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Abstract

Feedback is a critical component of almost all performance management systems (Aguinis, 2009), and is often positively associated with individual and organizational effectiveness (e.g., Kluger & DeNisi, 1996; Kim et al., 2016). Given this, researchers and practitioners have long sought to understand how and when feedback is likely to be most effective. Some promising new work has explored feedback orientation (FO), which describes a person's overall receptivity to performance feedback (Linderbaum & Levy, 2010; London & Smither, 2002). Initial research has shown that FO is positively associated with feedback seeking (Dahling et al., 2012; Whitaker et al., 2012) and feedback reactions (Braddy et al., 2013), as well as job performance (Dahling et al., 2012; Whitaker et al., 2012) and contextual performance (Whitaker et al., 2012). The current studies add to our understanding of FO by testing some core assumptions of the construct. The first study used an ESM approach to establish that self-report FO is consistent across time and situations, supporting the assumption that it is a relatively stable individual difference. The second study examined multisource ratings of FO, finding that both peer and direct-report ratings are positively associated with supervisor-rated performance. However, there was low agreement between self and other FO ratings, and self-ratings were not significantly related to performance. Combining this with other research, this suggests that FO leads to positive performance if the value placed on feedback results in feedback-related behaviors. Taken together, the results of this study support the conceptualization and use of FO as a stable individual trait and establish that self-ratings do meaningfully differ from other-source ratings.

Is it More State Than Trait? Within-person Variability and Inter-rater Agreement of Feedback Orientation

Performance feedback has considerable potential to influence attitudes and behaviors, and therefore is a critical component of almost all performance management systems (Aguinis, 2009). For instance, multisource feedback programs are often positively associated with financial performance, individual ability, and knowledge sharing between employees (Kim, Atwater, Patel & Smither, 2016). At the individual level, feedback has often been assumed to result in positive changes in performance (Kluger & DeNisi, 1996). However, feedback interventions often result in no change, or in some cases a decrease, in performance (e.g., Kluger & DeNisi, 1996).

Traditionally, research on feedback effectiveness focused on the source and methods of delivering performance information. However, recent work is more actively examining the role of the feedback recipient. Specifically, feedback orientation (FO) has been proposed as a stable individual difference that describes how likely an individual is to accept and act upon feedback (Linderbaum & Levy, 2010; London & Smither, 2002). So far, feedback orientation has received some promising empirical support, showing links to related behaviors and outcomes (Braddy et al., 2013; Dahling, Chau & O'Malley, 2012; Whitaker & Levy, 2012). However, there is much that is still unknown about this construct. Although scholars have proposed feedback orientation as a stable construct (e.g., Linderbaum & Levy, 2010; London, 2002), this question has not yet been empirically addressed. Also, the current body of research relies heavily on self-ratings of FO, leaving an incomplete

picture of FO measurement. The current project seeks to answer these questions to advance research on feedback orientation.

Performance Feedback

At its core, feedback is "the information people receive about their performance" (London, 2003, p. 11). More specifically as it is used in the workplace, feedback is considered any "action taken by an external agent(s) to provide information regarding some aspect(s) of one's task performance," (Kluger & DeNisi, 1996). Feedback can reduce uncertainty, provide key information about goal progress and importance, reaffirm individuals' beliefs about themselves and their performance, and increase feelings of competence (London, 2003). Through these mechanisms, feedback can have strong positive effects on performance at the individual (e.g., Kluger & DeNisi, 1996; Li, Harris, Boswell & Xie, 2011; Smither, London and Reilly, 2005), team (e.g., Deshon et al., 2004; Marks & Panzer, 2009; Passos & Caetano, 2005), and organizational levels (Kim et al., 2016).

However, since the Kluger and DeNisi (1996) meta-analytic review of feedback interventions, the duality of feedback outcomes has been an important issue for academics and practitioners alike. Feedback can lead to a multitude of positive outcomes, such as increased employee engagement following providing 360 ratings (Atwater & Brett, 2006), better task performance (Li et al., 2011; Smither, London & Reilly, 2005), managerial competency development (Dai, De Meuse, & Peterson, 2010), reduced turnover intentions (Atwater & Brett, 2006), and organizational citizenship behaviors (Lemoine, Parsons & Kansara, 2015). Feedback can even result in changes in behavior not directly addressed by the feedback itself. For instance,

providing normative feedback about negative work behaviors can result in an increase in compensatory organizational citizenship behaviors (Ilies, Peng, Savani & Dimotakis, 2013).

However, feedback can also result in negative outcomes, such as reduced performance (Kluger & DeNisi, 1996), lower intrinsic motivation (Weidinger, Spinath & Steinmayr, 2016), negative emotions (Baron, 1988), interpersonal conflict (Baron, 1988), and reduced self-efficacy (Baron, 1988). It is often the case that people respond favorably to positive feedback (information that they are performing above a standard), but respond poorly to negative feedback (information that they are performing below a standard) (e.g., Brett & Atwater, 2001). This is especially troubling because negative feedback suggests that performance is not up to standard, and that a change in behavior is required to reach performance standards. Often, negative feedback is dismissed by being perceived as not accurate or helpful, and can result in negative affective responses (e.g., Brett & Atwater, 2001; Sheldon, Dunning & Ames, 2014). In a way, this can be viewed as a defense mechanism used to protect self-esteem or often inflated self-views (Helzer & Dunning, 2012). Perhaps even more concerning is that those who are low in skill (or those who need feedback the most) are more likely to dismiss the accuracy or relevance of feedback and are therefore unlikely to take steps for self-improvement (Sheldon, Dunning & Ames, 2014).

The conflicting research findings and mixed personal experiences paint an unclear, confusing, and complicated picture of performance feedback; a picture that may cause some to question the benefits or use of feedback all together (see Adler et

al., 2015 and Pulakos & O'Leary, 2011 for a review). Mixed with similarly discouraging research from other areas of performance appraisal and management (for instance, performance ratings and rating scales), it is easy to see why managers avoid giving feedback, and some propose that performance management systems are broken, beyond repair, and should be abandoned (e.g., Adler et al., 2016; Pulakos & O'Leary, 2011).

On the positive side, these conflicting findings also spurred extensive examinations of the characteristics of feedback, strategies in delivering performance information, and moderators of the feedback-performance relationship. Indeed, many studies have uncovered moderators that help determine when and if feedback leads to positive outcomes. For instance, Kluger and DeNisi (1996) found that feedback focused on controllable behaviors was more effective than feedback focused on meta-task processes. Also, Van-Dijk and Kluger (2004) found that regulatory focus moderates the relationships between feedback sign and task performance motivation. Additionally, the mixed research spurred closer examination of feedback itself, resulting in a deeper understanding of the nature of feedback. For instance, some have attempted to broaden the definition of feedback acceptance to include affective and behavioral outcomes in addition to traditionally used perceptions of accuracy (Anderson & Jones, 2000); examining the multiple components of individual outcomes helps understand the complexity of feedback outcomes.

Traditionally, feedback research focused on characteristics of the feedback provider (e.g., source credibility) and the feedback itself (e.g., feedback sign), however another line of feedback research has started to examine feedback from the

receiver's perspective. From this point of view, feedback is both a passive and active process; performance information can be given by outside sources or can be actively sought and can be actively interpreted through cognitive processes. In both cases, it appears that feedback has positive effects on helping behavior and performance (Li et al., 2011). Being proactive in seeking feedback might be most useful when it comes to receiving information from peers or coworkers, as it is typically not expected that these groups provide feedback (unlike a manager; Li et al., 2011). An even more direct method of examining individual differences in receptivity to feedback has recently emerged in literature.

Feedback Orientation

While both the source and characteristics of feedback influence acceptance, there might also be individual differences guiding responses to feedback (Linderbaum & Levy, 2010; London & Smither, 2002). In fact, people differ in how much they seek feedback (Ashford & Cummings, 1983), as well as their general attitude towards receiving and using performance information (Linderbaum & Levy, 2010; London & Smither, 2002). This idea, termed feedback orientation, is conceptualized as an individual's overall receptivity to feedback. It is characterized by the degree of partiality to feedback, seeking feedback, processing feedback mindfully, and feeling accountable to act on feedback (London & Smither, 2002). Feedback orientation has four dimensions as was operationalized by Linderbaum and Levy (2010): (a) *utility* (believing that feedback is useful in achieving goals and obtaining desired outcomes), (b) *accountability* (a sense of obligation to react to and follow up on feedback), (c) *social awareness* (using feedback to be aware of others' views of themselves and to

be sensitive to those views), and (d) *feedback self-efficacy* (the perceived competence to interpret and respond to feedback appropriately).

There is a considerable amount of initial support for this construct. The Feedback Orientation Scale (FOS) has shown adequate factor structure, consisting of four distinct dimensions and a second-order overall general factor (Linderbaum & Levy, 2010). In terms of construct-related validity, feedback orientation is correlated with theoretically related variables such as implicit person theory and achievement motivation (Braddy et al., 2013), emotional intelligence (Dahling et al., 2012), and learning goal orientation (Linderbaum & Levy, 2010). Regarding criterion-related validity, feedback orientation predicts role clarity (Whitaker et al., 2012), leader member exchange (Dahling et al., 2012), job performance (Dahling et al., 2012; Whitaker et al., 2012), empowerment (Gabriel et al., 2014), and contextual performance (Whitaker et al., 2012) through the mediating mechanisms of feedback seeking (Dahling et al., 2012; Whitaker et al., 2012) and more positive feedback reactions (Braddy et al., 2013). Moreover, feedback orientation predicts unique variance in feedback seeking over and above feedback environment and learning goal orientation (Linderbaum & Levy, 2010). In summary, the available research indicates that people who are higher in feedback orientation proactively seek more feedback (Dahling et al., 2012; Whitaker, 2012) and react more favorably to and use the feedback they receive (Braddy et al., 2013; Garbiel et al., 2014); these in turn have a positive impact on performance (Dahling et al., 2012). These findings indicate how powerful and dynamic feedback orientation can be in the workplace and contribute to the growing understanding of basic feedback research.

What is less clear, however, is the stability or consistency of feedback orientation within an individual. Feedback orientation has been theoretically proposed as a stable individual trait (Linderbaum & Levy, 2010; London & Smither, 2002); however, there is currently little empirical evidence to support this assertion. Although one study found a small correlation between age and the social awareness and utility dimensions of feedback orientation (Wang et al., 2015) which could suggest normative change over time, there is currently no definitive evidence that feedback orientation remains consistent across the lifespan. Moreover, it is also unclear if individual feedback orientation is stable over short periods of time, for instance during the course of a day. In essence, it is not yet clear if feedback orientation is truly a stable individual difference, or if it reflects momentary situational and individual influences. Although knowing how much within-person consistency there is in feedback orientation may not change the importance of examining receptivity to feedback, it will determine the appropriateness of measurement and use. For instance, if feedback orientation is consistent within individuals and across situations, then using it to predict distal outcomes across time makes sense. However, if there is a great degree of intra-individual variation or little cross-situational consistency, then it is more appropriate to examine the proximal socio-cognitive factors that influence momentary feedback orientation and it should be measured closer in time to outcomes (Fleeson & Law, 2015).

Additionally, it is not clear if individuals see themselves the same way as others when it comes to gathering, reacting to, and acting on feedback. FO does involve active feedback seeking, and this should result in behavior that is directly

observable to others (for instance, asking for feedback). Even the more discrete aspects of feedback orientation, such as the value placed on feedback and the desire to utilize feedback, could result in changes in behavior that are observable to others; for instance, a person who makes behavioral changes after receiving feedback might be perceived as having high accountability. Because of the importance of feedback in organizational settings, and the typically social nature of performance feedback, it is worthwhile to consider the link between self and other judgments of feedback orientation. Study 2 will examine the agreement of feedback orientation across sources and relation to performance outcomes.

This study seeks to provide some answers and empirical evidence for both construct-related questions that have so far been left unanswered. Study 1 will address the stability of feedback orientation over time and situations, while Study 2 will examine the differences between self and other ratings of FO in a real-world context.

Study 1: Stability of Feedback Orientation

Contemporary views of personality and individual differences suggest that there might be much more within-person variance in individual traits than once thought. Although traits such as the Big Five show generally consistent within-person mean levels across the lifespan (e.g., Roberts, Walton & Viechtbauer, 2006), recent work often finds substantial within-person variation in state measurements of these traits, or in expressed behaviors related to the traits (e.g., Hadden, Smith, Osborne & Webster, 2017; Judge, Simon, Hurst & Kelley, 2014). These variations are not fully explained by changes in affect (Wilson, Thompson & Vazire, 2016). In fact, in a

meta-analytic summary of Experience Sampling Methodology (ESM) studies, Fleeson and Gallagher (2009) found that most of the behavior variation occurred within-person, while a smaller percentage of the overall variance was between-person. Traditionally, personality and individual trait research focused on normative, or mean level changes, over time (e.g., Roberts, Walton & Viechtbauer, 2006); however, the increased feasibility and use of ESM allowed the study of momentary examination of differences, adding a whole new dimension to trait research.

Whole Trait Theory (WTT; Fleeson & Gallagher, 2009; Fleeson & Jayawickreme, 2015) attempts to integrate these findings, proposing that individual traits can be thought of as a frequency distribution of within-person states across time; an individual's overall trait is represented by the central tendency of this distribution (Fleeson & Gallagher, 2009), but each individual also has variance in the expression of the trait. The theory describes that, although individuals do differ in their general tendencies and response patterns related to a specific trait, there is still substantial variation in the individual's actual state expressions of that trait. According to Fleeson and Gallagher (2009), personality states have the same affective, behavioral, and cognitive content as the matching trait, but occur for a shorter duration than the underlying trait itself. Therefore, the state can be measured through behavioral expressions, or a momentary response to the trait questions 'in the now'. This intra-individual variability is caused by, and therefore can be predicted from, socio-cognitive factors. For instance, in work settings, Judge et al. (2014) found that individual work experiences, such as organizational citizenship, conflict, and motivation predicted Big Five personality states that deviated from an individual's

base trait level. Further, changes in momentary personality states are predictive of daily experiences and the recall of daily events, such that an individual is more likely to experience or recall situations that are congruent with their momentary personality state (for example, those high in momentary extroversion report more positive social events; Hadden et al., 2017).

Although WTT has primarily been applied to the examination of the Big Five personality traits, it is anticipated to extend to other individual difference traits, such as feedback orientation. Given the many situational and affective moderators of feedback that have already been discovered (e.g., Belschak & Den Hartog, 2009; Kinicki et al., 2004) and the dynamic nature of the state expression of individual traits, it is likely that feedback orientation will also show some degree of within person variability. Although knowing an individual's overall standing on feedback orientation is important and useful, it is also important to know if, when, and how much intra-individual variability there is. Moreover, uncovering what other individual and situational factors predict deviations from an individual's general level of feedback orientation will be key to our future understanding and framing of the construct. For instance, two individuals might have the same level of general feedback orientation but have different amounts of variability. In that instance, perhaps the more consistent individual is likely to still be receptive to feedback when there are many situational constraints (time pressure, role overload, ambiguity, etc.) while the other might not. Or, it is also possible that a more consistent profile reacts similarly to positive and negative feedback, but another profile with more variability reacts favorably to positive feedback and reactors poorly to negative feedback.

Huang, Ford and Ryan (2017) demonstrated this same idea with intra-individual variation and training transfer; both level and variability in mastery goal orientation were helpful in predicting training outcomes. In other words, intra-individual variability in mastery orientation moderated the relationship between mastery orientation level and post-training outcomes. Similarly, others have shown that both level and variability of an individual's conscientiousness interacted to predict peer ratings or performance, such that those with less variability had a stronger relationship between level of conscientiousness and performance (Fleisher, Woehr, Edwards & Cullen, 2011). Indeed, it seems that the nature of the current task can have a systematic impact on trait expression (Minbasian, Wood & Beckmann, 2010). Although testing these ideas is beyond the scope of the current project, it highlights the importance of establishing the degree of intra-individual variability in feedback orientation before future work continues.

Consistent with Fleeson and Jayawickreme (2015), the first goal of the current study will be to examine and establish the feedback orientation trait in terms of level, variability, and shape of the distribution of feedback orientation states. It is anticipated that there will be intra-individual variation in state feedback orientation over time. It is also predicted that these individual state distributions will be normally distributed, whereby an individual will typically respond to state measures close to their trait standing and will have few extreme deviations from this baseline (e.g., Fleeson & Jayawickreme, 2015). Moreover, it is anticipated that the average of this distribution will be the best representation of an individual's trait score, such that the mean of the state distribution will have the strongest relationship with the trait

measure of feedback orientation. In essence, this would indicate that when completing a trait questionnaire that asks to report on their general level of feedback orientation across time and situations, participants will report on their average level of feedback receptivity. In essence, this captures the relationship between state and trait responses. If for instance there is a stronger relationship between the highest state measure observation and the trait measure, this would indicate that participants respond to trait measures with their maximum level of feedback receptivity; in essence, this would mean that participants respond to trait measures as they are on their 'best day.'

Hypothesis 1: Momentary feedback orientation measurements will be normally distributed.

Hypothesis 2 a-d: The mean of the state distribution of feedback orientation will have a stronger correlation with the trait measure of feedback orientation than the (a) mode, (b) median, (c) lowest value or (d) highest value.

As previously discussed, Whole Trait Theory suggests that some individuals may experience more intra-individual variability than others. Neuroticism has been shown to be a consistent predictor of intra-individual variability across different traits (e.g., Guekes et al., 2016; Judge et al., 2014; Robinson & Tamir, 2005; Suls & Martin, 2005). Individuals high in neuroticism are characterized by being highly volatile (easily upset or experience frequent changes in mood) and likely to become withdrawn (feeling of sadness, insecurity, easily overwhelmed; DeYoung, Quilty & Peterson, 2007). This is likely to lead to frequent changes in attentional focus; for instance, negative affect that is low in motivational intensity (for instance, sadness or

withdrawal) is tied to attentional broadening, while negative affect that is high in motivational intensity (anger, disgust) narrows attentional focus (Gable & Harmon-Jones, 2010). Also, negative affect is associated with reductions in self-regulation behaviors (see Heatherton & Wagner, 2011 for a review). Trait neuroticism is positively related to variation in both negative and positive affect (Murray, Allen & Trinder, 2002). Moreover, neurotics react to events with more extreme emotions, and are more likely to experience mood spillover from one even to another (Suls & Martin, 2005). This variation also extends to cognitive functioning, as those high in neuroticism also tend to have more variation in cognitive task performance across trials, as measured by reaction times (Robinson & Tamir, 2005).

Applied to FO, there is a long history of research that shows affect is closely tied to the feedback process. First, receiving feedback is likely to induce affect, such that positive feedback results in positive affect (e.g., Bell & Arthur, 2008; Belschak & Den Hartog, 2009; Brett & Atwater, 2001; Ilies et al., 2013; Jawahar, 2006). Additionally, mood is related to the acceptance of feedback; Those in a positive mood are more likely to accept feedback than those in a negative mood (e.g., Bell & Arthur, 2008; Brett & Atwater, 2001; Smither, London & Reilly, 2005). Therefore, affect is commonly viewed as a mediator between receiving feedback and feedback acceptance or outcomes (Belshak & Den Hartog, 2009), although others find that feedback acceptance is determined by a match between mood state and feedback sign (Esses, 1989). In terms of feedback seeking, especially when related to discretionary feedback seeking, individuals who are in a positive mood are more likely to seek negative feedback, and individuals in a negative mood are more likely to seek

positive feedback (Trope & Neter, 1994); which might suggest that individuals only seek negative feedback when they have enough positive information to cope with the negative emotions often tied to negative feedback. Taken together, it appears that affect is a major component of the desire to seek feedback, as well as the affective and cognitive processing of feedback itself. Given these links, and the idea that neuroticism is tied with extreme variations in affect, it is likely that trait neuroticism is positively related to intra-individual variation in feedback orientation.

Hypothesis 3: Trait neuroticism will be positively associated with intra-individual variance in feedback orientation.

Contextual Influences

Environmental or contextual factors are often overlooked in ESM studies. Although within-person variance found in multiple state measures may reflect fluctuations in the person's trait, this variance could also be explained by situational or contextual factors that induce specific actions, thoughts, or emotions. Through this lens, observed changes in state personality manifestations might just reflect changes in situational cues. This idea is not new; many previous theories discuss the interaction of both personality and situational influences on behavior. For instance, Trait Activation Theory (TAT, Tett & Burnett, 2003; Tett & Guterman, 2000) suggests that situational cues activate the expression of specific personality traits, and that this interaction is an important contributor to perceptions of fit with the organization. The cognitive-affective personality system (CAPS; Mischel & Shoda, 2008) proposes that personality is a moderator between situational cues and behavior,

such that behavior is determined by an individual's cognitive and affective interpretation of the situational cues they experience.

The Within and Across Context (WAC) framework proposes a method of compartmentalizing variance in measurement into variance attributed to situation change and variance attributed to intra-individual change (Guekes et al., 2016). As multiple measures of the same construct are taken in an ESM study, relevant aspects of the situation are also measured in order to group momentary measures by situations. This provides an estimate of how much variation occurs within and between contexts. Although this approach is relatively new, findings support that trait personality and contextual factors both explain variations in state measurements (Fleeson & Gallagher, 2009; Guekes et al., 2016; Sherman, Rauthman, Brown, Serfass & Jones, 2015; Wilson, Thompson & Vazire, 2016).

When it comes to measuring relevant aspects of the situation, however, previous research does not provide much clarity (e.g., Hogan, 2009; Reis, 2008). Some taxonomies of situational dimensions have been created (for instance, the Situational Eight DIAMONDS; Rauthmann et al., 2014); however, these taxonomies are relatively new and there is little consensus about their breadth and usefulness. Moreover, they provide situation measurement that is perhaps too specific for the purposes of examining the stability of feedback orientation. Trait feedback orientation is supposed to capture how one views feedback across multiple situations (for instance, receiving feedback from difference sources, getting positive and negative feedback), and this is therefore conceptualized at a more general level than predicting reactions to one specific feedback event. For instance, Dahling et al. (2012) examined

the relationship between feedback orientation and general task performance and leader-member exchange. These outcomes were derived from multiple performance episodes and interactions in a single environment (work). Although feedback orientation might be useful in predicting or explaining reactions or behaviors in a single feedback episode (just like general personality traits can be useful in explaining single behaviors), a first step should be to examine the consistency of feedback orientation across and within major life domains.

The sample used in this study will consist of working students. Members of this group are likely to have three major and distinct roles: work, school, and home. These contexts reflect very different situations, each with their own culture, climate, interactions, goals, and tasks; however, feedback can be a critical component in each domain. This study will utilize these major life domains according the WAC framework to explore consistency in feedback orientation within and across these different contexts. If there is still significant variance in feedback orientation state measures still occurs within each specific context, this will suggest that intra-individual variation in state feedback orientation is determined by more than just changes in situational influences.

Research question 1: How much variance will be observed in feedback orientation within and across each context (school, work, home)?

Study 1 Method

Pilot Studies

In order to reduce the potential fatigue participants may experience during an ESM study, most scholars recommend limiting the amount of time participants spend

on each daily survey. Because the only currently established measure of feedback orientation contains 20 total items (Linderbaum & Levy, 2010) and to remain consistent with the archival data collected in study 2, five items used by an international consulting firm will be used in this study as a measure of feedback orientation (see Appendix B). These items are part of an existing assessment tool and are designed to capture one's overall receptivity to performance feedback. Upon examination, these items appear to be highly similar to the FOS items and seem to be aligned with the definition of feedback orientation. To build confidence that these items are measuring feedback orientation, two pilot studies were conducted to assess the construct validity of the new items.

Pilot study 1: Item sorting task

First, an item sorting technique was used to establish that the five feedback receptivity items are aligned with the definition of feedback orientation and are conceptually distinct from constructs that may contain similar items. This approach will assess the construct validity of the new items, which as others have pointed out is an important, but infrequently examined component of validity (Colquitt, Sabey, Rodell & Hill, 2019). For this study, feedback environment and learning goal orientation (LGO) were selected as two constructs that, while related to feedback orientation, are theoretically and conceptually distinct. The feedback environment refers to the degree to which supervisors and coworkers provide meaningful positive and negative feedback, and support and encourage the seeking and use of performance feedback (Steelman, Levy & Snell, 2004). The feedback environment describes the informal influences and practices of others in the work environment

(e.g., supervisors and coworkers), while feedback orientation describes an individual's perceptions of the value of feedback. Essentially, feedback orientation describes the attitude one has about feedback, while the feedback environment describes how others in the social situation encourage feedback. Although the feedback environment is strongly and positively associated with feedback orientation, the conceptual definitions are distinct and the strength of the associated does not empirically suggest redundancy (Dahling et al., 2012; Gabriel et al., 2014; Linderbaum & Levy, 2010). Therefore, the items for scales measuring these constructs should be distinctive and unique. For instance, "To develop my skills at work, I rely on feedback" (FOS; Linderbaum & Levy, 2010) and "My coworkers are supportive when giving me feedback about my job performance" (FES; Steelman et al., 2004) are distinguishable in that the former suggests that an individual places value on feedback, while the latter suggests that feedback is supported in the social environment. It should be noted that there is some degree of overlap between items from both scales, primarily because both are self-report measures that capture an individual's perception of feedback quality. For instance, the FOS item "Feedback from supervisors can help me advance in a company" and the FES item "My supervisors give me useful feedback about my job performance" are very similar. However, at a conceptual level, the first item is intended to suggest that feedback is valuable and useful for achieving goals, while the second is intended to capture the quality of feedback provided by others in the work environment (which is separate from the perceived value of all feedback itself). These questions may not be

distinguishable in a sorting task, however there are few items that share this degree of similarity between the two scales.

LGO is also a construct that, while sharing some similarities with feedback orientation, is conceptually distinct. LGO, as described by the larger body of work regarding goal orientation (e.g., Dweck & Leggett, 1988), refers to an individual's propensity to improve competence through obtaining new skills and mastering new material (e.g., Dweck & Leggett, 1988; VandeWalle, 2003). Although gathering, mindfully processing, and using performance feedback can be a method for developing competence, it is not the only method to do so. For instance, those high in LGO set more challenging goals, utilize learning strategies (e.g., rehearsal), and tend to have less anxiety (e.g., Payne, Youngcourt & Beaubien, 2007). While there is a positive association between LGO and feedback orientation (Linderbaum & Levy, 2010) and feedback seeking (VandeWalle & Cummings, 1997), and feedback is considered to be a key tool for developing competence (VandeWalle, 2003), they are distinguishable constructs. LGO describes the process by which an individual cognitively frames and sets goals, while feedback orientation describes how one values information about a performance episode. Therefore, the items used to measure each construct should be unique and distinguishable. For instance, "Feedback is critical for improving performance" (FOS; Linderbaum & Levy, 2010) and "I often look for opportunities to develop new skills and knowledge" (LGO; VandeWalle, 1997) are distinguishable in that the former refers to the value placed specifically on feedback, while the latter refers to the desire to grow and obtain new skills by seeking new activities with no specific mention of the use of feedback.

Pilot Study 1 Method and Results

Fifteen SMEs with at least one year of graduate training in I/O Psychology (*M* = 3.46 years of graduate school) and who were familiar with feedback and performance management participated in the Q-sort task matching feedback orientation (5 new items and FOS), learning goal orientation (LGO scale; Vandewalle, 1997), and feedback environment (FES; Steelman, Levy, & Snell, 2004) items to construct definitions. Participants were recruited through current student and alumni listservs from two universities in the Midwestern United States that offer graduate degrees in I/O psychology. After agreeing to participate, SMEs were asked to read and understand the construct definitions for feedback orientation, feedback environment, and learning goal orientation (see Appendix A). Next, they were presented with all 5 new feedback items along with a representative sample of items from the FOS, FES, and LGO scales (see Table 1 for the list of items included in the sorting task) in a random order and asked to match them to the construct definition they believed was the closest fit. The SMEs were also given an 'other' category to use if they believed an item did not adequately represent any of the other constructs.

The results of the sorting task including the item classification frequencies can be found in Table 1. First, definitional correspondence (substantive agreement) was calculated by taking the number of correct classifications and dividing it by the total number of classifications made (Anderson & Gerbing, 1991). Overall, substantive agreement of the 5 new items was .76, indicating that the new items were matched to the feedback orientation construct definition 76% of the time. This is higher than the recommended .70 (Anderson & Gerbing, 1991), and is considered a strong degree of

agreement by Colquitt et al. (2019) taking into account the degree of correlation between the orbiting constructs found in other studies (e.g., Linderbaum & Levy, 2010). Next, definitional distinctiveness was examined by dividing the difference between correctly and incorrectly categorized items by the total number of ratings. For the scale overall, substantive validity = .52, which again is higher than the guidelines suggested by Anderson and Gerbing (1991) and is considered a strong degree of agreement by Colquitt et al. (2019). Together, these findings suggest that the 5 new items adequately match the construct definition of feedback orientation.

Pilot study 2: Convergent validity with the FOS

In addition to establishing construct validity evidence for the new items, it is also important to establish convergent validity by examining the empirical association between the new items and established measures. Therefore, the second pilot study was conducted to establish empirical convergence of the five feedback receptivity items and the FOS, which is currently the only known and established measure of feedback orientation in the public domain. It is expected that the two scales will correlate highly, which would further support the use of the new items as a measure of feedback orientation.

Pilot Study 2 Methods and Results

A sample of 163 individuals were collected using Amazon's Mechanical Turk (MTurk) to examine the convergence of the five feedback receptivity items and FOS measures. Additionally, scales from two theoretically unrelated constructs (Social Responsibility and Altruism; Penner et al., 1995) were included to examine the influence of common method bias. Two attention check items were included to

identify insufficient effort responders who might inflate the correlation between items (Huang et al., 2012). The questions were all presented to participants in random order. Fourteen participants who failed an attention check item or displayed long string responding (defined by responding to 10 items with the same response across scales and reverse coded items) were removed from the data. The final sample size for the analyses was 149.

Correlations between these variables, including the overall FOS and each FOS subscale (Utility, Accountability, Social Awareness, and Feedback Self-efficacy), are shown in Table 3. As expected, the correlation between the new items and the FOS was strong ($r = .73$, $p < .001$). This indicates that there is adequate convergent validity between the two scales, and therefore supports the use of the new items as a measure of feedback orientation. Examining the correlation between the new items and FOS subscales, it appears that the new items have stronger correlations with the utility ($r = .60$, $p < .001$) and self-efficacy ($r = .73$, $p < .001$) dimensions than the accountability ($r = .47$, $p < .001$) and social awareness dimensions ($r = .47$, $p < .001$).

Sample

Participants were recruited from psychology and business classes from a large, urban university in the United States in exchange for class credit. In total, 163 participants began the study and agreed to the informed consent, however only 144 successfully completed the first survey. Participants were removed at this stage if they 1) did not complete at least 75% of the initial survey or 2) did not successfully pass the attention check items. From this group, 122 participants completed enough of

the daily surveys to be retained for future analyses (k = 10 or more daily surveys completed).

Of the usable sample, 14.8% identified as male and 81.1% identified as female (with less than 1% identifying as transgender male/female or gender variant/non-conforming) and were on average 24.67 years old (range = 19-65). Most of the sample reported being White (66.4%), followed by Black (13.1%), Hispanic or Latino (6.6%), Multiracial (5.7%), and Asian (2.5%). Most participants were full-time students (90.2%), and reported being 13.1% Freshman, 17.2% Sophomores, 33.6% Juniors, and 35.2% seniors. Moreover, 75% of the sample was currently employed, working on average 25.3 hours per week (SD = 10.95). Of the included participants, each completed an average of 27.32 daily surveys each (range = 10-34).

Measures

Trait feedback orientation. Both the 20-item standard Feedback Orientation Scale (Linderbaum & Levy, 2010; α = .89) and the 5 new feedback orientation items (α = .56) were used to measure trait feedback orientation on the initial survey. When responding to these questions, participants were asked to respond how they typically behave in general.

Trait neuroticism. The 8 neuroticism items from the Big Five Inventory (Benet-Martinez & Joohn, 1998; John, Donahue & Kentle, 1991; α = .85) were used to assess trait neuroticism in the initial survey. Instructions asked participants to answer the questions in relation to how they typically think, feel, and act in general.

State feedback orientation. Because of the relatively invasive and time-consuming nature of ESM studies, it is important to keep the number of items in each

survey short to avoid fatigue and increase study completion. Although there has not been a lot of work that establishes how long ESM surveys should be, most similar studies aim for surveys that take approximately 1-4 minutes to complete on average (e.g., Fleeson & Gallagher, 2009; Wilson, Thompson & Vazire, 2016). Therefore, the five feedback receptivity items were used to measure state feedback orientation. In a similar study, Fleeson and Gallagher (2009) found that the longer time span that participants were asked to recall when answering the survey questions, the more the state measures correlated with trait measures. Following this recommendation, participants were asked to think about their thoughts, feelings, and actions pertaining to the items during the last hour.

Situational context. Participants were asked where they were during the last hour (during the time they were asked to consider their responses to the state measures): work, school, home, or other (open response).

Procedure

Participants were provided with an overview of the study requirements in the study recruitment materials and were asked to read and agree to an informed consent document that explained the full nature of the study and criteria for successful study completion. If participants agreed to participate, they completed the first online survey through Qualtrics. This survey contained all of the trait measures (administered in random order) and demographic items. Next, participants were provided with instructions for the daily surveys, and asked if they wanted to continue with the study. Participants who opted-out of the daily surveys were awarded partial credit for study completion.

The daily surveys were administered 3 times a day for 10 days after completing the initial survey. Daily surveys were distributed by sending a Qualtrics survey link to the participant's email at random times between 9am and 12pm, 1pm and 4pm, and 6pm and 9pm, with at least a 2-hour gap between each survey. In addition to receiving an email alert for each survey, a text message was sent (if participants provided their phone number) to alert them when a survey was available. Participants could use a computer, tablet, or smartphone with internet connection to complete the daily surveys. Participants were instructed to complete each survey as soon as soon as possible, given that it was safe and appropriate to do so. Survey instructions clearly asked participants not to complete the survey if it created a dangerous situation (e.g., while driving or operating machinery), or would be considered a socially inappropriate time (e.g., during class or work hours). Participants were told that they had to complete the survey within 4 hours for it to be successfully completed, and that they needed to successfully complete 27 of the possible 30 surveys to earn full credit for participating. Special allowances were made for holidays (surveys were optional on this day), and if participants requested an extension because they would not be able to complete surveys on specific days (e.g., would be traveling).

The daily surveys contained the state feedback orientation and situation items. In both the study instructions and in the instructions sent with each daily survey, participants were asked to reflect only on the last hour, and to respond to the questions as they think or feel right now (in the moment). The instructions also

reminded participants that their responses may or may not be the same as their previous responses.

Study 1 Results

Within-person Feedback Orientation Distribution Shape

Hypothesis one predicted that within-person feedback orientation measurements would be normally distributed. To test this assertion, multiple approaches examining the characteristics of each participant's distribution was used. Although it was anticipated that within-subject state feedback orientation distributions would be normally distributed, approaches for assessing the shape of a distribution start with the assumption of the hypothesized fit and test for significant deviations from the hypothesized distribution. In essence, all known normality tests start with the null hypothesis that the distribution is normally distributed, and significance implies that there is a substantial deviation from normality. Because there are no known statistical tests for a distribution conforming to normality, these approaches were used.

Only participants who completed at least 25 daily surveys were used in these analyses (N = 105). The state feedback orientation distribution shape was examined for each participant using two approaches. First, skewness and kurtosis values were examined. Following recommendations from Joan and Gill (1998), skewness (b1) and kurtosis (b2; Cramer, 1946) values were calculated because the number of measurements used were relatively small. Following convention, values greater than |1| were considered to deviate from normal (Tabachnik and Fidell, 2006). Using this approach, 71 distributions had skewness values consistent with normality (67.62%),

and 51 distributions had kurtosis values consistent with normality (48.57%). In total, 48 distributions had both skewness and kurtosis values within the acceptable range (45.71%).

The second approach was to conduct a Shaprio-Wilk normality test for each distribution (see Table 4 for these results). The Shapiro-Wilk test assumes a normal distribution, and therefore significant values represent a significant deviation from normality. This test was chosen because it is more powerful than other traditional approaches (Razali & Wah, 2011). The results showed that 91 of 105 (86%) within-person distributions were significant, indicating that most of the distributions significantly deviated from normality. Taken together, hypothesis 1 was not supported; it appears that the majority of within-person feedback orientation distributions were not strictly normally distributed.

Relationships Between State and Trait FO

Hypothesis 2 predicted that participant's mean state feedback orientation would have a stronger relationship to trait feedback orientation compared to the a) mode, b) median, c) minimum value, and d) maximum value of state feedback orientation. To test this hypothesis, each participant's set of daily FO scores were used to construct the relevant statistics; for instance, all daily FO scores were averaged to create the distribution. These values were correlated with that participant's trait score from the initial survey in which they were instructed to respond according to how they think, feel, and act *in general*. The correlations between these values are shown in Table 5. For the analysis, trait feedback orientation based on the new FO values and the FOS values were included.

Overall, the average of the daily FO scores had the strongest relationship with the trait FO using both the new items ($r = .60$, $p < .01$) and the FOS ($r = .57$, $p < .01$). A difference between two dependent correlations test was used to determine if these values were significantly higher than the others (Lee & Preacher, 2013). Using the new FO items, the mean of the state measures had a significantly stronger relationship with trait scores compared to the median ($z = 2.76$, $p < .01$) and minimum ($z = 3.71$, $p < .01$) state distribution values, but were not significantly different from the mode ($z = 1.81$, $p = .07$) or maximum value ($z = 0.60$, $p = .55$). Using the FOS values, the mean of the state measures had a significantly stronger relationship with trait scores than the minimum state distribution value ($z = 4.19$, $p < .01$), but not the median ($z = 1.62$, $p = .11$), mode ($z = 1.41$, $p = .16$), or maximum ($z = 0.58$, $p = .56$) values. Therefore, hypothesis 1 is partially supported; the mean of daily FO scores did have the strongest relationship with trait FO, however the correlation was not significantly different from some of the other state distribution values.

ESM analyses

For the ESM analyses, only the previously identified sample that was comprised of participants who completed at least 10 daily surveys was included. In this sample, 122 participants completed an average of 27 daily surveys, comprising a total of 3,333 observations. Hierarchal linear modeling (HLM) was used to examine within and between subject trends in daily FO.

First, a null model with only state FO scores nested within participants was tested to determine if there was significant within-person variation to proceed with the analyses and to compare future models. The ICC for state feedback orientation

was .65, indicating that 65% of the variation in state feedback orientation was between person, and the remaining 35% was within person. The within-person variance is substantially smaller than previously studied state variables (see Podsakoff, Spoelma, Shawla & Gabriel, 2019), however it is sufficient for further analyses. As expected, a random intercept model fit the data significantly better than the null model ($\Delta\chi^2$ (1) = 3103.33, $p < .01$) suggesting that individuals differed on their mean levels of state FO. Therefore, a random intercept model was used for subsequent analyses.

Next, models were created to examine the effect of survey administration sequence. In essence, testing if there were systematic changes in state FO during the course of the study. Each participant's state measures were assigned a number reflecting the order in which they were completed (e.g., 1-30). This time variable was entered as a level 1 predictor of state FO in the random intercept model. This model did fit the data significantly better than the random-intercept only model ($\Delta\chi^2$ (1) =5.11, $p < .05$), indicating that it explains additional variance in the scores. Additionally, there was a significant relationship between time (administration order) and state FO (γ = .0.002, $p < .05$), such that state FO increased slightly across all participants across the duration of the study. Finally, a random slopes model was tested to determine if there was significant variation in the slopes between time and state FO across individual participants. This model also explained a significant amount of variance in the observed state FO scores ($\Delta\chi^2$ (2) = 180.45, $p < .01$), indicating a variation in slopes across participants.

Although this suggests that there was significant overall change in state FO over the course of the 10-day study, the effect was very small. The overall slope indicates that for each daily survey, there was on average a 0.002 increase in state FO (on a 5-point scale). Additionally, the standard deviation of random slopes across participants in the final model was .02, indicating very similar slopes across most participants. Viewing the regression lines of each participant (Figure 1), it appears like most participants had relatively small (if any) systematic changes in scores in the duration of the study, with a few exceptions. It should also be noted that the correlation between average state FO mean and slope was -0.15, potentially indicating a ceiling effect.

To expand on this, and to test hypothesis 3, Mixed Effects Multiple Location Scale Modeling (MEMLS) was used to also estimate add within and between-subjects variance estimates to the model. Although traditional HLM allows slopes and intercepts to vary by subject, it assumes that the within-subject variation is stable across and within participants (e.g., participants all have the same degree of variation, or participants have more variation in scores at different levels of a covariate; Hedeker, Mermelstein, & Demirtas, 2008). The analyses were conducted using the MixWILD (Mixed model analysis With Intensive Longitudinal Data; Dzubur et al., 2020; Hedeker & Nordgren, 2013) program, which allows for the addition of location and scale effects within the model. Trait neuroticism was added to the model to predict within-subject variation in state FO. Results are shown in Table 6.

The results of this analysis yielded some interesting findings. First, there was a significant effect of time on between subject variance ($\alpha = 0.009$, $p < 001$),

suggesting that between subject variance increased as participants progressed through the study. Additionally, there was a significant effect of time on within-subject variance (τ = -0.05, p < .001) such that within subject variance decreased throughout the course of the study. In essence, across the 10-day study period, subjects' state FO scores become more consistent within themselves, but more differentiated amongst other participants. The random scale standard deviation in this model was 1.19 (p < .01), meaning that the amount of within-subject variation differed significantly across study participants. This effect also had an interaction with the mean level of state FO, such that those higher in average state FO had less within-person variance than those with lower average state FO. This could either indicate the presence of a ceiling effect in state FO scores, and/or that those high in FO tend to be more consistent in their level of state FO than those with lower averages.

Finally, trait neuroticism was entered as a stage 2 predictor to test hypothesis 3. In this model the scale effect was not significant (*Scale* = 0.07, p = 0.37), indicating that there was no association between trait neuroticism and the amount of within-subject variation in state FO scores. Therefore, hypothesis 3 was not supported. There was a positive location effect (*Location* = -0.19, p < .01), meaning that there was a negative association between state FO mean and trait neuroticism. This aligns with the correlation observed between trait FO and trait neuroticism (r = -0.19, p < .05).

Situation Effects and Consistency of State FO Scores

To explore research question 1, a three-level HLM analysis was conducted to establish how much variation in FO scores could be attributed to the situation (work,

school, home, or other) the individual was in when they completed the survey. In this model, the situation was entered at level 2 and participant was entered at level 3 since situations were nested within participants. Although this model fit significantly better than the model without the situation variable ($\Delta\chi^2$ (1) = 33.81, $p < .001$), the ICC of each level indicated that the situation variable only accounted for 2.67% of the variation in FO scores, while level one within-person variation accounted for 33.18% and level three between-person factor accounted for 64.15% of the variation in FO scores. Additionally, a supplemental g-theory analysis was conducted to determine the amount of variation in scores attributed to the situation. The results of this analysis, as presented in Table 7, also demonstrate that the situation accounted for very little variation in the daily FO scores, relative to between and within-person differences (situation accounted to .3% of variation in scores). Therefore, it appears that the context in which participants were in did not have a strong influence on their FO. Rather, it seems that most of the variation observed in scores are attributed to other within-participant factors or between-participant differences.

Study 1 Discussion

While FO has been proposed and used as a relatively stable individual trait (e.g., Linderbaum & Levy, 2010; London & Smither, 2002), there has been no direct evidence to support this assumption. Without confidence in this claim, we cannot be sure that past research that relies on taking measurements at a single point in time reflect a general disposition toward collecting and using feedback information rather than just a momentary reaction to situational or other internal factors (e.g., how someone feels about feedback in that moment). Establishing the stability of FO within

individuals is therefore paramount to FO research moving forward, as it will determine the appropriate measurement, use, and interpretation of research and practice that include FO.

Study 1 used an ESM approach to examine the characteristics and stability of FO over time to determine if, and to what degree, FO could be considered a stable individual disposition rather than a reaction to the collection of situational and personal variables interacting at a specific moment (e.g., how feedback is delivered, the situation feedback is delivered in, the amount of trust someone has in the feedback delivered). These results support the conceptualization of FO as being relatively stable at least in the short term, as most of the variation in FO scores measured across 10 days were attributed to between-person differences and there was relatively little variation within-person. In this study, the proportion of within person variation of FO scores (.35) falls below the average of many variables that are generally considered to be less stable than individual traits, such as job performance (.50), citizenship behavior (.45), engagement (.50), motivation (.52), and affect (.53) (Podsakoff et al., 2019). It should be noted that a meta-analysis by Podsakoff et al. (2019) found that ESM studies using agree-disagree scale responses (as used in this study) displayed lower proportions of within-person variance, they also found that using multiple surveys per day with momentary instructions (how you feel in the moment; used in this study) had higher within-person variance. Therefore, while there could be methodological factors influencing the amount of within-person variation used in this study, the percentage is still lower than the reported average values from

Podsakoff et al. (2019) even when adjusting for methodological issues that would only lower the percentage.

Moreover, the situation individuals were in when responding to the questions (work, school, home, or other), accounted for almost no consistent variation in the state FO scores. This again reinforces the consistency of state scores within a person, and further supports the idea that FO is a relatively stable individual trait. If FO was more reactionary, for instance largely/heavily influence by situational or personal variables (e.g., feedback environment, trust in feedback source, changing interpretations of the importance of feedback relative to a specific context), then we would expect to see systematic differences in state FO scores between situations. However, in this study situational factors only accounted for less than 3% of the overall variation in FO scores. This suggests that individuals generally maintain their position on the importance of feedback across situations broadly. With that in mind, future work could expand upon this by defining the situation with more specificity, identifying and measuring variables that are more closely aligned to expected changes in FO. For instance, new students or new employees who have entered an unfamiliar and ambiguous new environment might be far more likely to be open to feedback regularly compared to those more established in their roles or positions.

Although the primary findings support the idea that FO is relatively stable, there was still a small amount of variation in momentary FO scores attributable to within-person factors, and there were small but significant patterns within participants in state FO during the 10 days data were collected. First, it should be noted that the pattern in state FO over time was very small, especially considering that each

individual's slope was based on relatively few FO scores. It is also not surprising that allowing for individual slopes in a HLM accounts for more variation in the scores, and thus a better fitting model. This is supported by the small estimate of overall slope from the sample, and the small variation in slopes across participants. Overall, considering how little variation total was observed within-subjects compared to between subjects, sate FO was relatively stable, at least across a few weeks. Future work should expand upon this and test for systematic changes across longer periods of time and normative changes across the lifespan.

It was assumed that there would be differences in the amount of within-person variation across subjects, and this was also supported by the data. However, trait neuroticism was not associated with the degree of within-person variation as predicted. Since none of the the within-person variation in state FO is accounted for by the variables included in this study, there are a few possible explanations. First, there are potential statistical or methodological effects associated with the study design that either masked the effect of neuroticism on variance or induced different amount of variation on the participants. For instance, this could be supported because of the relatively low level of observed variance within participants, which was especially magnified during the course of repeated measures in the study period (perhaps due to survey fatigue). In addition, the relationship could have been masked by the presence of a ceiling effect in state FO scores (those with high average state FO had lower variation on average), again reducing the variation in scores systematically for those high on FO. It is also plausible that, unlike previous research would suggest, trait neuroticism is not related to within-person variations in FO as

measured during this study. There is likely a measurable explanation as to why people differ in their levels of within-person variance, and future work should strive to uncover those.

This study also revealed some interesting information relating to the characteristics of within-person distributions of state FO scores. Interestingly, although it was expected that state FO distributions would be normally distributed, this was not strictly the case. In fact, participants displayed different shapes and characteristics in their state distribution of daily FO scores. Not only can these unique distributions be important for describing and understanding an individual trait profile, but may also have the potential to add predictive and explanatory power to other important variables in research and practice. Future research should examine how the characteristics of the trait distribution furthers our understanding of individual differences beyond traditional methods (e.g., using mean and SD of trait measures alone).

As expected, and similar to what has been shown in similar studies examining state distributions (e.g., The Big 5 Traits; Fleeson & Gallagher, 2009) the average of state FO scores had strong alignment with trait FO scores. However, the same was true for the median and maximum value of the distribution. Likely, this is at least in part explained by a ceiling effect in the data and low overall variance in within-subject scores; most data were consistently on the high end of the scale, so the mean, median, and maximum were all close to the same score. It is pretty clear in the data presented here that when completing the trait measure of FO they are not capturing themselves on their ‘worst day,’ or on the lower boundary of the receptivity to

feedback. However, at least based on these findings, participants do generally capture their true average of state scores when responding to trait measures.

Although this study makes several contributions to the FO research literature, it does have some limitations that should be noted. First, this study did only measured participants during a 2-week period. Although several daily measures were recorded across that time, it does mean that the results of this study do not necessarily extrapolate to longer periods of time (e.g., months or years). Additionally, it is possible that very extreme situational events (e.g., loss or transition of jobs, extreme periods of stress, other periods of life change, etc…) that could dramatically effect FO might not have been captured or well represented. Therefore, it is still possible that situational or environmental events of a high degree do affect FO in a more robust way. Finally, although ESM studies have become more popular over the past several years (Podsakoff et al., 2019), there are still some limitations and unanswered questions related to these types of studies. For instance, not much is known about how the length of survey, timing of measurement, instruction sets, contact methods, or number of surveys affect scores. Notably in this study, there was an observed effect of participants scores having less individual variation during the study. It is not clear if this was caused by a methodological effect of repeated measures (e.g., survey fatigue effect), or if it was due to an actual change within participants. For instance, it is possible that being exposed to the question set altered participant's actual frame of reference, leading to actual changes of FO over time (e.g., Dillman et al., 2014). Although some good work is currently being done in this area now that the studies

have become more prevalent, it is currently hard to gauge the effect that methodological decisions have on the results.

Study 2: Inter-Rater Agreement

As others have noted (e.g., Arthur & Villado, 2008; Oh, Wang, & Mount, 2011), it is important to separate the validity of traits and methods when making assessments in organizational settings. This is especially true when evaluating individual differences that are defined both by internal processes and outward behaviors. Up to this point, feedback orientation has exclusively been measured using self-report measures. In many ways self-report questionnaires seem appealing when it comes to measuring feedback orientation; feedback reactions are internally processed (e.g., perceptions of accuracy or utility) and individuals see themselves across situations, therefore self-ratings may be able to draw on more information than any other method. However, there are also many known problems and biases with self-perceptions (see Morgeson et al., 2007; Paunonen & O'Neill, 2010), particularly when it comes to predicting future behavior (e.g., Helzer & Dunning, 2012). Especially when a high-stakes setting promotes social desirability or faking, self-report measures might contain less "true score" variance, and therefore self-ratings are weak predictors of criteria (Mueller-Hanson, Heggestad, & Thornton, 2003). With regard to the study and use of feedback orientation in organizational settings, the intentional or unintentional contamination of self-ratings could have many significant implications.

Although feedback orientation is conceptualized as an internal trait, the value someone places on feedback should be visible to others through patterns in

observable behavior. Much like many conceptualizations of personality, feedback orientation is comprised of a pattern of both internal processes and external behaviors. Therefore, others should be able to observe and evaluate a target's propensity to seek, accept, and use performance feedback. Outside-observer ratings, while certainly containing their own contamination and deficiency (e.g., halo bias), should avoid many of the issues associated with self-report methods. Although self-perceptions might be better in terms of assessing individual identity and unobservable aspects of different traits, other's perceptions might contain less self-serving bias and might be more reflective of actual behaviors rather than intentions (e.g., Helzer & Dunning, 2012; Kolar, Funder & Colvin, 1996). It is therefore important to examine both the agreement between different rating sources, and the relationship that each rating source has with criteria. This provides an idea of how consistent ratings are from one source to another, provides some tangential or indirect evidence of the accuracy of rating sources, and provides information about the appropriateness of each method in both academic and applied settings.

In terms of multisource rater agreement, it is expected that self and other feedback orientation ratings should align to the same degree as similar work-related individual differences and traits. For instance, personality traits are a similar blend of internal process and outward behaviors. Past research has shown a moderate degree of agreement between self and other ratings of personality traits (Funder, 1980), with a recent meta-analysis showing correlations of self and other ratings of the Big Five dimensions ranging from .46 to .62 (Connolly, Kavanagh & Viswesvran, 2007). Similarly, examinations of multisource performance ratings often reveal low

agreement between different sources (e.g., Heidemeire & Moser, 2009), and often even low agreement within different source categories (e.g., Viswesvaran, Ones & Schmidt, 1996).

Although multi-rater agreement has not been examined with feedback orientation, there are a few hints that there will not be perfect rater agreement. In one study, Braddy et al. (2013) found that there was no relationship between an individual's self-reported feedback orientation and other's ratings of openness, likelihood to change, or defensiveness during feedback sessions; however, there were significant correlations with same-source variables such as feedback reactions to 360-degree feedback. Additionally, Stark (2016) found little agreement between self and observer ratings of feedback seeking behavior in a lab task. Thus, it is unclear how much alignment there is between rating sources. However, to support the idea that feedback orientation is an individual trait with a consistent pattern of behaviors across situations and feedback occurrences, it is necessary to have at least a moderate degree of alignment between different sources. Practically, examining the degree of alignment between ratings sources will speak to the appropriateness of interchanging these methods, the utility of collecting 360-degree ratings for feedback purposes, and indirectly speak to the alignment between the internal value placed on feedback and the alignment with feedback-relevant behaviors.

Research question 2: How much agreement exists between self, peer, direct report, and supervisor ratings of feedback orientation?

Not only is important to examine the degree of alignment between self and other ratings of feedback orientation, but assuming there is at least some

disagreement it is also important to understand how the scores from each rating source relate to criteria. Examining multisource ratings in this manner can provide insight into the criterion-related validity of each rating source and help identify differences in the constructs being measured by different sources (e.g., Helzer & Dunning, 2012; McAbee & Connelly, 2016).

Although feedback orientation is likely related to several important work behaviors and outcomes, the most important criteria in terms of theory and organizational practice is job performance. Individuals with high levels of feedback orientation should display higher levels of performance, as they gather, mindfully process, and act on performance feedback (Linderbaum & Levy, 2010; London & Smither, 2002). In turn, this allows individuals to closely monitor the quality of their work, monitor and modify goal progress, and adjust performance-related behavior in a fast manner (e.g., London, 2003). Initial work has supported this idea; self-rated feedback orientation is positively related to supervisor performance ratings indirectly through feedback seeking behavior and feedback acceptance (Dahling et al., 2012; Rasheed et al., 2015; Whitaker & Levy, 2012). However, at this point there has not been a study that examines the relationship between other ratings of feedback orientation and job performance. With similar individual difference variables (e.g., personality), it is common for observer ratings to have stronger and more consistent relationships with criteria than self-report ratings (e.g., Oh, Wang, & Mount, 2011). Additionally, since common method variance stemming from same-source predictor and criteria ratings may inflate validity estimates, supervisor ratings of performance will be used as the criteria, while self, peer, and direct report ratings of FO will be

used as the predictors (Oh & Berry, 2009; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Because other ratings are typically more closely aligned with objectively measured outcomes and judgments made by others (for instance, job performance ratings from supervisors; e.g., Helzer & Dunning, 2012), it is anticipated that other ratings of feedback orientation will have a stronger relationship with performance ratings.

Hypothesis 5: Peer feedback orientation ratings will have a stronger relationship with supervisor-rated job performance than self-report feedback orientation ratings.

Hypothesis 6: Direct-report feedback orientation ratings will have a stronger relationship with supervisor-rated job performance than self-report feedback orientation ratings.

Study 2 Method

Multisource feedback orientation and performance ratings were collected by an international consulting company that specializes in 360-degree assessments. Data were collected between 2014 and 2017, and in total included 1,061 participants rated by 11,181 additional raters. The data were collected for a variety of purposes and uses for the client organization, but typically the ratings were used for leadership development purposes.

These data contained performance ratings for all participants made by other sources, however there were two different rating scales that were used. Although the questions were similar between the two performance scales, they were not directly comparable. Therefore, only those that had data for the most common performance

rating scale were retained for analyses involving performance ratings. In total, this included 766 participants rated by 8,053 other raters.

Sample

Participants came from a diverse range of industries and had a large range of job functions. The rating targets (self-ratings) were 42.3% female and 50.7% male, 78.7% obtained at least an undergraduate degree, and were on average 41.28 years old (range 23-65). This group is primarily comprised of middle managers (37.3%) followed by upper middle managers (18.4%), first level managers (18.5%) and executives (12.9%). The participants came from primarily for profit-commercial business (72.3%), but included a variety of industries including Governmental (13.8%), conglomerate (11.5%), chemical (10.4%), computer hardware (8.1%), and electronics (8.0%) organizations. Most participants were originally from the United States (34.9%), however a large portion of the sample (57.1%) reported being from 54 other countries. Notably, a large portion of the sample were from Canada (12.3%), Egypt (8.7%), United Kingdom (5.9%), and India (5.5%). All other countries of origin comprised less than 32.7% of the entire sample. Most of the sample currently resides in the United States (44.3%), followed by Canada (14.4%), the United Arab Emirates (7.6%), United Kingdom (4.6%) and Australia (3.9%). Most of the sample spoke English as their primary language (82.4%).

A break down of key demographics for target and other (direct report, peer, and supervisor) raters can be found in Table 8. In total, the other raters for these targets were comprised of peers (32.9%), direct reports (28.9%), others (19.1%), superiors (9.8%), and bosses (9.3%). Overall, the sample mostly self-reported being

male (57.3%) having at least an undergraduate degree (83.6%), and were on average 43.25 years old (range 23-65). On average, each target was rated by 10.5 other raters.

Measures

Feedback orientation. Feedback orientation was measured using the 5 feedback receptivity items described earlier in the pilot study and Study 1 (a list of these items is presented in Appendix B). Internal consistency of these items was good for both the self (α = .76) and other (α = .88) ratings.

Supervisor-rated job performance. Job performance was provided by supervisors using 8 general items comprising 3 dimensions: job performance, advancement potential, and derailment. These items were designed to capture job performance at a general level, so that they could be applied across different types of jobs. The job performance items asked about general performance relative to how the target is performing compared to expectations. Advancement potential questions focused on the perceived skill of the target moving up to a higher position, and their ability to handle the new responsibilities. The derailment questions asked about the likelihood that the target would fail to meet expectations, be demoted, or be stalled in their career progression.

For the analyses, boss and superior ratings were combined to form supervisor performance ratings ($t(562) = .09$, $p = .93$). CFA was used to compare a one-factor model to the hypothesized three-factor model to ensure that it was appropriate for the data. A chi-square difference test showed that the three-factor model ($\chi^2(11) = 26.22$, $p < .01$, RMSEA = .043, CFI = .997, NNFI = .994) fit significantly better ($\Delta\chi^2(3) = 1226.2$, $p < .001$) than the one-factor model ($\chi^2(14) = 1252.45$, $p < .001$, RMSEA =

.347, CFI = .739, NNFI = .608), indicating that the hypothesized performance factor structure was a good fit for the data.

Demographic and organizational characteristics. Basic demographic information was collected from all participants. These measures included gender identity (male or female), highest degree completed, native country, current country of residence, and primary language. Information about the organization each employee worked for, including industry type, years of experience, organization size, and job function was also collected.

Study 2 Results

Descriptive statistics and correlations of feedback orientation by rating source can be found in Table 9. Although most correlations were significant, the magnitude of association (range of r = .08 to r = .33) and inter-rater reliability (ICC = .53) were less than similarly studied individual differences (e.g., Connolly et al., 2007). Although the effect was small, the mean ratings from each source were significantly different ($F(3, 2112) = 33.07$, $p < .001$; partial $\eta^2 = .05$), such that self-ratings of feedback receptivity were the lowest (M = 3.77, SD = .51) and superior ratings were the highest (M = 4.02, SD = .57).

Criterion-related validity by rating source

In order to test hypotheses 6 and 7, correlational difference tests were used to compare the correlations between self and other-rated feedback orientation and the three supervisor-rated dimensions of job performance. Because the compared correlations have one unique variable (FO rating) and one shared variable (performance rating), Lee and Preacher's (2013) software was used to test for the

difference between two dependent correlations. This test uses Fisher's r-to-z transformation to convert the correlations to z-scores and uses the correlation of the unshared variables in an asymptotic z-test. Because the correlations had different N's, the lowest N was used in the difference test to be conservative.

The results of these tests, shown in Table 11, support both hypothesis 5 and 6 which stated that the relationship between peer FO ratings and supervisor-rated performance (hypothesis 5) and direct report FO ratings and supervisor-rated performance (hypothesis 6) would be stronger than the relationship between self FO ratings and supervisor-rated performance. Peer FO ratings had stronger relationships with job performance (z = -5.76, p < .01), advancement potential (z = -4.93, p < .01), and derailment (z = 3.14, p < .01) than self FO ratings. Similarly, direct report FO ratings had stronger relationships with job performance (z = -3.12, p < .01), advancement potential (z = -2.94, p < .01), and derailment (z = 2.60, p < .01) than self FO ratings. In fact, self FO ratings were not significantly related to any of the performance outcomes, while the other ratings were significantly related to all the performance outcomes in the predicted direction.

In addition to examining the bivariate relationships between FO ratings and job performance, Structural Equation Modeling (SEM; using the lavaan package in R, R Core Team, 2013; Rosseel et al., 2012) was used to test a model including all variables simultaneously. In this model, self, peer, and direct report ratings of feedback orientation were predictors of supervisor-rated job performance, advancement potential, and derailment. Descriptive statistics and correlations for

these variables from the sample with only usable performance ratings can be found in Table 10.

Four indices were used to examine overall model fit: Chi-square, root mean square error of approximation (RMSEA; Steiger, 1990), the comparative fit index (CFI; Bentler, 1990) and the non-normed fit index (NNFI; Bentler & Bonett, 1980). The guidelines suggested by Hu and Bentler (1999) were used to determine acceptable model fit. Additionally, chi-square difference tests were used to compare models (Bentler & Bonett, 1980).

First, the model was tested without structural paths was tested to determine if the measurement model achieved adequate fit (as suggested by Anderson & Gerbing, 1988). In this model, all 5 feedback orientation items were loaded onto their respective source factor, and the supervisor-rated performance items were loaded onto each performance dimension. Structural paths between multisource FO items and performance were included in the model, and correlations between latent variables were not constrained. Overall, this model achieved acceptable fit ($\chi^2(194) = 401.10$, $p < .01$, RMSEA = .049, CFI = .97, NNFI = .96).

Parameter estimates are shown in Table 12. As expected, similar to the bivariate correlation patters, there was no significant relationship between self-rated feedback receptivity and any of the performance criteria (job performance ($\beta = .00$, *ns*), advancement potential ($\beta = -.06$, *ns*), or derailment ($\beta = .04$, *ns*)). However, direct report ratings were significantly related to advancement potential ($\beta = .14$, $p < .01$) and derailment ($\beta = -.14$, $p < .05$) and marginally related to job performance ($\beta = .10$, $p = .05$), and peer ratings were significantly related to all 3 performance criteria (job

performance (β = .29, p < .01), advancement potential (β = .25, p < .01), and derailment (β = -.24, p < .01).

Study 2 Discussion

The results of the second study provide valuable information related to the future research and use of FO measured by different ratings sources. More specifically, the results provide both an understanding of the degree of alignment between ratings from different sources and establish how multisource ratings of feedback orientation relate to job performance. While there was some convergence of FO measures of the same target across rating sources, there is less agreement between rating sources than some other traditionally studied work variables such as personality (e.g., Connolly et al., 2007) and job performance (e.g., Heidemeier & Moser, 2009; van Hooft et al., 2006). The lack of agreement has several important implications. First, it does suggest that research and practice should not solely rely on self-ratings of feedback receptivity. Based on the data in this study it is not possible to tell why perceptions diverged, but the lack of agreement does suggest that raters do formulate their impressions based on different information, the weighting of information differently, or capture different constructs. Another potential implication relates to the perspective of the feedback provider. A recent study found that feedback providers put more effort into delivering performance information when they perceived that the feedback seeker would use the feedback to improve, and put in less effort when they believed the feedback seeker would not use the information or was seeking it for impression management reasons (Minnikin, Beck & Shen, 2020). Therefore, if a coworker or supervisor believes that someone is low in feedback

orientation and will not value or use the provided feedback, they might be less likely to provide quality feedback to that individual. Because quality feedback leads to performance improvements over time, this might result in a gap between the performance improvements of those perceived to have a high feedback orientation and a low feedback orientation. Additionally, while it is not entirely clear how perceptions of feedback orientation contaminate performance ratings, it is possible that feedback orientation is part of a general performance construct that would influence the evaluations or 360-degree performance ratings people receive. Therefore, other-source FO ratings might reflect a performance-based or halo effect, and therefore other's perceptions could be different from how an individual feels about feedback, thus potentially explaining differences between rating sources. Future work should further attempt to uncover how observer impressions are formed, the connections between feedback attitudes and behavior, and the contamination and deficiency included in each rating source.

Further, the results examining the criterion-related validity of multisource ratings with supervisor performance ratings highlight the implications of the low agreement among rating sources. Self-ratings of feedback receptivity were not significantly related to supervisor ratings of performance. This aligns with past work that also did not find a direct relationship between self-rated feedback orientation and other-rated performance (Dahling et al., 2012; Whitaker et al., 2012). However, as anticipated, both peer and direct report ratings were significantly related to performance ratings. This is consistent with other research that suggests other-source ratings often contain less self-serving bias and are more reflective of actual behaviors,

rather than just behavioral intentions (e.g., Helzer & Dunning, 2012; Kolar, Funder & Colvin, 1996; Mount, Barrick & Strauss, 1994).

Combining these findings with past research helps in our understanding of the nature of feedback orientation. Previous work also found no or weak direct relationships between self-rated feedback orientation and job performance (Dahling et al., 2012; Whitaker et al., 2012). However, there is an indirect association between self-rated FO and performance when there are behavioral mediators, such as feedback seeking behavior (Dahling et al., 2012; Whitaker et al., 2012). This seems to suggest that FO only results in increases in performance if feedback is acted upon; inherently valuing feedback is seemingly trivial when it comes to changes in job performance unless it results in behavioral changes. This same reasoning would explain why there is a relationship between other-source ratings of FO and job performance. Because it is likely that other-raters only use observations of the target's behaviors, they could be relying on those behavioral mediators to formulate their judgements about someone's FO. This focus on behavior instead of internal processes (enjoying feedback, feedback self-efficacy) could explain the stronger linkage with job performance. Therefore, future work should more closely examine the link between FO and feedback seeking behavior, in order to determine what factors strengthen the linkage between attitude and action.

General Discussion

Understanding how to use feedback as an effective tool for increasing performance has long been a priority for researchers and practitioners. While our understanding of performance feedback has dramatically grown over the past few

decades, there are still questions surrounding how to maximize the positive impact that feedback has on performance and ensuring that feedback turns into tangible action. FO has the potential to substantially contribute to our understanding in this domain by broadening our knowledge to include the feedback receiver's tendencies surrounding the appreciation and use of feedback information directly. Indeed, several recent studies have highlighted the utility of incorporating FO into the study of feedback. Notably, people who report themselves as having higher levels of FO are more likely to seek feedback (Dahling et al., 2012; Linderbaum & Levy, 2010; Whitaker et al., 2012), react positively to the feedback they receive (Braddy et al., 2013), and therefore have higher role clarity and job performance (Dahling et al., 2012; Whitaker et al., 2012). Moreover, people who are perceived by others to be highly receptive to feedback are more likely to receive higher quality feedback and to receive it more often (Minnikin et al., 2020). While these are certainly exciting and important findings, we must also work to establish the assumptions of the FO construct to ensure that we are truly measuring an individual's global disposition towards receiving and using feedback, and that studies using cross-sectional, self-report data are not just capturing situational attitudes based on situational reactions/factors.

This project aimed to critically examine the construct validity of FO, specifically through testing the assumption that FO is a stable individual trait and evaluating the usage of self-report measures to capture the construct. Indeed, the results of study 1 support the notion that self-reported FO is a relatively stable individual difference at least in the short term, and that there is far more variation in

FO across people than within people. It also supports that self-reported FO is very stable across broad situations (home, work, and school). Although the results presented here did show that individual state measures of FO do vary somewhat within subjects, this is an expected aspect of traits through the lens of WTT. Given the multitude of influences that can affect a person's behavior at any specific moment, it is not reasonable to expect that a person's trait-relevant behaviors are perfectly consistent across situations. There are likely strong situational cues and other individual characteristics that interact to influence an individual's preferences and behavior in the moment. This does not discount the importance of individual traits and tendencies however, as these explain an individual's patterns in behavior over time and relative consistency across situations. In the realm of FO, this means that there is consistency within the value a person places on feedback across time and situations. While there can be situational influences on the manifestation of this tendency (e.g., survey responses, asking for feedback), over time this person will on average be more responsive to feedback than someone who is low on FO.

It should also be noted that this study did not take into account specific or targeted situational variables that might have a dramatic effect on someone's FO, nor did it include the variables that are already established to effect acceptance or use of feedback. For instance, there could be important periods of time or specific situations in which people are more open to feedback for an extended period. An example might be when someone joins a new organization and is experiencing the socialization/onboarding process. In times where someone transitions into a totally new environment and a substantial amount of learning is required in a short period of

time, someone might rely on feedback more than they normally would. Additionally, if feedback is received from a trusted source, individuals might be highly receptive to that feedback regardless of their FO. These factors/situations would not undermine the importance of FO, however future research should seek to understand the interaction of specific situational variables with FO, keeping in mind that FO tendencies may help add explanatory power to the effect of these variables.

The second study added a different dimension and perspective, in that its primary focus was to examine the use and limitation of self-report FO measures relative to other's perceptions of a target. This is important not only because of the known limitations and differences found between self and other measurement sources (e.g., Helzer and Dunning, 2009), but also because this helps identify the sources of contamination when measuring a construct using different methods. The findings from this study greatly contribute to the previous FO literature, highlighting that self-perceptions of FO do not inherently lead to positive performance outcomes. Rather, behavior, specifically seeking and using feedback information, is the key to increasing performance. Although attitudes, values, and behavioral intentions are indeed correlated with actual behavior, there is certainly not a perfect relationship between them. In this context, placing value on feedback is only effective to the extent that it leads to actual changes in behavior, which may not always follow. This was highlight in previous work that showed no direct link between self-rated FO and performance, but an indirect effect that included feedback seeking behavior (Dahling et al., 2012; Whitaker et al., 2012). Similarly, the results presented here showed no direct relationship between self-reported FO and performance. However, other ratings

of FO did show a positive relationship with performance. Since others formulate their FO evaluation based on observable behaviors, it makes sense that those who are acting on feedback information are both viewed as having high FO and higher performance.

The studies conducted here are of course not without their limitations. The first study was reliant on self-report measures of FO and only measured state FO over the course of 1-2 weeks. Moreover, since this study used an ESM approach, there are potential unknown limitations that are a function of the ESM method. For instance, it is not certain how survey length, time of administration, and number of surveys provided might affect the results. The second study relied on data from the field, which is both a strength and a limitation. In terms of limitations, it is possible that the data were influenced by the nature in which it was collected. Because these were 360-degree ratings that could possibly be shared with the target, individuals might not have been fully honest in their ratings and provided a positive bias in the ratings. Additionally, it is possible that raters fell under a halo effect, in which coworkers used their overall judgement of a target to align ratings (e.g., provide all good or all bad ratings).

Overall, researchers and practitioners using established measures of FO can be confident that they are capturing an individual trait that is relatively stable across situations, and that self-report measures may not be strong predictors of external criteria. Future work should expand upon these findings, diving deeper into the relationship between FO and behaviors, understanding how FO perceptions are formed by sources outside of the target, and further explore if it is possible to build or

maximize FO in a specific setting. Moreover, future work should explore the characteristics of individual variation in FO, using it both to understand how factors might influence within-person variation as well as how individual differences in the degree of FO fluctuation might be important to other variables (e.g., other's perceptions).

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Appendix A: Construct definitions used in the item sorting task (pilot study 1)

Feedback Orientation: An individual's overall receptivity to performance feedback, which is characterized by the degree of partiality to feedback, the propensity to seek feedback, the degree of processing feedback mindfully, and the feeling of accountability to act on feedback once it is received. Those high in feedback orientation feel that feedback is useful for achieving goals and desired outcomes, feel a sense of obligation to act on feedback they receive, use feedback to learn how others view them, and feel competent when dealing with feedback information.

Feedback Environment: The contextual aspects of informal (day-to-day) supervisor-subordinate and coworker-coworker feedback processes. The feedback environment is determined by the frequency and availability of valuable, constructive, and credible feedback. The feedback environment also refers to the degree to which supervisors and coworkers provide meaningful positive and negative feedback, and support and encourage the seeking and use of performance feedback in the workplace.

Learning Goal Orientation: A desire to develop the self by acquiring new skills, mastering new situations, and improving one's competence. When approaching tasks, those high in learning goal orientation seek to understand something new or enhance their level of competence, focusing on improvement rather than demonstrating their competence.

Appendix B: Center for Creative Leadership 'Seeks and Uses Feedback' Items

**Note: These items are the property of the Center for Creative Leadership and are not to be shared with anyone outside of the dissertation committee.

Instructions: Please rate _____ on each of the following statements from 1 (strongly disagree) to 5 (strongly agree).

1. Learns from experience.
2. Pursues feedback even when others are reluctant to give it.
3. Is not afraid to ask others about his/her impact on them.
4. Responds effectively when given feedback.
5. Has changed as a result of feedback.

Appendix C: Feedback Orientation Scale (FOS; Linderbaum & Levy, 2010)

Instructions: The following questions ask about your thoughts on performance feedback in your workplace. Please indicate your agreement with each statement from 1 (strongly disagree) to 7 (strongly agree).

Utility

An individual's tendency to believe that feedback is useful in achieving goals or obtaining desired outcomes.

1. Feedback contributes to my success at work.
2. To develop my skills at work, I rely on feedback.
3. Feedback is critical for improving performance.
4. Feedback from supervisors can help me advance in a company.
5. I find that feedback is critical for reaching my goals.

Accountability

Individual's tendency to feel a sense of obligation to react to and follow up on feedback.

6. It is my responsibility to apply feedback to improve my performance.
7. I hold myself accountable to respond to feedback appropriately.
8. I don't feel a sense of closure until I respond to feedback.
9. If my supervisor gives me feedback, it is my responsibility to respond to it.
10. I feel obligated to make changes based on feedback.

Social awareness

Individual's tendency to use feedback so as to be aware of others' views of oneself and to be sensitive to those views.

11. I try to be aware of what other people think of me.
12. Using feedback, I am more aware of what people think of me.
13. Feedback helps me manage the impression I make on others.
14. Feedback lets me know how I am perceived by others.
15. I rely on feedback to help me make a good impression.

Feedback self-efficacy

Individual's perceived competence to interpret and respond to feedback appropriately.

16. I feel self-assured when dealing with feedback.
17. Compared to others, I am more competent at handling feedback.
18. I believe that I have the ability to deal with feedback effectively.
19. I feel confident when responding to both positive and negative feedback.
20. I know that I can handle the feedback that I receive.

Appendix D: Feedback Environment Scale (FES; Steelman, Levy & Snell, 2004)

Construct Definition: The contextual aspects of day-to-day supervisor-subordinate and coworker-coworker feedback process. The feedback environment is determined by the frequency and availability of valuable, constructive, and credible feedback (Linderbaum & Levy, 2010; Steelman et al., 2004).

Instructions: The following questions ask about your thoughts on performance feedback in your workplace. Please indicate your agreement with each statement from 1 (strongly disagree) to 7 (strongly agree).

Source Credibility

1. My coworkers are generally familiar with my performance on the job.
2. In general, I respect my coworkers' opinions about my job performance
3. With respect to job performance feedback, I usually do not trust my coworkers.
4. My coworkers are fair when evaluating my job performance
5. I have confidence in the feedback my coworkers give me.

Feedback Quality

6. My coworkers give me useful feedback about my job performance.
7. The performance feedback I receive from my coworkers is helpful.
8. I value the feedback I receive from my coworkers.
9. The feedback I receive from my coworkers helps me do my job.
10. The performance information I receive from my coworkers is generally not very meaningful.

Feedback Delivery

11. My coworkers are supportive when giving me feedback about my job performance.
12. When my coworkers give me performance feedback, they are usually considerate of my feelings.
13. My coworkers generally provide feedback in a thoughtless manner.
14. In general, my coworkers do not treat people very well when pro- viding performance feedback.
15. In general, my coworkers are tactful when giving me performance feedback.

Favorable Feedback

1. When I do a good job at work, my coworkers praise my performance.
2. I seldom receive praise from my coworkers.
3. My coworkers generally let me know when I do a good job at work.
4. I frequently receive positive feedback from my coworkers

Unfavorable Feedback

1. When I don't meet my deadlines, my coworkers let me know.
2. My coworkers tell me when my work performance does not meet organizational standards.

3. On those occasions when my job performance falls below what is expected, my coworkers let me know.
4. On those occasions when I make a mistake at work, my coworkers tell me.

Source Availability

1. My coworkers are usually available when I want performance information.
2. My coworkers are too busy to give me feedback
3. I have little contact with my coworkers.
4. I interact with my coworkers on a daily basis.

Promotes Feedback Seeking

16. My coworkers are often annoyed when I directly ask them for performance feedback.
17. When I ask for performance feed- back, my coworkers generally do not give me the information right away.
18. I feel comfortable asking my coworkers for feedback about my work performance.
19. My coworkers encourage me to ask for feedback whenever I am uncertain about my job performance.

Appendix E: Feedback seeking behavior (Callister, Kramer & Turban, 1999)

Construct definition: The degree to which an individual actively searches for performance feedback and information by either directly inquiring or environmental/social monitoring (Ashford & Tsui, 1991; De Stobberleir, Ashford & Buyens, 2011).

Instructions: Please indicate how frequently you do each of the following from 1 (never) to 5 (very frequently).

Peer feedback seeking (inquiry)

1. I ask my coworkers if I am doing a good job.
2. I ask my coworkers if I am meeting my job requirements.
3. I ask my coworkers if people like working with me.
4. I ask my coworkers what other people think I should be doing.

Peer feedback seeking (monitoring)

5. From their reactions, I can tell how well I am getting along with members of my work group
6. Because of the reactions I receive from my coworkers, I can tell whether I am doing the things that should be done.
7. Through observing my coworkers' reactions, I can tell how well they think I am doing.

Supervisor feedback seeking (inquiry)

8. I ask my supervisor how I am doing.
9. I ask my supervisor if I am meeting all my job requirements.

Supervisor feedback seeking (monitoring)

10. From watching my supervisor, I can tell how well I am performing my job.
11. From watching my supervisor's reactions to what I do, I can tell how well my supervisor thinks I am doing.

Appendix F: Learning Goal Orientation (Vandewalle, 1997)

Construct definition: "A desire to develop the self by acquiring new skills, mastering new situations, and improving one's competence."

Instructions: Please respond to the following questions from 1 (strongly agree) to 6 (strongly disagree).

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

Table 1
Results of a Q-sort task of items of feedback orientation and related constructs.

	Feedback Orientation	Feedback Environment	LGO	None
New Items				
I learn from experience	3		12	
I pursue feedback even when others are reluctant to give it	15			
I am not afraid to ask others about my impact on them	9	4	1	1
I respond effectively when given feedback	15			
I have changed as a result of feedback	15			
Feedback Orientation Scale Items				
Feedback contributes to my success at work	14		1	
Feedback is critical for improving performance	13	1	1	
I hold myself accountable to respond to feedback appropriately	14		1	
I feel obligated to make changes based on feedback	15			
Feedback lets me know how I am perceived by others	14			1
I rely on feedback to help me make a good impression	14			1
I believe that I have the ability to deal with feedback effectively	15			
I know that I can handle the feedback that I receive	15			
Feedback Environment Scale Items				
My coworkers generally provide feedback in a thoughtless manner		15		
I seldom receive praise from my coworkers		15		
My coworkers generally let me know when I do a good job at work		15		
My coworkers are usually available when I want performance information		15		
When I don't meet my deadlines, my coworkers let me know		15		
LGO Items				
I am willing to select a challenging work assignment that I can learn a lot from			15	
I often look for opportunities to develop new skills and knowledge			15	
I enjoy challenging and difficult tasks at work where I'll Learn new skills			15	

Table 2
Results of a Q-sort task of new FO and FOS items and FO sub-dimensions.

	Utility	Accountability	Social Awareness	Feedback Self-Efficacy	None
New Items					
I learn from experience	7			1	7
I pursue feedback even when others are reluctant to give it	7	1	6	1	
I am not afraid to ask others about my impact on them			11	4	
I respond effectively when given feedback		1		14	
I have changed as a result of feedback	8	5		2	
Feedback Orientation Scale Items					
Feedback contributes to my success at work	15				
Feedback is critical for improving performance	15				
I hold myself accountable to respond to feedback appropriately		15			
I feel obligated to make changes based on feedback		15			
Feedback lets me know how I am perceived by others			15		
I rely on feedback to help me make a good impression	1		14		
I believe that I have the ability to deal with feedback effectively				15	
I know that I can handle the feedback that I receive				15	

Table 3
Correlations between new feedback items and the Feedback Orientation Scale

Scale	M	SD	1	2	3	4	5	6	7	8
1. New	3.92	.59	(.65)							
2. FOS	4.01	.54	.73**	(.91)						
3. Utility	4.14	.68	.60**	.88**	(.88)					
4. Accountability	3.98	.61	.47**	.82**	.71**	(.68)				
5. Soc Aware	4.09	.62	.47**	.81**	.69**	.64**	(.77)			
6. Self Eff	3.84	.78	.73**	.69**	.42**	.35**	.31**	(.86)		
7. Soc. Responsibility	2.65	.79	.25**	.23**	.24**	.21**	.12	.14	(.76)	
8. Altruism	3.57	.89	.29**	.21**	.27**	.15	.10	.15	.14	(.68)

Note. N = 149. New = 5 new feedback items. ** indicates $p < .01$.

Table 4
Descriptive statistics of the within-person daily FO measure distributions for each participant

Part.	k	M	SD	Skew	Kurtosis	Shaprio-Wilks
1	30	4.12	0.19	1.08	0.66	0.79***
2	30	4.71	0.38	-1.04	-0.36	0.76***
3	28	4.29	0.3	0.27	-0.35	0.95
4	31	3.69	0.14	1.19	-0.12	0.64***
5	28	3.94	0.6	-0.58	-0.85	0.92*
6	30	3.85	0.14	2.90	7.84	0.40***
7	30	2.99	0.45	0.08	-1.44	0.91*
8	29	3.77	0.21	-1.65	3.81	0.77***
9	29	4.15	0.41	-1.07	1.78	0.89**
10	29	4.72	0.2	-0.11	-1.09	0.88**
11	27	3.59	0.38	0.84	-0.16	0.88**
12	28	3.46	0.57	0.26	0.24	0.96
13	28	3.57	0.57	0.30	-1.00	0.72***
14	29	3.24	0.34	-0.32	-1.12	0.92*
15	27	4.18	0.85	-1.75	4.77	0.73***
16	27	3.33	0.61	1.50	1.45	0.76***
17	34	4.96	0.15	-3.91	15.26	0.30***
18	26	3.85	0.3	0.33	0.20	0.85**
19	30	3.71	0.31	0.84	0.96	0.78***
20	29	3.12	0.29	0.44	-0.61	0.94
21	29	1.92	0.46	-0.06	-0.12	0.97
22	30	3.97	0.53	0.38	-0.59	0.95
23	29	3.95	0.27	-0.16	-0.17	0.93*
24	30	4.05	0.21	-0.18	-0.27	0.89**
25	28	4.89	0.13	-0.58	-0.74	0.75***
26	32	3.31	0.3	0.47	0.39	0.92*
27	30	4.64	0.16	-1.89	5.81	0.67***
28	30	4.59	0.16	-1.83	4.71	0.64***
29	25	3.94	0.35	-0.18	0.69	0.92*
30	26	3.98	0.28	-0.22	-0.04	0.94
31	27	3.27	0.4	1.35	2.50	0.84***
32	29	3.51	0.31	-0.65	0.00	0.92*
33	32	4.05	0.24	0.36	1.22	0.88**
34	30	4.37	0.2	-0.24	-1.25	0.86***
35	27	3.47	0.54	-0.89	-0.09	0.90*
36	29	4.92	0.19	-2.56	6.12	0.50***
37	28	3.83	0.1	3.15	8.23	0.29***
38	25	4.53	0.34	-1.54	1.87	0.77***

39	31	3.92	0.25	-0.74	1.02	0.86***
40	30	3.29	0.29	0.20	-1.35	0.89**
41	26	3.84	0.61	-0.07	-0.42	0.97
42	27	4.3	0.8	-0.78	-0.82	0.82***
43	29	3.12	0.33	-0.12	0.11	0.90**
44	30	3.62	0.08	0.80	2.19	0.55***
45	30	3.79	0.29	-0.91	0.10	0.79***
46	29	4.62	0.64	-1.97	2.84	0.64***
47	26	3.35	0.53	0.22	-1.05	0.96
48	29	3.69	0.23	-1.70	5.23	0.76***
49	26	3.56	0.15	-0.25	-0.35	0.85**
50	27	3.04	0.27	0.13	-0.43	0.91*
51	31	3.52	0.38	0.54	-0.84	0.91*
52	29	3.98	1.24	-0.77	-0.86	0.80***
53	29	4.59	0.15	1.11	1.90	0.70***
54	30	3.73	0.15	0.23	-0.72	0.84***
55	30	3.96	0.18	0.89	3.06	0.79***
56	25	2.76	0.37	1.27	2.42	0.87**
57	28	3.56	0.2	-0.46	0.86	0.89**
58	30	4.32	0.33	-0.66	-0.03	0.93*
59	28	4.54	0.19	-3.08	8.34	0.35***
60	27	4.72	0.5	-1.90	3.01	0.64***
61	30	4.07	0.27	-0.9	1.45	0.90**
62	27	3.93	0.39	-4.56	19.77	0.23***
63	29	3.41	0.41	0.08	-1.36	0.91*
64	31	3.25	0.75	-0.14	-1.21	0.96
65	27	4.17	0.74	-0.05	-1.65	0.85**
66	25	4.11	0.77	-0.28	-1.41	0.88**
67	31	3.95	0.23	0.82	0.20	0.87**
68	29	3.34	0.26	-0.39	1.81	0.79***
69	29	4.33	0.32	0.00	-0.47	0.96
70	27	4.19	0.39	1.19	0.04	0.68***
71	30	3.57	0.48	-0.89	0.55	0.93*
72	29	3.68	0.17	0.20	-0.71	0.87**
73	30	3.2	0.48	-0.14	-0.23	0.97
74	27	3.02	0.24	-0.87	-0.03	0.86**
75	28	3.72	0.31	0.82	-0.25	0.86**
76	28	3.61	0.28	0.02	-1.29	0.90**
77	30	4.39	0.04	-4.94	23.2	0.18***
78	29	4.24	0.24	-0.01	-0.94	0.92*
79	29	4.98	0.08	-3.78	13.7	0.28***
80	30	4.24	0.83	-2.71	6.34	0.49***
81	28	4.41	0.25	0.79	-0.12	0.87**

82	30	4.57	0.17	-1.77	3.42	0.62***
83	27	4.36	0.33	-0.37	-1.23	0.89**
84	30	3.81	0.28	0.23	0.78	0.80***
85	28	3.96	0.68	-1.69	2.88	0.75***
86	27	3.05	0.8	-0.50	1.89	0.81***
87	30	3.81	0.3	1.97	5.86	0.78***
88	32	4.04	0.26	-2.21	5.87	0.67***
89	28	3.81	0.04	4.74	21.21	0.19***
90	30	3.55	0.31	0.54	-0.73	0.88**
91	27	3.65	0.21	-0.50	-0.53	0.89**
92	25	3.54	0.78	0.79	-1.02	0.77***
93	30	4.84	0.25	-1.30	0.51	0.69***
94	29	3.39	0.3	-0.30	0.15	0.93*
95	29	4.02	0.33	-0.11	-0.36	0.94
96	28	3.35	0.37	-0.65	-0.44	0.92*
97	28	3.93	0.24	-0.26	-0.81	0.93
98	31	1.94	0.34	0.41	-0.61	0.93*
99	30	4.36	0.32	-0.69	-0.38	0.91*
100	30	4.89	0.31	-2.61	5.35	0.39***
101	30	3.68	0.36	0.56	-0.03	0.91*
102	27	4.05	0.15	-0.44	1.37	0.80***
103	31	4.03	0.21	0.91	6.29	0.61***
104	28	3.79	0.31	-0.30	-0.41	0.94
105	30	3.73	0.16	1.09	0.48	0.75***

Note. Skewness (b1)

Table 5
Correlations between trait feedback orientation and characteristics of daily feedback orientation measures

	Trait FO	Trait FOS	Mean ESM	Median ESM	Mode ESM	Min ESM	Max ESM
Trait FO	1						
Trait FOS	.70**	1					
Mean ESM	.60**	.57**	1				
Median ESM	.55**	.54**	.97**	1			
Mode ESM	.55**	.53**	.93**	.96**	1		
Min ESM	.36**	.29**	.64**	.54**	.47**	1	
Max ESM	.57**	.54**	.76**	.72**	.72**	.32**	1

N = 122. Data only include those who responded to at least 10 daily surveys.

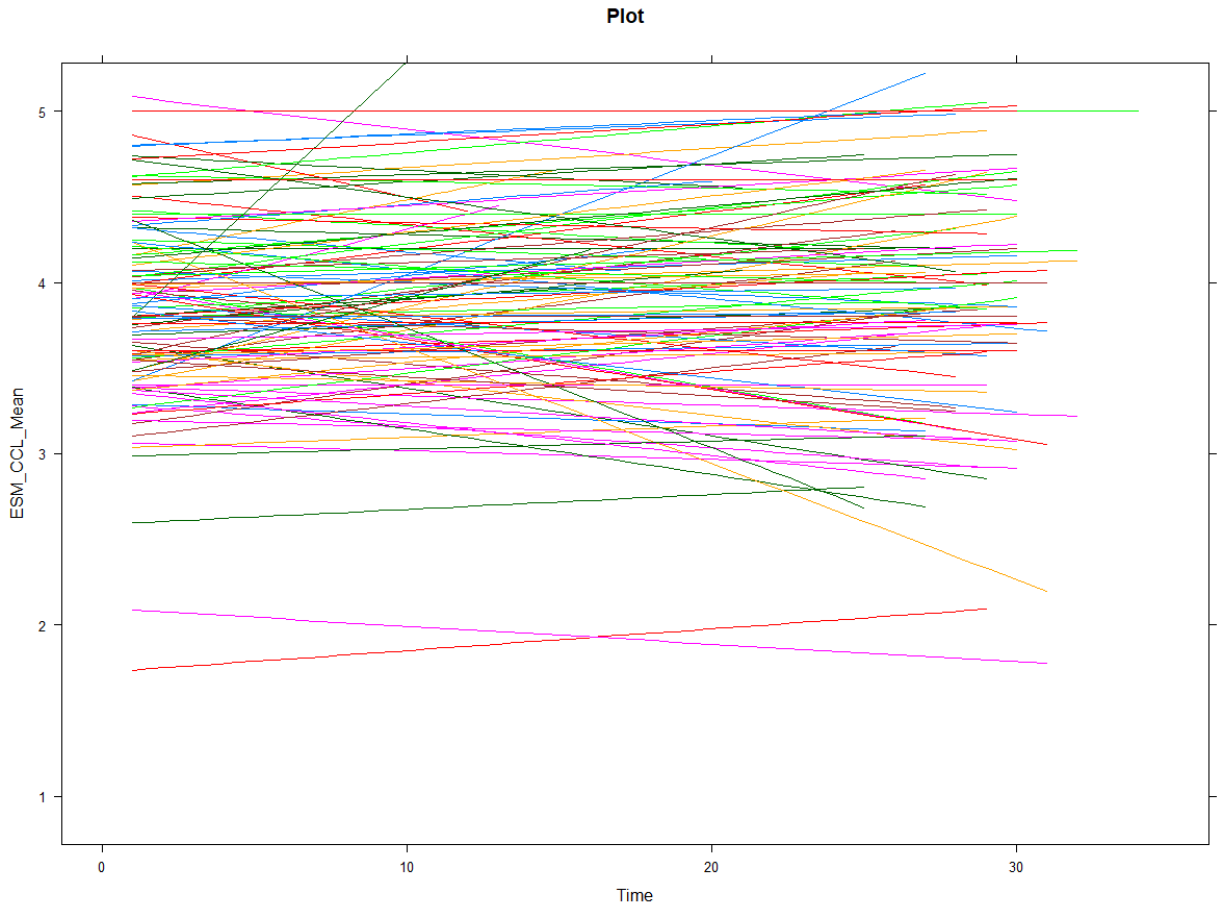

Figure 1

Table 6
Results of the MEMLS analysis examining trait neuroticism and within-participant FO

	Estimate (SE)	Z
Stage 1		
β (regressions)		
Intercept	3.91(.05)	81.39**
Time	-0.00 (.00)	-0.15
α (BS variance)		
Intercept	-1.75 (.12)	-9.73**
Time	0.01 (.002)	5.74**
τ (WS Variance)		
Intercept	-1.75 (.12)	-14.10**
Time	-0.05 (.01)	-14.63**
Random Scale SD	1.19 (.08)	14.59**
Rnd locat effect on τ	-0.30 (.11)	-2.59*
Stage 2 (trait neuroticism)		
Intercept	3.13 (.08)	41.09**
Location	-0.19 (.08)	-2.53*
Scale	-.07 (.08)	0.89

Note. *$p < .05$, **$p < .01$

Table 7
Results of the g-theory analysis examining FO scores across situations

Effect (α)	DF (α)	SS (α))	MS (α)	σ^2 (α)	Percent
Between person	121	1037.30	8.57	0.30	64.30
Situation	3	4.10	1.37	0.00	0.30
Person x Situation	310	67.5	0.22	0.01	2.30
Within person (residual)	3208	503.90	0.16	0.16	33.20

Table 8
Demographic summary of target and other raters used in Study 2.

		Target	Direct Report	Peer	Supervisor
Sample Size					
	Responses (N)	1061	3232	3503	2129
Age					
	Years (Mean)	41.28	43.92	43.40	42.75
Gender					
	Male	50.7%	51.0%	47.0%	46.0%
	Female	42.3%	37.3%	41.1%	42.6%
Country of Origin					
	United States	34.9%	46.6%	45.3%	45.0%
	Canada	12.3%	10.1%	9.0%	10.3%
	Egypt	8.7%	0.1%	0.1%	3.4%
	United Kingdom	5.9%	4.4%	5.1%	5.6%
	India	5.5%	5.3%	5.0%	4.8%
	All others	32.7%	33.5%	35.5%	31.9%
Highest Degree Earned					
	High School	2.5%	2.5%	3.1%	2.7%
	4-year College	34.7%	30.3%	31.9%	31.4%
	Advanced (PhD, M.A.)	45.2%	46.1%	43.8%	46.0%

Table 9
Means, standard deviations, and correlations of multi-source feedback orientation ratings

Rating source	M	SD	1	2	3	4	5
1. Self	3.83	.55	(.77)				
2. Peer	3.88	.49	.19**	(.88)			
3. Direct Report	4.03	.58	.12**	.26**	(.91)		
4. Supervisor	3.91	.54	.08*	.33**	.24**	(.83)	
5. Other	4.05	.55	.12**	.26**	.23**	.28**	(.89)

Note. Cronbach's alpha provided in parentheses along the diagonal. *$p < .05$, **$p < .01$.

Table 10
Means, standard deviations, and correlations between primary study variables used for SEM

Variable	M	SD	1	2	3	4	5	6
1. Self-rated FO	3.80	.55	(.76)					
2. Peer-rated FO	3.81	.46	.21**	(.87)				
3. Direct report-rated FO	3.95	.57	.10*	.21**	(.91)			
4. Job performance	3.96	.65	-.03	.26**	.15**	(.92)		
5. Advancement potential	3.54	.75	-.02	.23**	.15**	.75**	(.93)	
6. Derailment	1.53	.61	-.03	-.19**	-.18**	-.59**	-.51**	(.94)

Note. FO = feedback orientation. Job performance, advancement potential, and derailment
were rated by supervisors. Cronbach's alpha provided in parentheses along the diagonal. *$p < .05$, **$p < .01$.

Table 11
Results of multisource FO rating and performance difference between dependent correlation tests

Criteria	Self-rated FO	Peer-rated FO	z
Job Performance	-.03(720)	.26(597)	-5.76**
Advancement Potential	-.02(719)	.23(596)	-4.93**
Derailment	-.03(718)	-.19(596)	3.14**
		Direct Report-rated FO	
Job Performance	-.03(720)	.15(534)	-3.12**
Advancement Potential	-.02(719)	.15(533)	-2.94**
Derailment	-.03(718)	-.18(533)	2.60**

Note. FO = feedback orientation. Correlations used in the analysis for the unique variables were r = .21 between Self-rated Peer-rated FO and r = .10 between Self-rated Direct Report-rated FO. *p < .05, **p < .01.

Table 12
Structural parameter estimates of multisource feedback orientation ratings predicting supervisor rated performance

					95% CI (β)	
Criteria	**Feedback Orientation**	**Uns. Est.**	**S.E.**	**β**	**Lower**	**Upper**
Job Performance						
	Self-rated	.00	.12	.00	-.11	.11
	Peer-rated	.54	.11	.29**	.19	.39
	Direct report-rated	.15	.08	.10^{+}	.00	.20
Advancement Potential						
	Self-rated	-.06	.15	-.02	-.13	.09
	Peer-rated	.56	.13	.25**	.15	.35
	Direct report-rated	.26	.10	.14**	.04	.24
Derailment						
	Self-rated	.04	.11	.02	-.09	.13
	Peer-rated	-.39	.09	-.24**	-.34	-.14
	Direct report-rated	-.18	.07	-.14**	-.24	-.04

Note. Uns. Est = unstandardized parameter estimate. S.E. = standard error. β = standardized parameter estimate. *p<.05, **p<.01, $^{+}$ p<.10.