) and their subordinates' rating, the more the over-rating manager improved their performance. Johnson and Ferstl (1999) also found that the more discrepancy present between under-rating managers and their subordinates' ratings, the more under-rating managers tended to decrease their performance. Hence, Johnson and Ferstl (1999) concluded that upward feedback may have a positive or negative impact on the performance of managers, depending upon whether the manager is an over or under-rater of their performance.

Ostroff, Atwater, Feinberg (2004) conducted a study to assess the relative importance of how much biographical variables, e.g., age, race, gender, job experience, and education level; and how much contextual or situational variables, e.g., function, job category, and supervision impacted how recipients resolved self-other discrepancies. Ostroff et al. found that the variance in self-other discrepancy ratings due to biographical and contextual/situational variables accounted for only 3 to 5% of the total variance.

The research findings of Ostroff et al. (2004) indicate that there is a significant amount of unaccounted variance in how recipients resolve self-other discrepancies, since only 3 to 5% of the variance in self-other discrepancy ratings was composed of biographical and contextual/situational variables. The findings of Ostroff et al. suggest that another factor, such as, a cognitive process factor possibly accounts for some of the remaining variance.

#### *Research Outcomes on Multisource Feedback Effectiveness*

Seifert et al. (2003) reviewed 14 multisource studies that assessed the effects of MSF on managers and leaders. Of the 14 multisource studies, only 4 were field studies that randomly assigned subjects to experimental and control conditions, and of those 4 field studies, only 1 study found clear evidence that MSF was successful (Seifert et al.). The other 10 multisource studies used single subject research designs with no control groups, and of those 10 studies, the researchers found weak and inconsistent findings regarding the effectiveness of multisource feedback (Seifert et al.).

In a second study, Seifert et al. (2003) conducted a controlled group study on the effectiveness of MSF when a facilitator and not the manager's supervisor provided the feedback. Managers in three different groups received MSF from their subordinates, peers, and supervisors (Seifert et al.). One group was composed of managers who received MSF from a facilitator in a

workshop, another group of managers received a feedback report only, and the last group received no MSF information (Seifert et al.). The researchers found that managers who received MSF from a facilitator engaged in significantly more behavioral change versus managers in the feedback report only group or in the no feedback group (Seifert et al.).

Atwater, Waldman, Atwater, and Cartier (2000) in their study found no significant improvement in performance after recipients received MSF. The researchers conducted a field experiment of 110 police supervisors and found no significant improvement in performance between those supervisors who received anonymous upward leadership feedback and supervisors who completed a survey and received no upward feedback (Atwater et al.). The researchers concluded that the cause of no significant improvement was due to the subjects' attitude of organizational cynicism (Atwater et al.). In other words, supervisors who maintained organizational cynicism prior to receiving upward feedback were less likely to be motivated to create personal change after receiving upward feedback (Atwater et al.).

Lockyer, Violato, and Fidler (2003) conducted a study assessing whether surgeons would make changes as a result of receiving MSF from their patients, coworkers, and medical colleagues. Of the 153 surgeons who responded to a follow-up survey, the researchers found little correlation between the multisource performance ratings and the likelihood that surgeons would make changes as a result of the feedback (Lockyer et al.).

Smither et al. (2005) conducted a meta-analysis of 24 longitudinal MSF studies and found generally small recipient performance improvement. As a result, Smither et al. state that practitioners should not expect to see extensive performance gains after recipients receive MSF. Instead, practitioners should understand that performance improvement is most likely to occur when recipients are open to receive feedback, react positively to the feedback, believe that

change is possible, see that change is necessary, and are motivated to set goals and take action to make changes (Smither et al.).

### *Negative Reactions to Multisource Feedback*

Kluger and DeNisi (1996) conducted a historical review and meta-analysis of the effects of various types of feedback interventions on performance, both traditional and multisource, and found that in more than one-third (38%) of feedback cases, feedback actually lowered subsequent performance. In addition, the sign of the feedback, i.e., whether the feedback was positive or negative, was irrelevant to causing subsequent lower performance. In other words, the negative effects of feedback upon performance could not be traced back to whether an individual received negative as opposed to positive feedback (DeNisi & Kluger, 2000).

Kluger and DeNisi (1996) concluded in their meta-analysis that it is wrong to simply assume that providing feedback will always improve performance.

Kluger and DeNisi (1996) also found in their meta-analysis that feedback interventions, which threaten the recipient's self-esteem, have lower feedback intervention effectiveness than feedback interventions that do not threaten the recipient's self-esteem. As a result of their finding, DeNisi and Kluger (2000) concluded that multisource feedback interventions should only focus on task performance and not on the person or any part of the person's self-concept. However, focusing only on task performance is difficult to accomplish with MSF interventions, since by their very nature, MSF increases the likelihood that the focus of the feedback will move from the task to the self (DeNisi & Kluger, 2000).

In terms of organizations having a negative reaction to MSF, Fletcher (1998) found that as many as half of all U.S. firms that implemented MSF appraisal systems dropped them, within two years, due to negative attitudes from employees and inflated performance ratings.

*Preventing Negative Reactions to Multisource Feedback*

In order to manage the negative reactions that some recipients develop after receiving MSF, researchers have put forth a number of suggestions. (A) Multisource feedback interventions should only focus on task performance and should not focus on the person or the person's self-concept or threaten the ego of the person (DeNisi & Kluger, 2000). In addition, MSF interventions should only be utilized among recipients with high self-esteem (DeNisi & Kluger, 2000). (B) A trained facilitator, who is neutral to both sides, should act as a coach to assist recipients in how to correctly assimilate multisource feedback, so it can be used to improve recipient performance (Antonioni, 1996; DeNisi & Kluger, 2000; Hegarty, 1974; Nemeroff & Cosentino 1979; Seifert et al. 2003). (C) Multisource feedback should only be used for developmental purposes and should not be used for administrative purposes, i.e., to make promotion decisions, to make reorganization decisions, or determine merit raises (Antonioni, 1996; Atwater, Brett, et al., 2003). (D) Raters should be trained in how to complete MSF forms, informed about the objectives of the MSF evaluation, and educated about how to avoid common evaluation rating errors (Atwater, Brett, et al.; Waldman, Atwater, & Antonioni, 1998). (E) Feedback recipients should be trained or orientated prior to receiving MSF, so that recipients are educated about its value, purpose, and the importance of maintaining a positive attitude about receiving feedback (Antonioni, 1996; Atwater et al. 2000; Atwater, Brett, et al.).

### Summary

Multisource feedback involves having a recipient evaluate their own performance, as well as having one or more additional sources; such as, coworkers, subordinates, and customers also evaluate the recipient's performance. Multisource feedback differs from traditional supervisor to subordinate feedback in that recipients have more information to interpret and integrate, recipients are more likely to receive conflicting information, and MSF is more influenced by interpersonal affect. The underlying assumptions of MSF include the assumption that performance feedback from multiple sources is more valid and reliable than from a single source, and that behavioral change is obtained through the process of self-awareness.

Multisource feedback theory postulates that the underlying cognitive process involved in MSF is the reconciliation of self-perception with other perception, i.e., self-other discrepancy. A self-discrepancy typology model developed by Yammarino and Atwater (1997) proposes that individuals can be identified as being over-estimators, in-agreement good, in-agreement poor, or under-estimators in how they resolve the self-other discrepancy associated with MSF. Research has found general support for self-other discrepancy theory and for Yammarino and Atwater's (1997) typology model. On the other hand, research has found that MSF is generally ineffective when it comes to producing performance change. In addition to being ineffective, researchers have found that MSF can produce negative reactions in recipients and in the organizations that utilize it. As a result of the negative reactions, MSF researchers have proposed numerous changes to reduce the likelihood of negative reactions.

## Attributional Style

### *The Antecedents of Attributional Style*

The antecedents of attributional style lay in the development of attribution theory, and although there is no monolithic or single attribution theory (Harvey & Weary, 1984; Kelley & Michela, 1980), attribution theory in general is concerned with how individuals answer the *why* question (Weiner, 1985) and how individuals perceive and infer causes (Harvey & Weary, 1984). Individuals engage in the process of inferring causes and attempt to answer the why question in order to achieve a greater control over and understanding of their environment (Harvey & Weary, 1984). In addition, individuals interpret behavior in terms of why questions and infer causes, i.e., form attributions, as a means to understand and determine their reactions to the behavior of other people (Kelley & Michela, 1980).

In an organizational setting, the why question is usually concerned with how employees assign and infer causes for success or failure in achievement related situations (Weiner, 1985). In addition, Martinko, Gundlach, and Douglas (2002) theorize that attribution theory in the workplace, provides both a comprehensive and yet parsimonious explanation of why some employees choose to engage in counterproductive behavior and other employees do not.

The originator of attributional theory was Fritz Heider (Weiner, 1985). Heider was the first to propose a systematic analysis of how people assign causes to achievement related events (Weiner, 1985). In 1958, Heider theorized that in order for people to reach a desired goal they need both *can* and *try* factors (Weiner, 1990). Heider's can factor was conceptualized as the relationship between a person's ability (skill, intelligence, etc...) and the task difficulty, and Heider's try factor was conceptualized as the amount of motivation within the individual to achieve a desire goal (Weiner, 1990; Weiner & Kukla, 1970). According to Heider's theory,



achievement may be attributed to a person's special ability or unusual effort or both; on the other hand, achievement failure may be attributed to a lack of ability and/or effort (Weiner & Kukla, 1970).

Harold Kelley (1967, 1973) expanded on Heider's attribution theory by adding three specific factors that individuals utilize, as information cues, when determining attributions for the social behavior of others. Kelley (1967, 1973) states that when determining attributions for the social behavior of others, individuals reason using the three factors of consensus, consistency, and distinctiveness. The three factors taken together help individuals establish the causes for social behavior of people; in other words, the three factors help individuals determine if the social behavior of other people are primarily due to internal causes or outside stimuli (Kelley, 1967/1973).

Julian Rotter added to attribution theory with the development of the Internal-External scale (I-E scale), which later became known as locus of control (Weiner, 1990). Rotter (1966) developed the I-E scale as a means to measure differences between how individuals determine whether internal factors such as skill, ability, or intelligence; or external factors such as chance, luck, or fate created a particular outcome. The internal and external dimension is the most widely accepted dimension that attributional thinking is thought to occur between (Kent & Martinko, 1995a).

Bernard Weiner (1985) contributed to the development of attribution theory when he theorized that three causal dimensions describe the structure of causal thinking as it relates to emotions and motivation for achievement. Whereas Kelley focused on how individuals create attributions for the social behavior of others, Weiner focused on the attributions individuals create to explain their own performance or achievement behavior (Martinko & Thomson, 1998).

In order to explain achievement or lack of achievement, Weiner (1985) proposed that people structure their causal thinking around the dimensions of locus of causality, stability, and controllability. (A) The locus of causality (Rotter's locus of control) dimension represents internal and external causal thinking; for example, a person's ability and effort represent internal attributions; where as, task difficulty and luck represent external attributions (Weiner, 1985). (B) The stability dimension represents causal thinking regarding how individuals decide how stable or unstable the internal or external factors are that determined or influenced their performance (Weiner, 1979/1985). The stability dimension addresses the variability of a cause over time; for example, if an individual attributes the cause for their lack of success to their mood, the individual is likely to see the cause as unstable since mood level varies (Kent & Martinko, 1995a). The stability dimension has received wide support empirically (Sweeney, Anderson, & Bailey, 1986). (C) The controllability dimension represents causal thinking regarding the extent to which a cause is under an individual's volitional control (Weiner, 1979/1985). For example, individuals who believe that a ritual they engage in before betting causes them to frequently win, i.e., achieve, are more likely to believe they have control over a gambling outcome after they perform the ritual.

#### *The Learned Helplessness Connection*

Abramson, Seligman, and Teasdale (1978) first introduced the concept of attributional style in their paper on learned helplessness. Abramson et al. wrote, "Our reformulation regards the attribution the individual makes for noncontingency [behavior has no impact upon desired results] between his acts and outcomes in the here and now as a determinant of his subsequent expectations for future noncontingency" (p. 52). In other words, Abramson et al. reformulated the original learned helplessness model when they theorized that people ask themselves *why* they

are helpless. As a result of asking why, people create cognitive attributions along the dimensions of globality, internality, and stability when they are faced with a perception of noncontingency between their acts and lack of desired outcome (Abramson et al.).

According to Abramson et al. (1978) people who engage in causal thinking which attributes their failure(s) to internal versus external factors, stable versus unstable factors, and global versus specific factors, are more prone to depression than individuals with different causal thinking for failure event(s). Abramson et al. found that individuals vulnerable to depression were more likely to maintain a depressive attributional or explanatory style that causes them to view negative events as the result of internal versus external factors, stable versus unstable factors, and global influences versus partial influence factors.

In their reformulation, Abramson et al. (1978) incorporated Rotter's (1966) locus of control within their attribution dimension of internal and external. However, Abramson et al. defined their internal versus external as a self-other dichotomy. Hence, people who develop internal causal attributions believe that the event(s) that occurred to them are not likely to occur to others, and people who develop external causal attributions believe that events that occur to them are also likely to occur to others as well (Abramson et al.).

Secondly, in their reformulation, Abramson et al. (1978) adopted Weiner's (1974) stability dimension of causal thinking, but did not adopt his controllability dimension in their reformulation. Abramson et al. did not believe that the controllability dimension fit their reformulated learned helplessness model because the concepts of failure (based on noncontingency) and uncontrollability are not synonymous. What Abramson et al. believed to be important in the development of learned helplessness was whether a person perceived that a failure was present (based on a noncontingent response to desired outcome) and not whether the

event was perceived as controllable or uncontrollable, since failure occurs in events where a person believes they have controllability as well as in events where the person believes they have no controllability.

Finally, in their reformulation, Abramson et al. (1978) created the new attributional dimension of globality. The globality dimension represents global versus specific causal thinking (Abramson et al.). For example, people who develop a global attributional cause for a negative event, believe that the negative event will occur again across a wide variety of situations; whereas, people who develop a more specific attributional cause for a negative event believe that the negative event will only occur again under certain specific circumstances (Abramson et al.). Both the Attributional Style Questionnaire and r-OASQ incorporated the globality dimension as a measure of attributional style.

### Measures of Attributional Style

#### *The First Attributional Style Measure*

One of the first measures to assess individual attributional style differences was the Attributional Style Questionnaire (ASQ, Peterson et al. 1982). Derived from the reformulated theory of learned helplessness, the basic concept behind the ASQ is that people differ in their attributional styles, and those differences contribute to distinctions in peoples' future motivation, performance, and emotional reactions to particular events (Kent & Martinko, 1995a). In terms of its reliability, Kent and Martinko (1995) report reliability scores for the ASQ ranging from 0.40 to 0.70 for the individual dimensions and reliability scores ranging from 0.72 to 0.75 for the composite dimensions.

The ASQ was designed as a self-report measure of attributional style. The ASQ is comprised of six different hypothetical positive and negative events sampled from domains of achievement and interpersonal affiliation (Higgins & Hay, 2003). Subjects are asked to imagine themselves in each of the 12 hypothetical situations, to write down one major cause for each event, and to rate the cause on a seven-point Likert-type scale representing the attributional dimensions of locus of control, stability, and globality (Peterson et al. 1982). Individuals who have low composite negative scores and high composite positives on the ASQ are considered to be optimistic; where as, individuals who have high composite negative scores and low composite positive scores are considered to be pessimistic on the ASQ (Higgins & Hay, 2003).

As a measure, the ASQ has been mainly employed in the studies of depression (Furnham, Sadka, & Brewin, 1992). However, Seligman and Schulman (1986) conducted a study comparing successful and unsuccessful insurance agents and their ASQ explanatory styles. Seligman and Schulman (1986) found that insurance agents with optimistic explanatory styles sold 37% more insurance during their first two years of employment and remained on the job twice as long as those sales agents with pessimistic explanatory styles.

#### *Attributional Style Measures for the Workplace*

The development of separate attributional style measures for the workplace, from the more general ASQ, was necessary given Anderson, Jennings, and Arnoult's (1988) finding that attributions should be measured in a narrow range of situations, and because studies have shown that the power of attributional style to predict behavior is dependent on the specificity and dimensionality of the attributes elicited (Furnham & Procter, 1989).

Kent and Martinko (1995) developed an occupational attributional style measure (ASQO) composed of 16 negative hypothetical work related situations to which participants write down

the major cause for each negative work related situation, followed by rating the cause on six 7-point Likert-type scales composed of the attributional dimensions of internal locus of causality, external locus of causality, stability, control, globality, and intent. (The letters ASQO and not OASQ are used to identify Kent and Martinko's occupational attributional style questionnaire, so as not to confuse their occupational attributional style measure with the Occupational Attributional Style Questionnaire developed by Furnham et al. 1992).

Martinko et al. (2002) report that the ASQO validly predicts the types of attributions and behaviors that individuals are likely to make in workplace settings. However, one major lacking of Kent and Martinko's (1995) occupational attributional style questionnaire is that it is only composed of negative work related events; thus, ignoring that employees may also develop negative attributions to positive events as well as to negative events.

Kent and Martinko (1995) report that the ASQO has a composite internal reliability alpha score of 0.75 and a test-retest composite coefficient alpha score of 0.75. In terms of validity, Kent and Martinko (1995) found construct validity between the original ASQO and the ASQ. A composite score of all attributional dimensions, on the ASQO, were positively and significantly related to the ASQ composite score for all attributional dimensions ( $r = 0.29, p < 0.001$ ).

A second type of attributional style measure for the workplace is the Occupational Attributional Style Questionnaire (OASQ) developed by Furnham et al. (1992), and revised in 1994, i.e., the r-OASQ. The OASQ and r-OASQ were designed as attribution measures which assess how employees make causal attributions for occupational outcomes (Furnham et al.). The OASQ and r-OASQ were closely modeled on the ASQ and an attributional diabetes measure designed by Bradley, Brewin, Gamsu, and Moses (1984), which incorporated the attributional dimensions of controllability and foreseeability not found on the ASQ (Furnham et al. 1992).

The OASQ and r-OASQ also have strong theoretical ties with Rotter's locus of control (Brewin, 1988), as well as with Weiner's (1974) achievement attributions, and the learned helplessness model of Abramson et al. (1978). Research evidence has shown that the locus of control dimension is associated with employee motivation, effort, performance, job satisfaction, and compliance with authority (Spector, 1982). Hammer and Vardi (1981) report that past research literature found strong evidence that higher internal locus of control employees display more job motivation than external locus of control employees. Consequently, the OASQ and r-OASQ have incorporated internal, external, and personal control measurement scales to represent locus of control. The two other attributional dimensions on the r-OASQ include Weiner's (1974) stability dimension and Abramson et al. (1978) globality dimension.

The causal dimensions that were included on the original OASQ, but dropped on the r-OASQ were the dimensions of chance, control, foreseeability, and importance (Furnham, Brewin, & O'Kelly, 1994). These four dimensions were dropped because a factor analysis conducted by Furnham et al. revealed that there was dimensional overlap.

The r-OASQ is composed of eight different positive and negative hypothetical workplace scenarios that assess for high and low scores on five different attributional dimensions: internality, stability, globality, externality, and personal control (Furnham, 2003). Similar to the ASQ, the r-OASQ asks test-takers to write down the major cause for different hypothetical work related situations. Secondly, test-takers rate the extent of the cause, on a seven-point Likert-type scale, for each of the five attributional dimensions (Furnham, 2003). Finally, similar to the ASQ, scores are derived for individual dimensions along with overall composite dimension scores.

*Research Conducted with the ASQO, OASQ, and r-OASQ*

Douglas and Martinko (2001) used the ASQO in their investigative study on the relationship between individual employee differences related to workplace aggression. They found that employees who indicated hostile attributional styles were more likely to report a higher incident of workplace aggression than employees who indicated a less hostile attributional style (Douglas & Martinko, 2001).

Aquino, Douglas, and Martinko (2004) used the ASQO to study the relationship between victimization and overt anger. They found that employees who made more hostile attributions (attributed negative events to external, intentional, and controllable factors) for others' behavior also indicated a stronger relationship between perceived victimization and overt anger than those employees who made less hostile attributions.

Campbell and Martinko (1998) used the ASQO in their study to explore the relationship between empowerment and learned helplessness. They used the ASQO to differentiate empowered style employees and learned helplessness employees. Campbell and Martinko (1998) found that ASQO was able to differentiate between these two different styles. Empowered employees reported less tedium, more persistence, more positive expectancies, and less depression than learned helplessness identified employees.

Xenikou and Furnham (1997) conducted an evaluation of the OASQ by comparing it with two other reliable and valid measures, i.e., the Social Problem Solving Inventory and the Rapid Personality Questionnaire. The study was composed of 189 British insurance sales staff, 34 women and 155 men, with a mean age of 31 years. The study's research indicated three important results. (A) Attributional styles for positive and negative events should be viewed as separate and independent styles (Xenikou & Furnham, 1997). Contrary to Seligman's (1990)



definition of attributional style, which suggests that a person who attributes failure to external, unstable, and nonglobal factors will attribute success to internal, stable, and global factors; Xenikou and Furnham (1997) concluded that attributions for positive and negative events should not be considered as being polar opposite attributional styles. (B) Xenikou and Furnham (1997) found that due to low cross-situational reliability alpha levels, .28 for positive internality and .40 for negative internality, the internality causal dimension should be omitted from being an attributional style dimension. On the other hand, the causal dimensions of stability and globality, positive and negative, did show high alpha levels for cross-situational consistency (Xenikou & Furnham, 1997). (C) Xenikou and Furnham (1997) found the dimension of globality to be the strongest dimension in predicting future negative problem orientation and confidence. Thus, high scores on the dimension of negative globality may be used as an indicator of low expectation for future success and low scores may be used as an indicator of high expectation for future success (Xenikou & Furnham, 1997).

Furnham, Brewin, and Kelly (1994) used the r-OASQ in their study of the relationship between occupational attributional style and job involvement, job satisfaction, and organizational commitment. The researchers found that attributions for positive events and not negative events on the r-OASQ were consistently related to the workplace attitudes of organizational commitment, involvement, and job satisfaction (Furnham et al. 1994).

Furnham, Stewart, and Medhurst (1996) utilized the r-OASQ to examine the relationship between workplace attributional style and intrinsic work motivation, job satisfaction, and social consensus. Similar to previous findings, attributions for positive events, but not negative events, were significantly correlated with social consensus, work salary, and intrinsic work motivation (Furnham et al. 1996).

### An Attributional Measure of Outcome Causality

#### *The Causal Dimension Scale II*

The CDSII measures how individuals attribute causes to specific events or situations (McAuley, Duncan, & Russell, 1992). Whereas the ASQ, ASQO, and r-OASQ measure an individual's attributional tendencies or traits, the CDSII measures what individuals perceive to be attributional causes for particular situations; for example, an individual who perceives specific attributional causes for the discrepancy between their high self-rating and the low performance rating they received from a MSF performance appraisal.

The CDSII measures causal explanations along four causal dimensions: locus of causality, stability, personal control, and external control (McAuley et al. 1992). The locus of causality relates to whether the cause of the event resides internally or externally to the attributor, the stability dimension refers to whether the cause is stable/unchangeable or unstable/changeable over time, the personal control dimension refers to whether an individual believes they have power or no power to create change, and the external control dimension refers to whether the attributor believes the event is controlled by them or other people (McAuley et al.). The CDSII is composed of 12 items, 3 items for each of the four causal dimensions, and is scored on a nine-point Likert-type scale (McAuley et al.). McAuley et al. reports, "...the CDSII is internally consistent and possesses adequate construct validity as a measure of how individuals perceive causes along causal dimensions" (p. 572). The CDSII represents a psychometric improvement over Russell's (1982) first causal dimension scale, the Causal Dimension Scale (CDS).

### Validity of Attributional Style

Henry and Campbell (1995) found evidence to indicate that attributional style, as a trait, is present over time. Anderson et al. (1988) reviewed data from previous studies and determined that the concept of attributional style is a valid construct since evidence for both convergent and discriminant validity was found. However, Anderson et al. also report that attributional style does not appear to be as general or cross-situationally consistent as many researchers have assumed it to be.

#### *Attributional Style and Causal Explanation*

Research has demonstrated that when the ASQ (attributional trait measure) and the CDS (situational attribution measure) have been compared, no relationship has been found between peoples' attributional style and their attributional explanation for a particular event (Russell, 1991). Maher and Nordstrom (1996) state that one should expect that a global attributional trait measure would be related to attributions for specific events; however, contrary to expectations, research has indicated that global measures of attributional styles are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991).

If global measures of attributional style, e.g., the ASQ, are poor predictors for specific events, what about more specific attributional style measures? Henry and Campbell (1995) conducted a study to compare an academically modified ASQ and the CDS. Participants, composed of 256 undergraduate students, completed both the ASQ and CDS at the start of a 16-week semester (Time 1), and again at the end of the semester when the students had more knowledge of what their final grades would be for the course (Time 2). Henry and Campbell (1995) found convergent validity between the academically modified ASQ and CDS at Time 1

but not at Time 2. In other words, how students predicted their attributions for their grade outcome and their academic attributional style were very similar at Time 1, at a time when they had little to no information about what their grade would be (Henry & Campbell, 1995). However, at Time 2, when students were more aware of their actual attributions for the grades they would receive, their composite situational CDS scores and modified ASQ were not significantly correlated (Henry & Campbell, 1995). Thus, students' specific academic attributional style was significantly more correlated with the attributions for the grades the students thought they would receive than the students' attributions for their actual grades.

In a second study comparing a more specific versus global attributional style measure, Maher and Nordstrom (1996) compared Kent and Martinko's (1995) ASQO with Henry and Campbell's academically modified ASQ and the CDS. Maher and Nordstrom (1996) found that the ASQO was significantly correlated with the academically modified ASQ. However, they also found that the ASQO and the modified ASQ composite scores were respectively not significantly correlated with CDS scores. As in Henry and Campbell's (1995) study, the authors state that they expected that the ASQO and the CDS would significantly correlate with work related content, and the academically modified ASQ would correlate with the CDS on academically related context, but those results were not found (Maher & Nordstrom, 1996).

### Summary

The concept of attributional style developed out of the formation of attribution theory and the reformulation of the learned helplessness theory. Attribution style is grounded in attribution theory, which is basically concerned with how individuals perceive and infer causes. In addition,

attributional style is grounded in the reformulated learned helplessness theory, which theorizes that individuals who are depressed maintain a depressive attributional style.

The first measure that attempted to categorize attributional dimensions into different styles was the ASQ. After it was later determined that attributional styles should be assessed within a more narrow range of situations, two occupational attributional style measures were developed. The ASQO developed by Kent and Martinko (1995) measures attributional styles, but only for negative workplace events. The OASQ and r-OASQ developed by (Furnham et al. 1992) measures attributional styles for both negative and positive workplace events. The r-OASQ measures occupational attributional style along the five attributional dimensions of internality, stability, globality, externality, and personal control (Furnham et al.).

A second type of attributional dimension measure is the CDSII. Whereas the ASQ, ASQO, and r-OASQ measure an individual's attributional tendencies or traits, the CDSII measures what individuals perceive to be attributional causes to particular situations. The CDSII measures causal explanations along four causal dimensions: locus of causality, stability, personal control, and external control (McAuley et al. 1992).

Research has indicated that the concept of an attributional style is a valid construct; however, research has also found that both global and specific measures of attributional style are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991).

## CHAPTER 3. METHODOLOGY

### Purpose of Study

The study investigated the relationship between participants' occupational attributional styles and how participants assigned causal attributions to a hypothetical positive and negative multisource feedback performance appraisal. A statistically significant relationship finding would be a preliminary indicator that occupational attributional style acts as an underlying cognitive moderator involved in determining how recipients resolve the self-other discrepancies associated with multisource feedback. A secondary purpose of the study was to test the ability of the r-OASQ to predict or anticipate how participants assign attributional explanations to a hypothetical positive and negative multisource feedback performance appraisal. Statistically significant relationship findings would preliminarily indicate that the r-OASQ is a more robust attributional style measure than previous attributional style measures, which have not been able to accurately predict causal attributions.

### Research Design

The study employed a quasi-experimental approach that utilized a mixed, within-subject and matched-subject, research design. The study incorporated a within-subject design in order to test the congruency and consistency hypotheses. The congruency hypothesis was tested by comparing participants' positive and negative workplace event attributional style r-OASQ scores, and by comparing participants' positive and negative MSF performance appraisal CDSII scores. The consistency hypothesis was tested by comparing participants' r-OASQ attributional style scores with their respective CDSII attributional dimension scores, obtained after reading a positive and negative MSF performance appraisal.

The study incorporated a matched-subject research design by matching participants into nonequivalent groups according to their occupational attributional style. The matched-subject groups consisted of participants who identified themselves as having an optimistic attributional style and participants who identified themselves as having a mixed attributional style. The matched-subject design allowed for the consistency hypothesis to be tested by comparing optimistic style and mixed style groups' subscale and composite attributional style scores, on the r-OASQ, with their respective subscale and composite attributional dimension scores on the CDSII. The matched-subject design also allowed for the congruency hypothesis to be tested by comparing optimistic and mixed style participants' scores on the r-OASQ and on the CDSII.

The study utilized counterbalancing in order to reduce order and practice effects upon participants' responses. The study counterbalanced the presentation order of the r-OASQ and the two different MSF appraisals. For example, participants either completed the r-OASQ followed by a positive and negative MSF appraisal and corresponding CDSII measures, or participants completed a positive and negative MSF appraisal and corresponding CDSII measures followed by the r-OASQ. Additionally, the independent variables, the positive and negative MSF appraisals, were counterbalanced in terms of their order of presentation.

The study utilized a 5 to 10 day wait period in order to reduce the immediate effect that memory could possibly play on how participants reported attributional dimensions. In view of the fact that the r-OASQ is a trait measure, the wait period assisted in preventing participants, who first completed the CDSII, from having their immediate memory affect their answers on the r-OASQ; conversely, the wait period assisted in preventing participants' immediate memory on the r-OASQ from affecting their answers on the CDSII.

The two multisource feedback performance appraisals utilized in the study were chosen by six masters-level mental health professionals. The mental health professionals were given a total of six, three positive and three negative, MSF appraisals to evaluate in terms of the degree of positive or negative impression each created. The positive MSF appraisal selected for use in the study was the one judged to be the highest in terms of overall positive impression it created, and the negative MSF appraisal selected for use in the study was the one judged to be the highest in terms of overall negative impression it created.

#### Target Population and Participant Selection

A convenience sample of 43 full and part-time working adults (18 years old and older) were recruited to participate in the study from a variety of sources. Participant sources included coworkers, students, and acquaintances. Participants were referred to the study through colleagues, advertisement, and by direct solicitation. To ensure a heterogeneous sample, efforts were utilized to obtain participants from both blue and white-collar jobs, from management and nonmanagement positions, and from different professions; in addition, an attempt was made to recruit from different ethnic backgrounds, ages, and genders.

#### Procedures

Participants who volunteered for the study were first provided with two written informed consent statements. One informed consent statement was for them to read, sign, and return in a postage paid envelope, and the other informed consent form was for them to keep for future reference. The informed consent sheet notified the research participants of the following information. (A) The nature of the study. (B) That the study was voluntary and that participants could withdraw at anytime and still retain the monetary compensation. (C) The risks associated



with the study. (D) To complete the study anonymously. (E) Confidentiality. (F) The researcher and advisor's phone number and e-mail address for participants to contact if questions arose about the study or their role. (G) General information on how to complete the study and the length of time needed to complete the study.

Once participants signed the informed consent statement, they were given or mailed a packet that included a cover letter, a \$5.00 bill, a demographic questionnaire, an envelope containing the first part of the study (labeled number 1), an envelope containing the second part of the study (labeled number 2), and a postage paid return envelope. The cover letter instructed participants on how to complete the study, and informed participants that within five to seven days of receiving the study they would receive another \$5.00 bill in the mail. At the time the second \$5.00 bill was mailed out, a letter was sent reminding participants to take the second part of the study. Finally, all participants received an e-mail reminder notice to return the study.

The cover letter directed participants to first complete a demographic questionnaire. Participants were then instructed to complete the contents of the first envelope composed of either the r-OASQ or a positive and negative MSF appraisal and corresponding CDSII measures, depending on the order of the counterbalancing. After completing the contents of the first envelope, participants were instructed to complete the contents of the second envelope 5 to 10 days after completing the first envelope. The second envelope contained either the r-OASQ or a positive and negative MSF appraisal and corresponding CDSII measures, depending upon what they received in the first envelope. Lastly, participants were directed to mail back the demographic questionnaire, the r-OASQ, and the two completed CDSII measures in the postage paid return envelope.

The following provisions were undertaken in the study to protect participant confidentiality. (A) Participants were allowed to stay anonymous and directed not to write their names on any of the data forms, and participants were directed to mail back the demographic sheet and measurement data without a return address. (B) Participants were informed to complete the study in private. (C) The demographic sheet and two measurement instruments, the r-OASQ and CDSII, were associated by number and not by participant name. (D) Consent forms completed by participants were kept separate from measurement data. (E) When an individual score was reported, no identifying information was associated with that score. (F) All data was stored in a locked file cabinet, and the demographic sheet and measurement data were destroyed at the completion of the research study.

## Instruments

### *Description of the r-OASQ and Psychometric Properties*

The r-OASQ attempts to measure attributional style along the five attributional dimensions of internality, stability, globality, externality, and personal control (Furnham & Sadka et al.). In order to elicit attributional responses, the r-OASQ consists of eight brief hypothetical workplace scenarios commonly experienced by employed individuals (Furnham, Sadka, & Brewin, 1992). Four of the hypothetical scenarios describe positive workplace events and four describe negative workplace events. For each scenario participants are asked to visualize themselves in the situation and then to record, in writing, the single most likely cause for the event (Furnham & Sadka et al.). Secondly, participants are asked to rate the cause of the event on five different seven-point (0-6) Likert-type scales (Furnham & Sadka et al.). The Likert-type scales allow participants to rate the cause of the positive or negative workplace

event, in terms of how much or how little, of a specific attributional dimension is present in their causal attributions (Furnham & Sadka et al.). In addition, the r-OASQ is designed with reverse scoring, which prevents participants from rating all the workplace events with either high or low scores; consequently, receiving an artificially high or low attributional score (Furnham, 2003). The reverse scoring also makes it possible for a high score to represent a positive attributional style for both positive and negative workplace events (Furnham, 2003).

#### *Reliability of the r-OASQ*

For the r-OASQ used in this study, Furnham (2003) reports separate reliability alphas for the five attributional dimensions for both positive and negative workplace events. Furnham (2003) reports r-OASQ reliability scores for the internality dimension of 0.38 for positive situations and 0.32 for negative situations, stability dimension reliability scores of 0.85 for positive and 0.76 for negative situations, globality dimension reliability scores of 0.68 for positive situations and 0.51 for negative situations, externality dimension reliability scores of 0.66 for positive situations and 0.45 for negative situations, and personal control dimension reliability scores of 0.40 for positive situations and 0.51 for negative situations.

In a separate study and with a different population group, Furnham, Brewin, and O'Kelly (1994) report that the r-OASQ had internal reliability scores on the internality dimension of 0.50 for positive situations and 0.64 for negative situations, stability dimension reliability scores of 0.80 for positive situations and 0.71 for negative situations, globality dimension reliability scores of 0.79 for positive situations and 0.75 for negative situations, externality dimension reliability scores of 0.70 for positive situations and 0.60 for negative situations, and personal control dimension reliability scores of 0.58 for positive situations and 0.55 for negative situations.

Furnham and Brewin et al. (1994) found reliability alpha levels for the r-OASQ not markedly different from the original OASQ, with the exception that the negative internality dimension reliability score increased from 0.44 to 0.64, and the negative globality dimension reliability score increased from 0.55 to 0.75. Furnham (2003) concludes that the r-OASQ has acceptable but not particularly high reliability scores, which he reports is indicative of most attributional style instruments. As a side note, the reliability scores for the r-OASQ are higher than the reported ASQ's reliability scores (Peterson et al. 1982).

#### *Validity of the r-OASQ*

Furnham and Brewin et al. (1994) found that the r-OASQ's positive internality dimension scale, characteristic of an optimistic style, significantly correlated with organizational commitment and job involvement, and not the negative internality dimension scale, characteristic of a pessimistic style. Secondly, Furnham's (2003) research found that the r-OASQ's attributional scores for the negative stability and negative globality dimensions, characteristic of a pessimistic style, significantly correlated with individuals of lower socio-economic status ( $r = 0.18, p < .05$ ).

Heaven (1994) tested the original OASQ's validity on a small ( $n = 140$ ) nonrepresentative convenience sample of Australian workers. Heaven (1994) found no significant relationship between job commitment and job satisfaction to either positive or negative attributional style composite scores. Heaven (1994) did, however, find that job involvement was significantly related to the externality dimension, but not significantly related to the stability or globality dimension.

*Description of the CDSII and Psychometric Properties*

The CDSII is a 12-item instrument that measures attributions along the four causal dimensions defined by Weiner (1985): locus of causality, stability, personal control, and external control. The 12-items of the CDSII are broken down into three questions for each of the four dimensions, which are scored on a nine-point (1-9) Likert-type scale (McAuley, Duncan, and Russell, 1992). The lowest score participants could obtain on any single dimension is 3, and the highest score participants could obtain on any single dimension is 27 (McAuley et al.). Scores are summed for each of the four dimensions and compared to the midpoint of 15. Scores above the midpoint, depending on the attributional dimension being evaluated, indicate whether individuals have more or less of a particular attributional dimension than individuals who score below the midpoint.

*Reliability of the CDSII*

The CDSII is an adequately reliable and valid measure (McAuley et al. 1992). McAuley et al. found evidence for the psychometric properties of the CDSII in a series of four studies. Reliability coefficient scores across the four studies were 0.67 for the locus of causality dimension, 0.67 for the stability dimension, 0.79 for the personal control dimension, and 0.82 for the external control dimension (McAuley et al.).

## Hypotheses

*Null Hypothesis*

There is no significant relationship between participants' subscale and composite attributional style scores on positive and negative r-OASQ events, and there is no significant relationship between participants' subscale and composite dimension scores on the CDSII to a

positive and negative hypothetical MSF performance appraisal. Secondly, there is no significant relationship between participants' r-OASQ style scores and how participants assign causal attributional dimensions to a positive and negative hypothetical MSF performance appraisal on the CDSII.

### *Hypothesis 1*

The congruency hypothesis states that each participant's attributional style is congruent and distinct from other attributional styles. The hypothesis states that each participant's attributional style will be congruent when responding to positive and negative events on the r-OASQ and when responding to a positive and negative hypothetical MSF performance appraisal. Secondly, each participant's attributional style will be distinct from other attributional styles when responding to positive and negative events on the r-OASQ and when responding to a positive and negative hypothetical MSF performance appraisal.

### *Hypothesis 2*

The consistency hypothesis states that participants' attributional styles will be consistent with how participants' assign causal attributions a positive and negative hypothetical MSF performance appraisal. In other words, participants' subscale and composite style scores on the r-OASQ will closely correspond to participants' subscale and composite dimension scores on the CDSII.

## Data Collection and Data Analyses

### *Data Collection*

The data collected on the r-OASQ was hand-scored using the r-OASQ scoring guideline sheets. The r-OASQ scoring guideline sheet produces separate attributional style scores for each

of the five attributional dimensions: internality, stability, globality, externality, and personal control; in addition, the scoring sheet produces a composite attribution style score by adding the five attributional dimension scores together.

The scoring process involved summing the scores for each of the four positive and negative workplace events to achieve a raw individual attributional dimension score. The raw score was then divided by 4 to obtain a mean score for each attributional dimension. The sample mean score was compared to the r-OASQ population mean score listed in the r-OASQ manual. Sample mean scores above the population mean score, on all of the individual attributional dimensions, were rated as high, i.e., successful, on that attributional dimension. Similarly, sample mean scores below the population mean score, on all of the individual attributional dimensions, were rated as low, unsuccessful, on that attributional dimension. The term optimistic is utilized instead of successful and the term pessimistic is utilized instead of unsuccessful throughout the paper.

Composite positive mean scores were obtained by summing all of the positive situation raw dimensional scores together, minus the globality dimension score, and dividing by four. A negative composite mean score was obtained by summing all of the negative raw dimensional scores together, minus the globality dimension, and dividing by four. The positive and negative sample mean composite scores were compared to the population positive and negative composite mean scores. Participants' composite sample mean scores above or below the population positive and negative composite mean scores indicated the particular attributional style assigned to the participant, i.e., optimistic or pessimistic.

Data collected on the CDSII was hand-scored by summing the scores on each of the three questions associated with the four attributional dimensions of locus of causality, external control,

stability, and personal control. Scores for each of the four attributional dimensions ranged from a low of 3 to a high of 27. Participants who scored at or above the midpoint of 15, on any of the five attributional dimensions, were considered to have a higher level of that particular attributional dimension than participants who scored below 15. Therefore, participants who scored at or above 15 on the individual dimensions were considered to be optimistic, participants who scored 14 or below were considered to be pessimistic.

Composite scores on the CDSII were derived by multiplying the highest score possible (27) by the four dimensions to obtain a high total composite score of 108, and by multiplying the lowest score possible (3) by the four dimensions to obtain a low composite score of 12; thus, composite scores could range from a low of 12 to a high of 108. Participants who scored above the midpoint composite score of 60 were considered to be high on all attribution dimensions combined, and participants who scored below the midpoint composite score of 60 were considered low on all attributional dimensions combined. Hence, participants who obtained composite scores of 60 or higher were identified as optimistic and participants who obtained composite scores of 59 or lower were identified as pessimistic.

Due to the CDSII measure not having a composite dimension scoring method, a rough composite method of scoring was developed by taking the midpoint, i.e., 60, between the lowest possible composite dimension score and the highest possible composite dimension score to determine attributional style. Since the CDSII was not designed with a reverse scoring system, as was the r-OASQ measure, the CDSII was not able to compensate for the external control dimension which is scored opposite of the other three dimensions. As a result, the CDSII composite dimension scoring system, the midpoint method, should be viewed only as a rough



gage versus an accurate method of determining which participants should be assigned an optimistic or pessimistic attributional style.

In order to equate the five r-OASQ attributional dimensions and the four CDSII attributional dimensions, the r-OASQ dimension of globality was factored out of the analysis since it did not have a corresponding CDSII dimension. The r-OASQ globality dimension was not eliminated from the r-OASQ assessment measure because it was a constant for all research participants, but the globality dimension was factored out when determining which participants would be assigned an optimistic or pessimistic attributional style. This was done to better equate the two measures since the CDSII lacks a globality dimension. Hence, an optimistic, pessimistic, or mixed style was determined based on the four common, to both measures, attributional dimensions of internality, stability, externality, and personal control.

In terms of equating the other dimensions, the r-OASQ internality dimension was equated with the CDSII locus of causality dimension, the r-OASQ stability dimension was equated with the CDSII stability dimension, the r-OASQ external control dimension was equated with the CDSII external control dimension, and the r-OASQ personal control dimension was equated with the CDSII personal control dimension.

#### *Data Analyses*

Dependent group *t* tests, also referred to as a within-subjects *t* test (Coolidge, 2000), were utilized to examine whether optimistic and mixed attributional style participants demonstrated a congruency between their mean scores. In order to accept the congruency hypothesis, participants' mean scores had to be either significantly different at the  $p .05$ ,  $p .01$ , or  $p .001$  level, in accordance with the expected outcome. Note, in some cases, a nonsignificant finding if

in accordance with the expected outcome, would provide an understanding about the nature of the variables.

Significant or nonsignificant dependent group *t* test findings, depending on the expected outcome, would indicate that participants with optimistic and mixed attributional styles were demonstrating a congruent response pattern. In other words, a significant or nonsignificant dependent *t* test, in accordance with the expected outcome, would indicate that participants were following a style and not guessing or applying a random style when creating causal attributions; thus, warranting the *style* classification.

Independent group *t* tests were utilized to examine whether optimistic and mixed attributional style participants demonstrated a distinction between their mean scores. In order to accept the congruency hypothesis, participants with optimistic and mixed attributional styles had to have a significant difference in their mean scores, at the  $p .05$ ,  $p .01$ , or  $p .001$  level, in accordance with the expected outcome. However, in some cases, a nonsignificant finding, if in accordance with the expected outcome, would provide an understanding about the nature of the variables.

Significant or nonsignificant independent group *t* test findings, in accordance with the expected outcome, would indicate that participants with optimistic and mixed attributional styles were responding with enough distinction to warrant the style classification. So, depending on the expected outcome, either a significant or nonsignificant finding would indicate whether a particular attribution style was distinct or congruent enough to warrant being classified as a style.

Pearson Product-Moment Correlation coefficients were calculated for each of the four individual subscale dimensions and two composite dimensions on the r-OASQ, and for each of the four individual explanatory attributional subscale dimensions and two composite dimensions

on the CDSII, to determine if participants with optimistic and mixed attributional styles indicated consistency between their attributional style and their explanatory attributional dimensions. For example, participants with high positive personal control scores on the r-OASQ had to have, to confirm the consistency hypothesis, high personal control dimension scores on the positive MSF performance appraisal. Similarly, participants with high negative personal control scores on the r-OASQ had to have, to confirm the consistency hypothesis, low personal control dimension scores on the negative MSF appraisal, i.e., negatively correlated, due to the reverse scoring on the r-OASQ. Significant correlation findings would indicate that participants were consistently utilizing an attributional style, on all attributional dimensions individually and as a composite, when assigning explanatory attributional dimensions to a positive and negative MSF appraisal. Correlation coefficients ( $r$ ) were tested for their significance at the  $p .05$ ,  $p .01$ , and  $p .001$  levels by using the  $t$  formula and distribution.

Nonparametric statistical Chi-Square tests were conducted to test the consistency hypothesis. In order for the consistency hypothesis to be confirmed, participants who scored high or low, i.e., optimistically or pessimistically, on the subscale dimensions or composite scores on the r-OASQ, also had to score high or low, optimistically or pessimistically, on the corresponding subscale dimensions or composite scores on the CDSII, at an above chance level. In order to test the frequency of scoring high or low on both measures, 2 x 2 cell (equal probability type) Chi-Square tests were utilized. Significant Chi-Square score outcomes would indicate that participants' attributional subscale and composite scores, on the r-OASQ, were corresponding to their respective attributional subscale and composite scores to a positive and negative MSF appraisal, at an above chance level. Chi-Square scores were tested for their significance at the  $p .05$ ,  $p .01$ , and  $p .001$  levels.

All statistical calculations for *t* tests, correlation coefficients, and Chi-square tests were conducted with SPSS 11.0 (student version) software.

### Expected Findings

Past research studies have found that both global and specific attributional style measures are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991); therefore, the results of this study may indicate similar findings. Contrary findings, demonstrated by statistically significant congruency and consistency patterns between the r-OASQ and the CDSII, would provide insight into the role that occupational attributional style plays, as a cognitive moderator, in how employees resolve the self-other discrepancies that develop as an outcome of receiving multisource feedback. Secondly, significant congruency and consistency findings would be a preliminary indicator that the r-OASQ is a more robust attributional style measure than past attributional style measures.

### Summary

The purpose of the study was to investigate the relationship between participants' occupational attributional styles and how participants assigned attributional explanations to a positive and negative MSF performance appraisal. Statistically significant relationship findings would preliminarily indicate that occupational attributional style acts as an underlying cognitive moderator involved in determining how recipients resolve the self-other discrepancies associated with receiving multisource feedback. In addition, statistically significant findings would preliminarily indicate that the r-OASQ is a more robust attributional style measure than previous attributional style measures, which have not been able to predict causal attributions.

In order to investigate the relationship between attributional style and causal attributions, the study employed a mixed within-subject and matched-subject quasi-experimental research design, the study obtained a convenience sample of full and part-time working adults, and the study utilized two independent variables and one dependent measure. The independent variables consisted of a positive and negative hypothetical MSF performance appraisal. The dependent variables consisted of participants' subscale and composite scores on the CDSII.

The study contains two hypotheses. The congruency hypothesis states that each participant's attributional style should be unique and distinct from other attributional styles. The consistency hypothesis states that participants' attributional style responses should be consistent with their causal attributions when reacting to a positive and negative MSF performance appraisal. In order to test the congruency and consistency hypotheses four different statistical tests were utilized: dependent group  $t$  tests, independent group  $t$  tests, Pearson Product-Moment correlations, and Chi-Square tests.

## CHAPTER 4. DATA COLLECTION AND ANALYSIS

Two hypotheses guided the data collection and analysis. The first hypothesis involved demonstrating a congruency between the three different attributional styles; in other words, the hypothesis states that the three different attribution styles will display congruent and distinct reactions to positive and negative r-OASQ events and to a positive and negative hypothetical MSF performance appraisal. The second hypothesis involved demonstrating a consistency in responses between participants' attributional styles and their attributional explanations to a positive and negative hypothetical MSF performance appraisal; in other words, the hypothesis states that participants' r-OASQ subscale and composite attributional style scores will consistently correspond to similar subscale and composite attributional dimensions scores on the CDSII. The two hypotheses, however, could not be fully examined due to an under representation of pessimistic style participants. As a result, the congruency and consistency hypotheses could only be partially examined with optimistic style participants and mixed attributional style participants.

### Data Collection

Over a four-month period, 45 participants were recruited to participate in the research study. Of the 45 studies mailed or given out to participants, 44 studies were returned prior to the cutoff date. Of those 44 studies, 6 studies were returned with missing data. On 5 of the 6 studies with missing data, enough data was present so that at least partial analysis was possible. Only 1 study had to be eliminated from analysis due to missing data. Hence, 43 studies were available for analysis, 3 more studies than the 40 originally planned. Of the 43 studies, 13 participants indicated an optimistic style and 2 participants indicated a pessimistic style. The remaining 26

participants indicated that they had a mixed attributional style. As a result of only 2 participants indicating a pessimistic style, it was not possible to directly compare the optimistic style and pessimistic style groups utilizing statistical tests. In place of not being able to compare optimistic style and pessimistic style groups, statistical analysis was conducted between optimistic style and mixed style groups.

Participants who indicated a mixed style, on the r-OASQ, either indicated having an optimistic style for positive events and a pessimistic style for negative events, or they indicated having a pessimistic style for positive events and an optimistic style for negative events. Of the 26 mixed attributional style participants, 21 participants indicated a mixed style of being optimistic for positive events and pessimistic for negative events. Only 4 participants indicated a mixed style of being pessimistic for positive events and optimistic for negative events.

#### Description of Participants

The convenience sample of participants displayed a fairly diverse background in all variables except for ethnicity. Female participants were more representative than male participants by almost a 2:1 ratio. Women comprised 67% ( $n = 29$ ) of the participants, while men comprised 33% ( $n = 14$ ) of the sample. The median age of participants was 38 years, with 42% of the sample indicating an age between 36-45 years. The ethnicity of participants was primarily Caucasian ( $n = 39$ ). Other ethnicity groups included African American ( $n = 1$ ), Asian ( $n = 1$ ), and 1 participant indicated an *other* response for ethnicity. In terms of education level, 31% of the sample indicated they had some college education, 26% indicated they achieved a bachelor's degree, and 35% indicated they achieved a master's degree. Hence, the majority of the sample (95%,  $n = 41$ ) was composed of having some college or more in terms of education.

Finally, in terms of income level, the sample was composed of a mixture of lower, middle, and upper level incomes. Twenty-eight percent indicated an income below \$30,000, 49% indicated an income between \$30,000 to \$70,000, and 23% indicated an upper level income of \$70,000 or higher per year. The median income level for the sample was \$43,500 per year. Table 2a and 2b display a detail description of the sample.

Table 2a

*Demographic Data*

Characteristics		Frequency	Percentage	Median
Gender:	Male	14	33%	
	Female	29	67%	
	Total	43		
Age:	18-25	6	14%	
	26-35	4	9%	
	36-45	18	42%	38
	46-55	9	21%	
	56-65	3	7%	
	66-75	0		
	Missing	3	7%	
Ethnicity:	Caucasian	39	91%	
	African American	1	2%	
	Hispanic	0		
	Asian	1	2%	
	Native American	0		
	Other	1	2%	
	Missing	1	2%	
Education Level:	Some High School	0		
	High School Grad	2	5%	
	Some College	14	31%	
	Bachelor Degree	11	26%	
	Masters Degree	15	35%	
	Doctorate Degree	1	2%	
	Missing	0		



Table 2b

*Demographic Data*

Characteristics	Frequency	Percentage	Median
Income Level: (per year)			
\$20,000 or less	7	16%	
\$20,000 to \$30,000	5	12%	
\$30,000 to \$40,000	4	9%	
\$40,000 to \$50,000	5	12%	\$43,500
\$50,000 to \$60,000	7	16%	
\$60,000 to \$70,000	5	12%	
\$70,000 to \$80,000	2	5%	
\$80,000 to \$90,000	1	2%	
\$90,000 to \$100,000	0		
Missing	4	9%	

The work related demographics gathered indicated that the largest group in the sample was composed of white-collar workers (42%,  $n = 18$ ), compared to blue-collar workers (19%,  $n = 8$ ), and professionals (30%,  $n = 13$ ). Self-employed workers comprised a small percentage of the sample population (7%,  $n = 3$ ). The median hours worked per week were 35-hours, with 47% ( $n = 20$ ) of the sample working more than 40-hours per week, and 34% ( $n = 15$ ) of the sample working less than 30-hours a week. Hence, the sample obtained was composed of a diverse group of part-time and full-time workers. Finally, the median years of employment was 19 years, only 5% of the sample had less than 5 years of employment, and the majority of the sample was composed of participants with more than 11 years of employment (76%,  $n = 32$ ). Table 3 displays a detailed breakdown of the work related demographic data.

Table 3

*Employment Data*

Characteristics	Frequency	Percentage	Median
Type of Employment:			
Blue-collar	8	19%	
White-collar	18	42%	
Professional	13	30%	
Self-Employed	3	7%	
Missing	1	2%	
Work Hours: (per week)			
0-10	1	2%	
11-20	7	16%	
21-30	7	16%	
31-40	7	16%	35
40 plus	20	47%	
Missing	1	2%	
Years of Employment:			
0-5	2	5%	
5-10	7	16%	
11-15	6	14%	
16-20	8	19%	19
21-25	6	14%	
26-30	6	14%	
31-35	2	5%	
36-40	2	5%	
40 plus	2	5%	
Missing	2	5%	

## Statistical Analysis

The data was analyzed with four different statistical tests, i.e., dependent group *t* test, independent group *t* test, Pearson Product-Moment correlation, and the nonparametric Chi-Square test. Dependent group *t* tests were utilized to determine whether participants, identified with optimistic and mixed styles, significantly answered positive and negative events, on the r-OASQ, distinctly enough, in accordance with the expected outcome, to indicate that a

congruent response style was influencing their attributions. In addition, dependent group *t* tests were utilized to examine whether participants with optimistic and mixed styles were indicating a congruent or distinct response style, in accordance with the expected outcome, was influencing the attribution dimensions provided in reaction to a positive and negative MSF appraisal, as measured by the CDSII. Nonsignificant dependent group *t* test findings, in accordance with the expected outcome, would also provide an understanding of the nature of the interaction the variables.

Independent group *t* tests were utilized to determine if participants identified with optimistic styles, reacted significantly different, i.e., distinct, to how participants with mixed styles reacted, in terms of attributions, to both positive and negative events on the r-OASQ and to a positive and negative MSF appraisal, as measured by the CDSII. Significant independent group *t* tests, in accordance with the expected outcome, would provide a preliminary indication that participants' attributional styles were congruent and distinct enough to warrant being identified as a response style. Nonsignificant independent group *t* test findings, in accordance with the expected outcome, would also provide an understanding of the nature of the interaction between the variables.

Pearson Product-Moment correlations were conducted between how participants scored on the r-OASQ's eight subscales with how the same participants scored on the CDSII's eight subscales. In addition, participants' r-OASQ positive and negative composite scores were compared with participants' CDSII positive and negative composite scores. In all, 12 positive and negative correlations were examined for significance. For example, participants' positive and negative internality dimension raw scores on the r-OASQ were correlated with their respective positive and negative locus of causality dimension raw score on the CDSII.

Similarly, participants' positive and negative stability dimension, externality dimension, and personal control dimension raw scores on the r-OASQ were correlated with their respective positive and negative raw scores on the stability dimension, external control dimension, and personal control dimension on the CDSII. In addition to comparing separate subscale scores on the r-OASQ and CDSII, four composite scores were correlated. Composite score correlations were conducted between positive and negative composite scores on the r-OASQ and their respective positive and negative composite scores on the CDSII. Positively or negatively correlated significant findings would indicate whether participants' r-OASQ style scores were corresponding to participants' CDSII subscale and composite scores.

The study utilized the nonparametric Chi-Square statistical test to determine if participants who scored in the optimistic or pessimistic range on their subscale dimensions and composite scores, on the r-OASQ, also scored in the optimistic or pessimistic range on their respective corresponding subscale dimensions and composite scores, on the CDSII, at an above chance level. In order to test the frequency of scoring high or low on both measures, 2 x 2 cell (equal probability type) Chi-Square tests were utilized. Significant Chi-Square score outcomes would indicate that participants' attributional subscale and composite scores were corresponding to their respective positive and negative MSF attributional subscale and composite scores at an above chance level.

#### Dependent Group Analysis

Dependent group *t* tests indicated that participants with optimistic styles for positive events on the r-OASQ reacted significantly different,  $t(12) = 2.846$ ,  $p < .05$ , than they did for negative events on the r-OASQ. However, the same optimistic style participants did not indicate

a significantly difference,  $t(10) = 1.968, p > .05$ , on the CDSII, in how they reacted to a positive MSF appraisal versus a negative MSF appraisal.

The mixed style participants indicated a significant dependent group  $t$  test difference,  $t(25) = 7.553, p < .001$ , between how they reacted to positive and negative events on the r-OASQ. In addition, the same mixed style participants reacted significantly different,  $t(25) = 6.095, p < .001$ , on the CDSII, in how they reacted to a positive MSF appraisal versus a negative MSF appraisal. Table 4 displays a detailed analysis of the dependent group  $t$  analysis results.

Table 4

*Dependent Group t Tests*

Attributional Measure	r-OASQ Positive/Negative Events	CDSII Positive/Negative MSF
Attributional Style	Significance	Significance
Optimistic	2.846* <i>(M = 6.69, SD = 8.479, n = 13)</i>	1.968 <i>(M = 10.91, SD = 18.387, n = 11)</i>
Mixed	7.553*** <i>(M = 19.77, SD = 13.346, n = 26)</i>	6.095*** <i>(M = 17.46, SD = 14.607, n = 26)</i>

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Independent Group Analysis

Independent group  $t$  tests produced one significant and three nonsignificant findings between the optimistic and mixed attributional style participants. A significant independent group  $t$  test finding,  $t(24) = 7.109, p < .001$ , was found between how optimistic and mixed style participants reacted to negative events on the r-OASQ. Secondly, the independent group  $t$  test

between optimistic and mixed style participants was not significant,  $t(24) = -.535, p > .05$ , in how the two groups reacted to positive events on the r-OASQ.

The two groups, optimistic and mixed style participants, also produced no significant findings on how they reacted to a positive and negative MSF appraisal on the CDSII. The independent group  $t$  test between how optimistic and mixed styles reacted to a positive MSF appraisal revealed a nonsignificant finding,  $t(20) = -1.141, p > .05$ . Secondly, the independent group  $t$  test between how the optimistic and mixed styles reacted to a negative MSF appraisal revealed a nonsignificant finding,  $t(20) = .452, p > .05$ . Table 5 displays the independent group  $t$  test results.

Table 5

*Independent Group t Tests*

Attributional Measure	r-OASQ	CDSII
Attributional Style	Positive Events	Positive MSF
Optimistic/Mixed	$-.535$ ( $MD = -1.15, n = 26$ )	$-1.141$ ( $MD = -5.73, n = 22$ )
	Negative Events	Negative MSF
Optimistic/Mixed	$7.109^{***}$ ( $MD = 17.15, n = 26$ )	$.452$ ( $MD = 2.18, n = 22$ )

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$  ( $MD$  is mean difference)

Bivariate Correlation Analysis

Pearson Product-Moment correlation coefficients were conducted between the eight positive and negative subscales on the r-OASQ and their corresponding positive and negative

subscales on the CDSII. The results indicated only one significant negative correlation finding,  $r(39) = -.356, p < .05$ , between how participants reacted on the negative dimension of personal control. (Due to the reverse scoring on the r-OASQ, high scores on the r-OASQ negative personal control dimension were associated with low scores on the CDSII negative personal control dimension.) The other three positive and negative subscales on the r-OASQ and their corresponding positive and negative subscales on the CDSII produced no significant correlations. Table 6 displays the significance levels and correlation scores between the eight positive and negative subscales on the r-OASQ and their corresponding subscales on the CDSII.

Table 6

*Correlation Results Between the r-OASQ and CDSII Positive and Negative Subscale Scores*

Subscales	CDSII Subscales			
Correlations Scores	Locus of Causality Pos (Neg)	Stability Pos (Neg)	External Control Pos (Neg)	Personal Control Pos (Neg)
<b>r-OASQ</b>				
<b>Internality</b>				
Pos Subscale	.046 <i>n</i> = 42			
(Neg Subscale)	(.227) <i>n</i> = 43			
<b>Stability</b>				
Pos Subscale		-.004 <i>n</i> = 41		
(Neg Subscale)		(.063) <i>n</i> = 43		
<b>Externality</b>				
Pos Subscale			-.217 <i>n</i> = 41	
(Neg Subscale)			(.010) <i>n</i> = 43	
<b>Personal Control</b>				
Pos Subscale				.095 <i>n</i> = 42
(Neg Subscale)				(-.356*) <i>n</i> = 41

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Four additional Pearson Product-Moment correlations were conducted between the positive and negative composite scores on the r-OASQ and CDSII. No significant correlations were produced between participants' composite scores to positive r-OASQ events and participants' composite scores to a positive MSF appraisal, as measured by the CDSII. Similarly, no significant correlations were produced between participants' composite scores to negative r-OASQ events and participants' composite negative MSF appraisal, as measured by the CDSII. Finally, no significant correlations were produced between how participants reacted as a composite to positive r-OASQ events and a negative MSF appraisal, or how participants reacted to negative r-OASQ events and a positive MSF appraisal. Table 7 displays the nonsignificant findings between participants' positive and negative composite dimension scores on the r-OASQ and CDSII.

Table 7

*Correlation Results Between the r-OASQ and CDSII Positive and Negative Composite Scores*

Composite Scores	CDSII	
	Positive MSF Scores	Negative MSF Scores
r-OASQ		
Positive/Event Scores	.039 (n = 41)	-.166 (n = 41)
Negative/Event Scores	.041 (n = 41)	-.128 (n = 41)

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$



Chi-Square Analysis

Of the 14 Chi-Square tests conducted on the data, only four produced significant findings. A significant finding was found for one of the eight positive and negative attributional subscales and for one of two attributional composite scores. A significant Chi-Square finding,  $X^2(1) = 15.244, p < .001$ , was found between participants' stability subscale scores for positive events on the r-OASQ and corresponding CDSII positive stability subscale scores to a positive MSF appraisal. Secondly, a significant Chi-Square finding,  $X^2(1) = 10.756, p < .001$ , was found between participants' positive attribution composite scores to positive events on the r-OASQ and corresponding CDSII positive composite scores to a positive MSF appraisal. Table 8 displays the Chi-Square findings for the r-OASQ and CDSII subscale and composite scores.

Table 8

*Chi-Square Results Between Positive and Negative Subscales and Composite Scores*

Subscales/ Composite Scores	CDSII				
	Locus of Causality Pos (Neg)	Stability Pos (Neg)	External Control Pos (Neg)	Personal Control Pos (Neg)	Composite Score Pos (Neg)
r-OASQ					
Internality Pos (Neg)	.381 (.581)				
Stability Pos (Neg)		15.244*** (1.140)			
Externality Pos (Neg)			.610 (.023)		
Personal Control Pos (Neg)				.095 (2.951)	
Composite Score Pos (Neg)					10.756*** (.220)

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Two additional significant Chi-Square findings were found between participants' attributional styles and their corresponding scores to a positive MSF appraisal. A significant finding,  $X^2(1) = 9.308, p < .01$ , was found for participants with optimistic styles for positive r-OASQ events and corresponding CDSII scores to a positive MSF appraisal. In addition, a significant finding,  $X^2(1) = 5.538, p < .05$ , was found for participants with mixed styles for positive r-OASQ events and corresponding CDSII scores to a positive MSF appraisal. Table 9 displays the significant and nonsignificant Chi-Square scores between participants' attributional styles and corresponding scores to a positive and negative MSF appraisal.

Table 9

*Chi-Square Results Between Optimistic and Mixed Styles and CDSII MSF Scores*

Composite Scores	CDSII	
	Positive MSF	Negative MSF
r-OASQ Style		
Optimistic Pos Events	9.308** (n = 13)	
Optimistic Neg Events		.091 (n = 11)
Mixed Pos Events	5.538* (n = 26)	
Mixed Neg Events		.154 (n = 26)

Two-tail significance \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### Summary

Forty-three studies were available for statistical analysis. The study's sample was primarily composed of Caucasian men and women, around 38 years old, college educated, middle class, with part-time and full-time jobs, white collar and professionally employed, and most participants had more than 11 years of employment. The dependent group *t* tests conducted for optimistic and mixed attributional style participants, revealed three significant and one nonsignificant finding. The independent group *t* tests between optimistic style and mixed style attributional participants produced one significant and three nonsignificant findings. The Pearson Product-Moment correlation coefficients between r-OASQ and CDSII subscale scores revealed only one significant finding and seven nonsignificant findings, and correlational coefficients between r-OASQ and CDSII composite scores revealed four nonsignificant findings. Finally, of the 14 Chi-Square tests conducted between the r-OASQ and CDSII attributional subscale, attributional composite, and attribution style scores, only 4 were found to be significant while 10 were found to be nonsignificant.

## CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

The study's results did not support the acceptance of the first or second hypothesis; thus, the null hypothesis could not be rejected. The results found inconclusive support for the congruency hypothesis, and the results found no support for the consistency hypothesis. The study's findings appear to indicate that participants drifted away from their attributional styles when faced with the task of determining specific attributional explanations to a positive MSF appraisal and even more to a negative MSF performance appraisal. As a result of the findings, the study concluded that occupational attributional style does not appear to be a cognitive moderator involved in determining how individuals resolve the self-other discrepancies associated with MSF. In addition, the study concluded that the r-OASQ is not a more robust measure of attributional style than previously developed global and specific attributional style measures, and the study's findings support the findings of other studies reporting that both global and specific attributional style measures are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991). The implication reached by the study is that practitioners should not rely heavily upon occupational attributional style, as measured by the r-OASQ, to anticipate or predict how employees may resolve the self-other discrepancies associated with MSF.

### Discussion of Results

#### *Hypothesis 1*

The dependent group *t* test results were inconclusive; therefore, the null hypothesis could not be rejected in favor of the congruency hypothesis. The dependent group *t* tests indicated that

participants with optimistic styles for positive events on the r-OASQ reacted significantly different than they did for negative events on the r-OASQ ( $n = 13$ ); however, given that the r-OASQ utilizes reverse scoring, making a high score on both the positive and negative events favorable, a nonsignificant finding was expected. In other words, the r-OASQ positive and negative event scores for optimistic participants should have been similar enough not to indicate a significant finding; thus, indicating a congruency rather than a distinction. The significant finding indicates that optimistic styles scored significantly distinct versus congruent on the positive and negative events r-OASQ, but not scoring too distinct to indicate the presence of a pessimistic style on either positive or negative events.

A significant finding was expected in how optimistic style participants reacted to a positive MSF appraisal versus a negative MSF appraisal on the CDSII ( $n = 11$ ); however, a nonsignificant finding was found. The significant finding was expected because the CDSII does not utilize reverse scoring; thus, a high score on the CDSII for a positive MSF appraisal would represent optimism and a low score on the CDSII for a negative MSF appraisal would represent optimism; therefore, it was expected that optimistic style participants would score high on the positive MSF appraisal and low on the negative MSF appraisal to indicate that a congruent optimistic style was present; however, this was not the case.

The mixed style participants, of whom 21 of the 26 were identified as having an optimistic style for positive events and a pessimistic style for negative events, showed a congruency in response style, on the dependent group  $t$  test, to the positive and negative r-OASQ events. Hence, the results indicated that a congruency was present between mixed style participants in how they chose their attributional responses between positive and negative events

on the r-OASQ. In other words, these participants scored distinctly enough on the positive and negative events to indicate that they were choosing different attributional styles, i.e., optimistic or pessimistic, on the positive and negative r-OASQ events.

The mixed style participants also indicated a significant difference between how they chose their attributional dimensions to a positive and negative MSF appraisal on the CDSII; thus, showing a congruency. Given the make-up of these two groups, composed mostly of an optimistic style for positive events and a pessimistic style for negative events, it was expected that these groups' means would be significantly distinct enough to indicate a congruent reaction, which was the case.

Overall, the dependent group *t* test findings indicated that participants were using a congruent mixed attributional response style, but did not indicate that participants were displaying a congruent optimistic attributional response style. As a result of the inconclusive findings, the null hypothesis could not be rejected in favor of the congruency hypothesis.

The independent group *t* test results also indicated inconclusive findings; thus, the null hypothesis could not be rejected in favor of the congruency hypothesis. The findings revealed two expected nonsignificant findings, one expected significant finding, and one unexpected nonsignificant finding that supported the null hypothesis. Two nonsignificant findings were expected between optimistic and mixed style participants since the two groups were nearly identical in their make-up for positive events. Recall that the mixed style group was composed of 4 participants with an optimistic style for negative events and a pessimistic style for positive events, and 21 participants with an optimistic style for positive events and a pessimistic style for negative events. Thus, the optimistic and mixed style groups were nearly identical in how they

responded to positive events and nearly opposite in how they responded to negative events. As a result, it was expected that the optimistic style participants and mixed style participants would be nonsignificant in how the two groups reacted to positive r-OASQ events and a positive MSF appraisal, which was the case.

A significant and expected independent group *t* test finding was projected between how participants with optimistic styles and mixed styles would react to negative events on the r-OASQ. Given the difference between these two groups, i.e., all optimistic style participants had an optimistic style for negative events and most mixed style participants had a pessimistic style for negative events, it was expected that the means of these two groups would be clearly distinct enough to result in a significant finding, which was the case.

A significant and expected independent group *t* test finding was also projected between how optimistic style and mixed style participants reacted to a negative MSF appraisal; however, a nonsignificant finding was found. This was an unexpected finding given the composition of the two groups, i.e., participants with an optimistic style for negative events and mixed style participants with a pessimistic style for negative events should have scored significantly different. Therefore, as a result of this last finding of the independent group *t* tests, the null hypothesis could not be rejected in favor of the congruency hypothesis.

### *Hypothesis 2*

The Pearson Product-Moment correlation analysis found little support for the consistency hypothesis; hence, the null hypothesis could not be rejected. In other words, no consistent relationship was found to exist between attributional styles, optimistic or mixed, and the attributional dimensions assigned to a positive and negative MSF appraisal. The correlation

analysis between the eight positive and negative subscales on the r-OASQ and their corresponding subscales on the CDSII produced only one significant finding and seven nonsignificant findings. In addition, no significant findings were produced between the participants' r-OASQ and CDSII composite positive and negative scores.

In order for the null hypothesis to have been rejected, the correlation findings would have had to demonstrate that relatively higher scores on the r-OASQ positive subscales were associated with relatively higher scores on the positive CDSII subscales, with exception of the externality scale. Secondly, in order for the null hypothesis to be rejected, the results would have had to also demonstrate that relatively higher scores on the r-OASQ negative subscales were associated with lower scores on the negative subscales on the CDSII, due to the reverse scoring on the r-OASQ, with the exception of the externality scale. In order for the externality scale to indicate significance, higher r-OASQ positive subscale scores would have had to negatively correlate with lower CDSII positive subscale scores, and higher r-OASQ negative subscale scores would have had to positively correlate with higher CDSII negative subscale scores.

In addition to the Pearson Product-Moment correlation analysis not finding support for the consistency hypothesis, the Chi-Square tests also found little support for the consistency hypothesis. In order for a Chi-Square test to be significant, pessimistic or optimistic scores on the r-OASQ needed to correspond to pessimistic or optimistic scores, at an above chance level, on the CDSII, which was not the case on 10 of the 14 Chi-Square tests. The results did indicate that 4 of the 14 Chi-Square tests were found to be significant; however, even these four significant findings did not display complete consistency with their negative counterparts.



The Chi-Square tests did point to an interesting trend which occurred to the four Chi-Square significant findings. For example, participants' r-OASQ positive stability subscale scores significantly corresponded, at an above chance level, to positive stability subscale scores on the CDSII. However, participants' r-OASQ negative stability subscale scores did not significantly correspond, at an above chance level, to negative stability subscale scores on the CDSII. Similarly, participants' r-OASQ positive composite scores significantly corresponded, at an above chance level, to their CDSII composite positive scores, but participants' r-OASQ negative composite scores did not significantly correspond, at an above chance level, to negative composite scores on the CDSII. Lastly, participants' optimistic and mixed attributional style scores significantly corresponded to CDSII scores to a positive MSF appraisal, but participants' optimistic and mixed attributional style scores did not correspond to CDSII scores to a negative MSF appraisal. Hence, preliminarily it appears that some participants engaged in more attributional drift to a negative MSF appraisal than to a positive MSF appraisal.

## Conclusions

### *Attributional Style*

The results did not indicate that participants were consistently operating under either an optimistic or mixed attributional style. The interpretations of the dependent group *t* test relationship findings were inconclusive; on the one hand, the optimistic style participants did not indicate congruency on both dependent group *t* tests; on the other hand, the mixed style participants did display congruency on both dependent group *t* tests. The independent group *t* test relationship findings were also inconclusive; on the one hand, the optimistic style and mixed style participants did display expected congruency for positive r-OASQ events and also to a

positive MSF appraisal; on the other hand, the optimistic and mixed style participants were congruent in their reactions to negative r-OASQ events, but were noncongruent, when a congruency was expected, to a negative MSF appraisal. As a result of the last finding, a clear attributional style type was not found in the data. In order for an attributional style to be labeled a *style*, a clear congruency and distinction had to be demonstrated per the first hypothesis. The conclusions reached by the dependent and independent group *t* test relationship findings should be viewed in the light that the sample size of participants was below statistical power level, and composite scoring on the CDSII may not have accurately categorized participants' attributional style.

#### *Attributional Drift*

A possible explanation for why both hypotheses were not accepted was that participants drifted away from their assigned attributional style, on the r-OASQ, when they assigned causal attributions to a positive and negative MSF appraisal. The interpretation of the dependent and independent group *t* test relationship findings indicated that either the optimistic or mixed style participants drifted away from their optimistic or mixed attributional style (mixed style participants were primarily composed of pessimistic styles for negative events) when determining their attributional explanations to a negative MSF appraisal. In other words, a significant difference was expected in means between the optimistic and mixed style participants on negative r-OASQ events due to the differences present between the two groups, which was the case. In addition, a significant dependent group *t* test finding was expected between how the mixed style participants reacted to a negative MSF appraisal, which was the case.

Consequently, a significant difference in means was also expected between how optimistic and

pessimistic style participants responded to a negative MSF appraisal, but this was not the case. The results point out that many of the optimistic or mixed style participants appeared to have drifted away from their attributional style for negative events when providing explanatory attributional responses to a negative MSF appraisal, according to the dependent and independent group *t* tests. The results were unclear as to which style drifted more, or if both styles drifted a similar amount.

The interpretation of the Pearson Product-Moment correlation relationship findings indicated that many participants drifted away from their attributional dimension and style responses on the r-OASQ and provided different attributional dimensions and composite scores to a positive and negative MSF appraisal. The interpretation of the results indicated that many participants scoring in the pessimistic or optimistic range on the r-OASQ, did not always stay in the pessimistic or optimistic range when reacting to a positive or negative MSF appraisal; in other words, participants drifted away from their attribution dimension and style choices at the subscale and composite level when determining attributional dimensions to a positive and negative MSF appraisal, with the exception of the negative personal control subscale.

The Chi-Square test relationship findings found 4 significant findings out of 14 Chi-Square tests. The majority of the Chi-Square results indicate that participants, who scored in the optimistic or pessimistic range, frequently, on 10 of 14 tests, did not stay in the optimistic or pessimistic range, i.e., drifted away, when faced with determining explanatory attributions to a positive and negative MSF appraisal.

*Drift to the Negative*

The four significant positive Chi-Square results and the lack of corresponding negative Chi-Square results, preliminarily appears to indicate that some participants drifted more for a negative MSF appraisal than for a positive MSF appraisal. In other words, the same participant who rated themselves as an optimist or a pessimist on the r-OASQ positive events, at an above chance level, were also optimistic or pessimistic to a positive MSF appraisal. However, participants who rated themselves as an optimist or a pessimist on the r-OASQ negative events appeared to drift away from their style, in all four cases, when providing explanatory attributions to a negative MSF appraisal.

The contrast between the dependent and independent group *t* test relationship findings provide additional support for the conclusion that participants drifted more for a negative MSF appraisal versus a positive MSF appraisal. Recall that the dependent group *t* test findings for mixed style participants indicated that there was a significant difference between how those participants reacted to a positive and negative MSF appraisal. Therefore, it was expected that the result on the independent group *t* test for optimistic style and mixed style participants' reaction to a negative MSF appraisal was to be significant, given the composition of the two groups, but a nonsignificant finding was found. In order to make sense of the dependent and independent *t* test results, the conclusion was reached that some participants must have drifted from their optimistic or mixed attributional style when faced with providing explanatory attribution responses to a negative MSF appraisal. A similar independent group *t* test finding was not found for how optimistic and mixed style participants reacted to a positive MSF appraisal.

*Occupational Attributional Style as a Cognitive Moderator*

The lack of significant relationship findings of the independent group  $t$  tests, Pearson Product-Moment correlations, and Chi-Square findings point to the conclusion that participants in the study appeared to be following some other factor(s) when determining their attributional explanations to a positive and negative MSF appraisal versus following a particular occupational attributional style, since many participants appeared to drift away from their attributional style when determining their attributional explanations to a positive MSF appraisal and even more so to a negative MSF appraisal.

*The Robustness of the r-OASQ*

The lack of significant relationship findings of the independent  $t$  group, Pearson Product-Moment correlations, and Chi-Square findings point to the conclusion that the r-OASQ is not a more robust attributional style measure than previous developed attributional style measures. Therefore, the results in the study support the findings of other studies reporting that both global and specific attributional style measures are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991).

*Conclusions and Limitations*

The dependent group  $t$  tests, the independent group  $t$  tests, the Pearson Product-Moment correlations, and the Chi-Square results should all be viewed in the light that some of the samples utilized for statistical comparisons were below statistical power level. Secondly, the composite results should be viewed in the light that a rough method of midpoint composite scoring was developed for the CDSII, which was not validated. As a result, the subscale results

should be viewed as more accurate than the composite results. However, given the limitations present in comparing r-OASQ composite and CDSII composite scores, the composite scores did display similar relationship findings as the subscale dimension comparisons.

### Implications

For practitioners, the implication of the study indicates that they should not rely heavily upon occupational attributional styles, as measured by the r-OASQ, to anticipate or predict how employees might resolve the self-other discrepancy associated with MSF. Since other studies have also indicated similar findings that global and specific attributional style measures are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991), practitioners should also be cautious not to heavily depend upon attributional style measures, in general, to anticipate or predict employee reactions to other types of workplace interventions in addition to receiving multisource feedback.

### Study Limitations

Five main limitations should be considered when evaluating the study's outcomes. One, the study utilized hypothetical MSF versus real life MSF. The study in essence posed hypothetical events on the r-OASQ with hypothetical MSF scenarios. A limitation of utilizing hypothetical examples is that participants might misjudge their own reactions; for example, participants might judge that they would do better or worse than how they would actually react in real life to either a positive or negative MSF performance appraisal. The study, however, counteracted some of this limitation by comparing hypothetical events with hypothetical events.

Therefore, participants who were likely to misjudge their actual reactions would likely do so to the hypothetical events on the r-OASQ and on the CDSII.

Two, the study employed a quasi-experimental research design which utilized a convenience sampling approach to obtain participants. Since a random sample of participants was not obtained, the study's convenience sampling approach may have led to skewed findings.

Three, the study achieved a low sample size of participants in some categories, and the study failed to generate an adequate sample of pessimistic style and minority participants. In most cases the study's sample size met a sufficient statistical power level of 30 participants (Coolidge, 2000); however, in some cases the sample size was at a low statistical power level. Sample sizes lower than 30 participants occurred on the dependent group *t* tests, on the independent group *t* tests, and on the Chi-Square comparisons between optimistic and mixed styles. Secondly, the study failed to generate an adequate sample size of minority participants and pessimistic style participants. The study was only able to recruit a few minorities to participant, and since only 2 participants identified themselves as having a pessimistic attributional style, the research study needed to rely on participants who identified themselves as having a mixed attributional style.

Four, the study compared two nonequivalent measures. The r-OASQ asked participants to assign how much or how little of a specific attributional dimension is present on five (four used in the study) different seven-point (0-6) Likert-type scales; whereas, the CDSII asked participants to assign how much or how little of a specific attributional dimension is present on four different nine-point (1-9) Likert-type scales. The difference in Likert-type scales may have led to participants indicating more or less of a certain attribution depending on the scale being

utilized, i.e., the 0-6 scale or the 1-9 Likert-type scale. It was assumed that participants would still score above or below the population mean on the r-OASQ, and above or below the midpoint on the CDSII if they were of an optimistic or pessimistic style.

Five, the CDSII measure was not designed with composite dimension scoring. A rough composite method of scoring was developed by taking the midpoint, i.e., 60, between the lowest possible composite dimension score and the highest possible composite dimension score. Since the CDSII was not designed with a reverse scoring system, as was the r-OASQ measure, the CDSII was not able to compensate for the external control dimension, which is scored opposite of the other three dimensions. No research was conducted to test the validity of the midpoint composite scoring method; as a result, the rough scoring system may have incorrectly categorized, in terms of their attributional style, some of the participants. In terms of accuracy, the subscale comparison between the r-OASQ and the CDSII should be viewed as more accurate than the composite comparisons between the two measures.

#### Recommendations for Future Research

One direction for future research would be to replicate the findings in this study with a larger sample of participants. A larger sample size would increase the power level of the statistical analysis, and a larger sample size would increase the number of participants with pessimistic attributional styles. If a similar sample group of participants were recruited, a much larger sample size of participants would be required to obtain a sample of 30 or more pessimistic style participants since a sample size of 43 participants only yielded 2 pessimistic participants. In addition, a sample that large would also include a better representation of minority participants.



A second direction for future research would be to utilize a different quantitative research approach. Since this study focused on utilizing a hypothetical research approach, a research approach that utilizes a real life approach could provide additional valuable insight into the role that attributional style plays in recipients' reaction to MSF. For instance, a research study could be conducted on a group of employees who already receive MSF. In this type of setting, the researcher would first provide a sample of employees with the r-OASQ; subsequently, the researcher would provide the same employees with the CDSII right after they received MSF.

A third direction for future research would be to employ a qualitative research approach. A qualitative approach would add further valuable insight and understanding as to why participants drifted or maintained their particular attributional style when providing attributional explanations for specific events.

### Summary

The study's results did not support the acceptance of the first or second hypothesis; thus, the null hypothesis could not be rejected. The dependent and independent group *t* test indicated inconclusive findings; as a result, the data was not able to clearly indicate that a certain attributional style was present in participants. The contrast between the dependent and independent group *t* test between optimistic and mixed style participants indicated that either the optimistic or the mixed style participants drifted away from their attributional style to a negative MSF appraisal. The Pearson Product-Moment correlations indicated that participants drifted away from their attributional style when faced with determining attributional dimensions and composite styles to a positive and negative MSF performance appraisal. Finally, the Chi-Square tests also indicated that participants drifted away from their attributional style when determining

their attributional dimensions and composite styles, and the drift was more pronounced for a negative MSF appraisal than for a positive MSF appraisal.

The study reached the following conclusions. (A) Participants in the study appeared to have drifted away from their attributional style, both at the individual dimension and composite level, when determining their explanatory attributions to a positive and negative MSF appraisal. (B) Some participants appeared to have engaged in more attributional drifting to a negative MSF appraisal versus a positive MSF appraisal. (C) The data did not support the findings that occupational attributional style is an underlying cognitive moderator involved in determining how individuals resolve the self-other discrepancies associated with MSF. (D) The results indicated that the r-OASQ measure is not a more robust measure than previously developed global or specific attributional style measures. (E) The results of the study support the findings of other studies that have reported that both global and specific attributional style measures are poor predictors of attributional explanations for actual events (Cutrona, Russell, & Jones, 1984; Henry & Campbell, 1995; Maher & Nordstrom, 1996; Russell, 1991).

For practitioners, the implication of the study indicates that they should not heavily depend upon occupational attributional styles, as measured by the r-OASQ, to anticipate or predict how employees might resolve the self-other discrepancy associated with MSF.

The limitations of the study included employing a quasi-experimental research approach that utilized a convenience sample of participants. In addition, the study was limited by the use of hypothetical versus real life examples, by a low sample size of participants, and by the lack of pessimistic style participants and minorities in the study. Finally, the study may have been

limited by comparing two nonequivalent measures, and by utilizing a nonvalidated method of midpoint composite scoring, for the CDSII, to determine participant attributional style.

Future research should attempt to replicate the study with a larger sample size, employ real life MSF situations instead of hypothetical MSF scenarios, and incorporate a qualitative research component within the research study.

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## APPENDIX A. DEMOGRAPHIC QUESTIONNAIRE

Capella University  
225 South 6th Street, 9th Floor  
Minneapolis, MN 55402

### Demographic Questionnaire:

You may elect not to complete one or more of the following questions

- 1.) Gender    Male \_\_\_\_\_ Female \_\_\_\_\_
- 2.) Age        18-25 \_\_\_\_\_ 26-35 \_\_\_\_\_ 36-45 \_\_\_\_\_ 46-55 \_\_\_\_\_ 56-65 \_\_\_\_\_ 66-75 \_\_\_\_\_
- 3.) Ethnicity    Caucasian \_\_\_\_\_ African American \_\_\_\_\_ Hispanic \_\_\_\_\_ Asian \_\_\_\_\_  
Native American \_\_\_\_\_ Other \_\_\_\_\_
- 4.) Education Level    Some High School \_\_\_\_\_ High School Grad \_\_\_\_\_  
Some College \_\_\_\_\_ Bachelor Degree \_\_\_\_\_  
Masters Degree \_\_\_\_\_ Doctorate Degree \_\_\_\_\_
- 5.) Years of Employment    Less than 5 years \_\_\_\_\_ 5-10 years \_\_\_\_\_ 11-15 years \_\_\_\_\_  
16-20 years \_\_\_\_\_ 21-25 years \_\_\_\_\_ 26-30 years \_\_\_\_\_  
31-35 years \_\_\_\_\_ 36-40 years \_\_\_\_\_ More than 40 years \_\_\_\_\_
- 6.) Work Hours (per week)    0-10 \_\_\_\_\_ 11-20 \_\_\_\_\_ 21-30 \_\_\_\_\_ 31-40 \_\_\_\_\_  
40 hours plus \_\_\_\_\_
- 7.) Type of Employment    Blue-collar \_\_\_\_\_ White-collar \_\_\_\_\_  
Professional \_\_\_\_\_ Self-Employed \_\_\_\_\_
- Types of blue-collar jobs: warehouse worker, manufacturer, driver, restaurant worker, retail worker, beautician, construction worker, daycare worker, and various types of laborers. Workers in this category are usually paid by the hour, and usually require graduation from high school and technical training.
- Types of white-collar jobs: teacher, salesperson, manager, accountant, nurse, and police officer. Jobs in this category may be paid a salary and usually require either a two or four year college degree.
- Types of professional jobs: doctor, lawyer, pastor, dentist, and social worker. Jobs in this category usually require an advanced degree and are connected with professional associations.
- Self-employment: All your income must be derived from your self-employment work and you do not have a supervisor or boss.
- 8.) Income Level    \$20,000 or less per yr. \_\_\_\_\_ \$20,000 - \$30,000 per yr. \_\_\_\_\_  
\$30,000 - \$40,000 per yr. \_\_\_\_\_ \$40,000 - \$50,000 per yr. \_\_\_\_\_  
\$50,000 - \$60,000 per yr. \_\_\_\_\_ \$60,000 - \$70,000 per yr. \_\_\_\_\_  
\$70,000 - \$80,000 per yr. \_\_\_\_\_ \$80,000 - \$90,000 per yr. \_\_\_\_\_  
\$90,000 - \$100,000 per yr. \_\_\_\_\_ \$100,000 or more per yr. \_\_\_\_\_

## APPENDIX B. POSITIVE MULTISOURCE FEEDBACK APPRAISAL

### Multisource (360-Degree) Employee Performance Evaluation

Vividly imagine that you just completed a self-evaluation in which **you** rated yourself as having a high quality of work performance, excellent communication skills, good leadership skills, and being a great team member. In addition, you rated yourself as having a friendly and cooperative personality.

Now read how your supervisor, an upper manager, four of your coworkers, and one outside vendor (an employee who you regularly interact with outside of your organization) have rated your performance. Each tally mark (/) equals how one of the raters, a total of seven, rated you in each of the below categories.

<b>Time Spent with Employee</b>	<b>Every Day</b>	<b>A few times a week</b>	<b>A few times a month</b>	<b>Every few months</b>	<b>NA</b>
Frequency of interaction	////	//	/		

<b><u>Quality of Work</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Sets high standards for quality of work	////	//			
Ensures work is error-free before submitting it	/////	/			
Helps others improve the quality of their work	////	//			

<b><u>Communication</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Communicates well orally and in written-form	////	/			
Displays good listening skills	////	//			
Shares information freely with others	////	//			

<b><u>Leadership</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Exhibits strong leadership qualities	/////				
Encourages performance from others	////	///			
Leads by example	////	/			

<b><u>Teamwork</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<i>NA</i>
Helps a team more than hinders a team	/////	/			
Helps define team roles to maximize output	////	//			
Can be counted on to complete tasks correctly	////	//			

<b><u>Personal Qualifications</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<i>NA</i>
Presents a positive image to outsiders	///	///			
Is friendly and easy to work with	///////				
Has high professional & ethical standards	////	//			

**Please provide specific examples of competencies where this person excels as an employee.**

The following are statements about you from either your supervisor, an upper level manager, the vendor employee, or from one of your four coworkers.

- 1.) You have sound decision making skills.
- 2.) You excel in creative thinking and do well at implementing those ideas.
- 3.) You effectively organize, prioritize, and handle multiple assignments efficiently.
- 4.) You are an excellent team player.
- 5.) You are willing to “go the extra mile” to achieve results and complete goals.
- 6.) You exercise sound judgment when dealing with coworkers and customers.
- 7.) You consistently produce excellent work output.

**Please provide specific examples of areas where this person needs to improve.**

The following are statements about you from either your supervisor, an upper level manager, the vendor employee, or from one of your four coworkers.

- 1.) You could improve upon your Microsoft Excel skills.

## APPENDIX C. NEGATIVE MULTISOURCE FEEDBACK APPRAISAL

### Multisource (360-Degree) Employee Performance Evaluation

Vividly imagine that you just completed a self-evaluation in which **you** rated yourself as having a high quality of work performance, excellent communication skills, good leadership skills, and being a great team member. In addition, you rated yourself as having a friendly and cooperative personality.

Now read how your supervisor, an upper manager, four of your coworkers, and one outside vendor (an employee who you regularly interact with outside of your organization) have rated your performance. Each tally mark (/) equals how one of the raters, a total of seven, rated you in each of the below categories.

<b>Time Spent with Employee</b>	<b>Every Day</b>	<b>A few times a week</b>	<b>A few times a month</b>	<b>Every few months</b>	<b>NA</b>
Frequency of interaction	///	//	/	/	

<b><u>Quality of Work</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Sets high standards for quality of work			///	////	
Ensures work is error-free before submitting it			/	/////	
Helps others improve the quality of their work			////	///	

<b><u>Communication</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Communicates well orally and in written-form		/	///	///	
Displays good listening skills			///	////	
Shares information freely with others			//	/////	

<b><u>Leadership</u></b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>NA</b>
Exhibits strong leadership qualities			////	///	
Encourages performance from others			//	/////	
Leads by example			/////	//	

<u>Teamwork</u>	Strongly Agree	Agree	Disagree	Strongly Disagree	NA
Helps a team more than hinders a team			//	////	
Helps define team roles to maximize output		/	///	///	
Can be counted on to complete tasks correctly			///	////	

<u>Personal Qualifications</u>	Strongly Agree	Agree	Disagree	Strongly Disagree	NA
Presents a positive image to outsiders			////	///	
Is friendly and easy to work with			/	/////	
Has high professional & ethical standards			////	//	

**Please provide specific examples of competencies where this person excels as an employee.**

The following are statements about you from either your supervisor, an upper level manager, the vendor employee, or from one of your four coworkers.

- |   |
|---|
| <ol style="list-style-type: none"> <li>1.) You have good technology knowledge, but you are not always willing to share them with your coworkers.</li> <li>2.) You have the ability to cross-sell, but you don't seem interested in using that ability.</li> </ol> |
|---|

**Please provide specific examples of areas where this person needs to improve.**

The following are statements about you from either your supervisor, an upper level manager, the vendor employee, or from one of your four coworkers.

- |  |
|--|
| <ol style="list-style-type: none"> <li>1.) You need to participate more as a team member.</li> <li>2.) Please think before you jump to conclusions and blame others for problems.</li> <li>3.) Do not depend on your coworkers to always fill in for you.</li> <li>4.) You need to improve the quality of your work.</li> <li>5.) You need to pay more attention to your work and spend less time gossiping.</li> <li>6.) You need to obtain less customer complaints.</li> <li>7.) Do not monopolize meeting time with just your problems.</li> </ol> |
|--|



