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## **Constructive Supervisor Feedback is Not Sufficient: Immediacy and Frequency is Essential**

\*Bård Kuvaas, Professor  
BI Norwegian Business School  
Nydalsveien 37  
0484 Oslo  
Norway  
Email: [bard.kuvaas@bi.no](mailto:bard.kuvaas@bi.no)  
Tel: +4746410731  
Fax: +4746410701

Robert Buch, PhD  
Oslo and Akershus University College of Applied Sciences  
Pilestredet 35  
0166 Oslo  
Norway Email: [robert.buch@hioa.no](mailto:robert.buch@hioa.no)  
Tel: +4747951964  
Fax: +4722453600

Anders Dysvik, Professor  
BI Norwegian Business School  
Nydalsveien 37  
0484 Oslo  
Norway  
Email: [bard.kuvaas@bi.no](mailto:bard.kuvaas@bi.no)  
Tel: +4746410713  
Fax: +4746410701

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\*Corresponding author

## **Constructive Supervisor Feedback is Not Sufficient: Immediacy and Frequency is Essential**

### Abstract

In the present study, we investigated the relationship between perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback and work performance. In two pilot studies, we obtained support for the two-dimensionality of our measure of supervisor performance feedback. In the main study, perceived constructiveness of supervisor performance feedback and work performance was positively related when perceived immediacy and frequency of supervisor performance feedback was high. We discuss theoretical and practical implications and directions for future research.

*Keywords:* feedback constructiveness, feedback immediacy and frequency, supervisor performance feedback, work performance

Lately, companies such as Accenture, Adobe, Deloitte, Gap, General Electric, Microsoft, and many others have removed their annual reviews of employees' performance, or are in the process of doing so. Representatives of these companies have provided several reasons to change their performance management systems, but two of the most cited ones have to do with the immediacy and frequency and the constructiveness of feedback provided to employees. For instance, and according to Bob Sutton's LinkedIn article about Adobe, "The aim is to give people information when they need it rather than months after teachable moments have passed" and that managers are expected to "help employees with their growth and development plans" (Sutton, 2014).

With this background, the aim of the current study is to test the unique and interactive relationships between perceived immediacy and frequency of supervisor performance feedback and perceived constructiveness of supervisor performance feedback and work performance. Feedback immediacy (e.g., Kulik & Kulik, 1988) refers to the proximity in time with respect to the particular task performed and feedback frequency (e.g., Lam, DeRue, Karam, & Hollenbeck, 2011) to how often feedback is received. As *perceptions* of feedback, perceived proximity in time with respect to the particular task performed is probably confounded with perceived frequency. That is, if an employee perceives that feedback is usually provided immediately after the work is done, (s)he will probably also perceive that the feedback is sufficiently frequent. Therefore, we conceptualize feedback immediacy and feedback frequency as a single feedback dimension. Perceived constructiveness of supervisor performance feedback refers to feedback perceived as strength-based (i.e., focusing on positive behavior and results that stem from employees' knowledge, skills, or talents (e.g., Aguinis, Gottfredson, & Joo, 2012)), task- rather than person-oriented (e.g., Kluger & DeNisi, 1996), specific and easy to understand (e.g., Kuvaas, 2011), and

acceptable (e.g., Anseel & Lievens, 2009) or accurate (e.g., Jawahar, 2010) (i.e., agreement between the feedback receiver and provider).

More immediate, frequent, and constructive feedback might have the capacity to improve performance, but the relationship between perceptions of feedback and/or manipulated feedback and work performance is more complex than typically assumed (Kluger & DeNisi, 1996).

Immediacy and frequency of feedback has a long history of research in the work and educational domains, but the optimal immediacy and frequency of feedback seems to depend on several factors, such as the type of learning being undertaken, cognitive load, recall, and what happens between the actual behavior and the feedback (Ilgen, Fisher, & Taylor, 1979; Wiliam, 2011). Furthermore, for learning purposes, immediate feedback is usually more effective than delayed feedback in applied studies, whereas experimental studies most often produce opposite results (Kulik & Kulik, 1988). Similarly, Lam et al. (2011) found an inverted-U relationship between feedback frequency and task performance in an experimental study. Accordingly, the relationship between perceived immediacy and frequency and work performance is unclear. In addition, and from a practical point of view, many line and middle managers experience an increasing workload associated with the implementation of HR activities (Bond & Wise, 2003; McConville, 2006; McConville & Holden, 1999; Renwick, 2003; Whittaker & Marchington, 2003), which may prevent them from providing sufficiently immediate and frequent feedback to their employees. Some managers may even think that formal feedback activities, such as those involved in performance appraisals or reviews, can compensate for immediate and frequent feedback on a more regular basis (e.g., Kuvaas, 2011). In addition, the prevalence of a laissez-faire leadership (Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007) characterized by delayed decisions, lack of involvement and feedback, and few attempts to satisfy the needs of the

employees or to motivate them (Bass & Avolio, 1990), may also hinder the provision of immediate and frequent feedback.

As evident by the transformation of performance management systems in many organizations, practitioners have also become more aware of the importance of constructive or developmental feedback as opposed to annual rankings and evaluations of prior performance. For instance, in a letter to the employees, Lisa Brummel (the executive vice president of Human Resources at Microsoft) wrote that the key elements of the new performance management system were to put more emphasis on employee growth and development and “meaningful discussions to help employees learn in the moment, grow and drive great results” (Warren, 2013). Since we conceptualize the constructiveness of feedback by several feedback subdimensions that have previously been linked to work performance, learning, or the motivation to improve performance (e.g., Aguinis, et al., 2012; Ilgen, et al., 1979; Northcraft, Schmidt, & Ashford, 2011), we expect a positive relationship between perceived constructiveness of feedback and work performance. What is a more open question is whether perceived constructiveness and perceived immediacy and frequency interactively influences work performance. Despite the long history of research on immediacy and frequency and constructiveness of feedback, we are not aware of studies investigating the unique and interactive roles of perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback on work performance. In an experimental study, Northcraft et al. (2011) found a positive interaction effect of immediate (as opposed to periodic) and specific (as opposed to vague) feedback on task performance. In field settings, however, feedback is not dichotomized. In addition, and as previous research suggests, the specificity of feedback is only one subdimension among many to capture constructive feedback. Therefore, the current study should contribute to feedback and performance

management research and practice by investigating whether the relationship between perceived constructiveness of feedback and work performance depends on the level of perceived immediacy and frequency of feedback.

### **Theory and Hypotheses**

There is no unified conceptualization of feedback and multiple dimensions have been applied: source (e.g., Brett & Atwater, 2001); specificity (e.g., Northcraft, et al., 2011); sign (e.g., Kluger, Lewinsohn, & Aiello, 1994); consistency (e.g., Stone & Stone, 1985); acceptance (e.g., Anseel & Lievens, 2009); accuracy (e.g., Jawahar, 2010); frequency (e.g., Lam, et al., 2011); and immediacy (e.g., Kulik & Kulik, 1988). There is also a debate about which feedback dimensions should be included in the feedback environment and the dependency and interdependency between different dimensions (see Kinicki, Prussia, Wu, & McKee-Ryan, 2004 for a brief overview). Unlike experimental studies, where immediacy is often operationalized as immediate or delayed feedback (e.g. Kulik & Kulik, 1988) and frequency can be counted (e.g. Lam, et al., 2011), perceived feedback immediacy probably depends on certain levels of perceived feedback frequency in the field. Accordingly, we conceptualize perceived immediacy and frequency as the combination of perceived immediacy and frequency in the present study.

Several different conceptualizations of constructive feedback have been proposed in the literature (see Sommer & Kulkarni, 2012 for a review). Alder and Ambrose (2005) defined constructive feedback as feedback that is specific and sensitive, and Sommer and Kulkarni (2012) restricted constructive feedback to feedback that emphasizes problematic behaviors over personal weaknesses and two additional subdimensions. Given the large number of potentially relevant feedback subdimensions, we conceptualize perceived constructiveness of feedback as a more

global construct consisting of several subdimensions that have predicted work performance in prior feedback research and research on performance appraisal reactions (i.e., perceived as strength-based, task- rather than person-oriented, specific and easy to understand, and acceptable or accurate). Finally, we chose to investigate the immediate supervisor as the source of the feedback since (s)he is the preferred source (Gosselin, Werner, & Hallé, 1997), and because the immediate supervisor is the agent of the organization (Kuvaas & Dysvik, 2010) that puts performance management into practice (den Hartog, Boselie, & Paauwe, 2004).

#### *Perceived Constructiveness of Supervisor Performance Feedback and Work Performance*

Strength-based feedback that focuses on positive behavior and results that stem from employees' knowledge, skills, or talents may improve work performance because employee strengths have potential for learning, growth, and development (Aguinis, et al., 2012). In addition, strength-based feedback should satisfy the need for competence, which in turn enhances intrinsic motivation and ultimately work performance (Gagné & Deci, 2005). Weakness-based feedback, on the other hand, especially if it is person-oriented rather than task-oriented, may undermine the need for competence. In addition, negative feedback in the form of criticism has been associated with lower levels of feedback accuracy and satisfaction with feedback (Jawahar, 2010).

Furthermore, back in the 1960s, Kay, Meyer, and French (1965) observed that when supervisors pointed out improvement needs in performance appraisals, employees perceived the feedback as threatening their self-esteem and responded with defensive behavior. Furthermore, "The greater the threat, the less favorable the attitude toward the appraisal system and the less the subsequent constructive improvement in job performance realized" (Kay, et al., 1965: 311). In addition, that feedback is perceived to be task-oriented rather than person-oriented is important to avoid because it directs attention to the self. When attention is directed to the self, affective reactions



that can interfere with task performance may be produced and cognitive resources needed for task performance may be depleted (Kluger & DeNisi, 1996).

For supervisor performance feedback to enhance learning and motivation to improve performance, it should also be understood and followed by specific advice on how performance can be improved (e.g., Northcraft, et al., 2011). The feedback needs to be specific enough to be useful for the employee, but not too specific to prevent the employee from learning the generalities of the task (Villado & Arthur, 2013). To illustrate the importance of feedback specificity, Kluger and DeNisi (1996) reported a stronger effect size for feedback specificity predicting performance than for feedback intervention versus no-feedback intervention. Finally, if the feedback is not perceived as acceptable or accurate, that is, if there is disagreement between the feedback receiver and the provider, the less likely it is that it will be acted upon to improve performance (Anseel & Lievens, 2009; Ilgen, et al., 1979; Kinicki, et al., 2004). Accordingly, we hypothesize:

*Hypothesis 1: Perceived constructiveness of supervisor performance feedback relates positively to work performance.*

#### *Perceived Immediacy and Frequency of Supervisor Performance Feedback and Work Performance*

For both immediacy (Kulik & Kulik, 1988) and frequency (Salmoni, Schmidt, & Walter, 1984) of feedback, “the more is better” hypothesis has received relatively strong support in field contexts. Still, in support of resource allocation theory, Lam et al. (2011) recently reported an inverted-U relationship between feedback and task performance in an experiment where the number of feedback episodes was manipulated. Thus, cognitive demands associated with very

high frequency feedback may interfere with the ability to respond to and to process the feedback appropriately. Similarly, experimental studies of feedback immediacy have shown negative or mixed results when compared to delayed feedback (Kulik & Kulik, 1988). In addition, the effect of immediacy versus delay may depend on task-related expertise and complexity (Guadagnoli, Dornier, & Tandy, 1996). Still, unless in contexts characterized by very high immediacy and frequency (e.g., for stock traders), we propose that perceived immediacy and frequency of supervisor feedback will increase work performance. First and most important, more frequent and immediate feedback implies that employees can learn and adopt more efficient task strategies and can do so without delay or the risk of forgetting, which should enhance work performance. Second, many line and middle managers experience an increasing workload associated with the implementation of HR activities (Bond & Wise, 2003; McConville, 2006; McConville & Holden, 1999; Renwick, 2003; Whittaker & Marchington, 2003), which may make it difficult to meet the perceived feedback needs of their employees with respect to immediacy and frequency. Third, a large span of control or organizational distance necessarily limits the time managers can spend being close to their employees (Antonakis & Atwater, 2002; Dansereau, Graen, & Haga, 1975; Judge & Ferris, 1993). Therefore, we believe the “more is better” hypothesis is relevant with respect to perceived immediacy and frequency of supervisor performance feedback in most field settings and hypothesize the following:

*Hypothesis 2: Perceived immediacy and frequency of supervisor performance feedback relates positively to work performance.*

*The Interaction of Perceived Constructiveness and Perceived Immediacy and Frequency of Supervisor Performance Feedback*

Even though perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback may have unique effects on work performance, a strong case can also be made for interaction between the two perceived feedback dimensions. If supervisor performance feedback is provided mainly in formal performance management activities which typically occur once or twice a year, perceived constructiveness would probably lead to more favorable performance appraisal reactions, but to a lesser extent to work performance. First, the ability to learn from delayed constructive feedback is limited by memory biases (e.g., Murphy & Balzer, 1986; Villado & Arthur, 2013). Second, if the employee is able to learn from delayed constructive feedback, the learning cycles will be fewer and the resulting learning and performance improvement slower. Third, Northcraft et al. (2011) obtained experimental evidence for a positive relationship between specific feedback and performance only under the condition of immediate feedback. Fourth, Kuvaas (2011) found that perceived frequency of regular day-to-day work-related feedback (from multiple sources) outside formal performance appraisal moderated the relationship between performance appraisal reactions and work performance. A positive relationship was only observed for high levels of regular day-to-day feedback. Finally, indirect support is provided by Sparr and Sonnentag (2008), who observed a negative relationship between frequent negative feedback from the supervisor and well-being, but a positive relationship between frequent positive feedback from the supervisor and well-being.

Accordingly, we hypothesize:

*Hypothesis 3: The relationship between perceived constructiveness of supervisor performance feedback and work performance is moderated by perceived immediacy and frequency of supervisor performance feedback: the higher the perceived immediacy and frequency of supervisor performance feedback, the more positive the relationship.*

## **Method**

### *Sample and Procedure*

The respondents were recruited through students enrolled in executive education programs at the business school where the first and third author are employed. With an electronic survey tool, we first distributed the questionnaire to 678 employees of a Norwegian governmental directory and received 278 (41%) complete responses. We then distributed a questionnaire to measure work performance to the 41 supervisors of the employees and received responses from 29 (70.7%) of them. Participants filled out a personal code, which we used to match the employee and supervisor responses. We informed the participants that the survey had been approved by the Norwegian Social Science Data Services (NSD) and assured them of strict confidentiality. The final matched sample consisted of data from 158 employees, corresponding to a response rate of 23.3%. Of the employees, there were 112 (67.1%) women and 43 (27.4%) men (1.3% missing). With regard to their organizational tenure, 40.5% had between one and three years, 32.9% had between four and seven years, and 25.3% had between eight and eleven years. Finally, we note that only 6.3% of the respondent did not finish a college or university degree. In fact, 34.8% had completed a Bachelor's degree, 55.1% had completed a Master's degree, and 3.8% had completed a PhD.

### *Measures*

All items were scored on 5-point Likert response scales ranging from 1 (strongly disagree) to 5 (strongly agree) unless otherwise noted.

## Perceived feedback characteristics

Before testing our hypotheses, we developed and validated the scales used to measure perceived immediacy and frequency and perceived constructiveness of supervisor performance feedback using two independent samples. First, we applied a deductive approach to scale development and developed 13 initial items based on the construct definitions (Hinkin, 1998). We considered the subdimensions of our feedback constructs (frequency and immediacy on the one hand, and strength-based, task- rather than person-oriented, specific and easy to understand, and acceptable and accurate on the other hand) to be clear and specific enough to justify a deductive approach. To avoid items being confounded with measures of characteristics of the supervisor other than the feedback (s)he provides, we made sure that feedback was the focal unit of each item. Sample items used to measure perceived constructiveness of supervisor performance feedback are: “My immediate supervisor provides feedback that is more concerned with what I’m good at in my job than with I’m not so good at” (strength-based); “If I do something wrong at work, my immediate supervisor provides feedback that focuses on the task and not me as a person” (task- rather than person-oriented); “When I receive correcting performance feedback from my immediate supervisor, (s)he always follows up with good advice about how I can do things better” (specific and easy to understand); and “If there is discrepancy between my own and my immediate supervisor’s evaluation of my performance, we come to an agreement after having discussed the matter” (acceptable or accurate). This distinguishes our scale from the Feedback Environment Scale (FES) (Steelman, et al., 2004), where characteristics of the supervisor are the focal units of several of the items. Sample items of the PFES are: “My supervisor is supportive when giving me feedback about my job performance”: “When my supervisor gives me performance feedback, (s)he is considerate of my feelings”; and “My supervisor is tactful when giving me performance

feedback.” Sample items used to measure perceived immediacy and frequency of supervisor performance feedback are: “I often receive performance feedback from my immediate supervisor” (frequency); and “The performance feedback I receive from my immediate supervisor is provided far too long after I have done the work (immediacy).”

Second, the use of exploratory factor analysis (EFA) is typically recommended in the early stages of scale development (e.g., Farrell, 2010; Hurley, et al., 1997; Kelloway, 1995). Accordingly, we performed an EFA (principal axis factoring with oblimin rotation) to examine the factor structure via a pilot study with 135 employees (38.7% response rate) from 2 Norwegian non-governmental organizations (NGOs). Researchers have argued that principal axis factoring is advantageous over principal component analysis when the goal is to identify latent constructs (Fabrigar, Wegener, MacCallum, & Strahan, 1999) since it does not rely on “...the false assumption that the variables are error-free made in component analysis” (Nunnally & Bernstein, 1994, p. 536). Furthermore, we employed promax rotation since it is an oblique rotation that permits correlations among factors (Fabrigar et al., 1999). Instead of relying on Kaiser’s eigenvalue-greater-than-one rule (Kaiser, 1960) to determine the appropriate number of factors to extract, we relied on the scree test which is much less problematic and more likely to perform well under a range of conditions (Fabrigar et al., 1999). We present the results of the EFA (i.e., the items and their corresponding factor loadings and Eigenvalues) in Appendix A. The scree test clearly indicated that a two-factor solution provided best fit with the data. On the basis of relatively stringent rules-of-thumb we omitted three items developed to measure perceived constructiveness; one (PFBC2) because of a factor loading below .40 (Meyers, Gamst, & Guarino, 2006), one (PFBC6) because of a differential below .20 between included factors (Van Dyne, Graham, & Dienesch, 1994), and one (PFBC5) because it loaded on the perceived

immediacy and frequency factor rather than the perceived constructiveness factor. The trimmed scales demonstrated high internal consistency, with Cronbach's alphas of .83 (perceived constructiveness) and .83 (perceived immediacy and frequency).

Third, because the factor analytical techniques we used to develop the measures could have resulted in sample-specific factors (Hinkin, 1998), we estimated a CFA (with the use of Mplus software) to test and cross-validated the findings with the use of an independent sample consisting of 223 (54.3% response rate) administrative employees of a Norwegian sports federation. More specifically, following Kuvaas, Buch, Dysvik, and Haerem (2012), we estimated a Multiple Indicator Multiple Cause (MIMIC) model due to potential unobserved heterogeneity that affects the variance in the feedback measures as well as their covariance. A MIMIC model thus served to control for sample heterogeneity when performing the CFA (cf., Bollen, 1989; Muthén, 1989). To perform the MIMIC-CFA, we simply regressed the two feedback scales on the control variables; gender; age; education; tenure; and employment condition (permanent vs. temporary). We treated the data as categorical because “ordinal variables are not continuous and should not be treated as if they are” (Jöreskog, 2005: 10). To accommodate the ordered categorical data, we used the weighted least squares (WLSMV) estimator (Flora & Curran, 2004; Muthén, du Toit, & Spisic, 1997). The results of the CFA model indicates good fit with the data ( $\chi^2 [74] = 126.52, p < 0.05$ ; RMSEA = 0.057; CFI = 0.99; TLI = 0.99) when controlling for sample heterogeneity (i.e., by regressing the feedback scales on the control variables). All factor loadings were statistically significant with a mean standardized loading of .79, supporting convergent validity (Anderson & Gerbing, 1988). Finally, the coefficient alphas for perceived constructiveness of supervisor performance feedback ( $\alpha = .87$ )

and perceived immediacy and frequency of supervisor performance feedback ( $\alpha = .87$ ) provided additional evidence of a reliable measurement model.

### Work performance

We measured work performance ( $\alpha = .95$ ) by having supervisors fill out a 10-item scale (e.g. Kuvaas, et al., 2012), including items such as: “He/she intentionally expends a great deal of effort in carrying out his/her job”; and “The quality of his/her work is top-notch.”

### Control variables

To help rule them out as alternative explanations of the hypothesized relationships between perceived constructiveness and perceived feedback immediacy and frequency and work performance, we controlled for possible socio-demographic differences including gender (1 = women; 2 = men), education (measured on an ordinal scale ranging from 1 to 4 where 1 represented high school, 2 represented bachelor’s degree, 3 represented master’s degree, and 4 represented PhD degree), and organizational tenure (measured on an ordinal scale ranging from 1 to 3 where 1 represented 0 to 3 years, 2 represented 4 to 7 years, and 3 represented 8 to 11 years). We also controlled for perceived co-worker support (PCS) using a measure from the Leiden quality of work questionnaire (Van der Doef & Maes, 1999), since the beliefs employees hold regarding the extent to which their coworkers provide work-related (instrumental) and emotional assistance (e.g. Ng & Sorensen, 2008) may influence employee work performance.

### *Analyses*

To test whether the scale items would conform to the hypothesized data structure, we followed a similar procedure as in the scale development process described above and performed a MIMIC-



CFA on a four-factor model representing perceived constructiveness, perceived feedback immediacy and frequency, perceived co-worker support, and work performance. Because of the non-independent observations in the dataset (the respondents are nested within supervisors), the MIMIC-CFA was performed using cluster robust standard errors at the supervisor level. To test the hypotheses, we used hierarchical linear modeling (HLM), which allowed us to partial out the variance in the employees' responses resulting from several employees reporting to the same supervisor to examine only the individual-level variance. Using an excel-based statistical tool (Biemann, Cole, & Voelpel, 2012) we calculated the intraclass correlation coefficients (i.e., ICC(1) and ICC(2)) and within-group agreement indices (i.e.,  $r_{WG(j)}$ ) for work performance (ICC(1) = .15; ICC(2) = .50;  $r_{WG(j)} = .83$ ), perceived constructiveness (ICC(1) = .63; ICC(2) = .91;  $r_{WG(j)} = .72$ ), and perceived feedback immediacy and frequency (ICC(1) = .36; ICC(2) = .76;  $r_{WG(j)} = .51$ ). The ICC1s supported the appropriateness of HLM as a significant proportion of the variability in work performance (15 %), perceived constructiveness (63%), and feedback immediacy and frequency (36%) was attributable to between-supervisor variability. Furthermore, the  $r_{WG(j)}$  results indicated high average within-group agreement for work performance (.83) and perceived constructiveness (.72), but weaker average within-group agreement for perceived immediacy and frequency (.51). Preceding the HLM analysis, we grand-mean centered the continuous predictors (Hoffman & Gavin, 1998). To explore the nature of the statistically significant interaction, we plotted low versus high scores on perceived constructiveness of supervisor performance feedback and perceived immediacy and frequency of supervisor performance feedback (one standard deviation below and above the means using non-standardized scores) (Cohen, Cohen, West, & Aiken, 2003).

## Results

A four-factor MIMIC-CFA model representing perceived constructiveness of supervisor performance feedback, perceived immediacy and frequency of supervisor performance feedback, perceived co-worker support, and work performance achieved a good model fit ( $\chi^2 [306] = 416.87, p < 0.05$ ; RMSEA = 0.048; CFI = 0.98; TLI = 0.98) when controlling for sample heterogeneity (i.e., by regressing the scales on the control variables: gender; education; and tenure). All factor loadings were statistically significant, and the mean standardized loading of .84 provided additional support for convergent construct validity (Anderson & Gerbing, 1988). Descriptive statistics, correlations, and reliability estimates are reported in Table I.

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 Insert Table I and Table II about here  
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We present the results of the HLM analyses in Table II. In support of Hypotheses 1, the results revealed a positive relationship between perceived constructiveness of supervisor performance feedback and work performance ( $\gamma = .19, p < .05$ ) when controlled for gender, education, tenure, perceived coworker support, and perceived feedback immediacy and frequency of supervisor performance. Hypothesis 2, however, was not supported since the perceived immediacy and frequency of supervisor performance feedback did not relate significantly to work performance ( $\gamma = -.10, n.s.$ ) when controlled for gender, education, tenure, perceived coworker support, and perceived constructiveness of supervisor performance. Hypothesis 3 stated that the relationship between perceived constructiveness of supervisor performance feedback and work performance is moderated by perceived immediacy and frequency of supervisor performance feedback: the higher the perceived immediacy and frequency, the more positive the relationship. In support of Hypothesis 3, the statistically significant interaction term revealed that the

relationship between perceived constructiveness of supervisor performance feedback and work performance is moderated by perceived immediacy and frequency of supervisor performance feedback. Figure 1 demonstrates the nature of the moderated relationship. For individuals low in feedback immediacy and frequency, feedback constructiveness was not significantly related to work performance ( $b_{\text{low}} = .10, n.s.$ ). On the other hand, for employees high in feedback immediacy and frequency, the relationship between feedback constructiveness and work performance was positive and significant ( $b_{\text{high}} = .38, p < .01$ ).

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 Insert Figure I about here  
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## **Discussion**

In the current study, we set out to make a contribution to performance management and feedback research and practice by investigating the unique and interactive relationships between perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback and work performance. We found support for an initial positive relationship between perceived constructiveness of supervisor performance feedback and work performance. Further analyses showed that perceived constructiveness of supervisor performance feedback and work performance were only positively related when perceived immediacy and frequency of supervisor performance feedback was high.

### *Implications for Theory and Practice*

The positive relationship between perceived constructiveness of supervisor performance feedback and work performance underscores the importance of providing feedback perceived as strength-based, perceived to be task- rather than person-oriented, and perceived as acceptable or accurate.

This particular finding contributes to feedback research by providing field data on a relationship that has mainly been observed in experimental studies (Kinicki, et al., 2004).

The interactional relationship between perceived constructiveness of supervisor performance feedback, perceived immediacy and frequency of supervisor performance feedback, and work performance, underscores the observation that the effect of feedback on performance is not always positive (Kluger & DeNisi, 1996). Specifically, we observed a positive relationship between perceived constructiveness of supervisor performance feedback and work performance only for high levels of perceived immediacy and frequency of supervisor performance feedback. The correlation matrix and supplemental HLM analyses where we tested the two perceived feedback dimensions in isolation revealed a weak positive (but non-significant) relationship between perceived constructiveness and work performance, and a weak negative (but non-significant) relationship between perceived immediacy and frequency and work performance. Accordingly, certain levels of constructiveness and immediacy and frequency seem to be needed to establish a positive relationship with work performance. In addition, the non-significant negative relationship between perceived immediacy and frequency of supervisor performance feedback and work performance should not be interpreted as evidence that challenges the “more is better” assumption, as long as the feedback is perceived to be constructive. This particular finding contributes to feedback research by providing field evidence suggesting that supervisor performance feedback perceived as constructive is only as useful as its perceived immediacy and frequency. In an experimental study, Northcraft et al. (2011) found a similar interaction between manipulated specific (versus vague) feedback and manipulated immediate (versus periodic) feedback. Our study echoes their finding, but also extends it by applying measures that include several subdimensions of feedback (strength-based, task- rather than person-oriented, and

acceptable/accurate in addition to immediacy and frequency) and by providing field data. Our findings also extend experimental research suggesting that the ability to learn from delayed constructive feedback is limited by memory biases (Villado & Arthur, 2013) by providing field data. Our results are also consistent with the observation that regular day-to-day feedback (from multiple sources) is a condition for a positive relationship between positive performance appraisal reactions and (self-reported) work performance (Kuvaas, 2011). Finally, the observation that work performance is higher when both perceived immediacy and frequency and constructiveness is low than when perceived immediacy and frequency is high and perceived constructiveness is low (see Figure 1), suggests that supervisors who are not able to provide feedback in a manner that is perceived as constructive, should provide feedback less rather than more immediate and frequently. This particular observation is strengthened by Sparr and Sonnentag (2008), who observed a negative relationship between frequent negative feedback from the supervisor and employee well-being.

The most important practical implications of our study are twofold. First, managers should provide both constructive and immediate and frequent feedback. Second, to do so, feedback needs to be provided in a cyclical nature between discrete performance management activities. We certainly recognize that supervisors represent only one source of feedback and that other sources may also be relevant (e.g., peers, customers and other end-users). In addition, individual employees may have different needs for feedback, as indicated by a recent meta-analytical review of research on antecedents to feedback-seeking behavior (Anseel, Beatty, Shen, Lievens, & Sackett, 2015). Still, it is the supervisor's responsibility that the feedback needs of the employees are satisfied, and we think our perceptual two-dimensional measure of perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback

effectively captures individual differences in the need for feedback. More specifically, high levels of perceived constructiveness and immediacy and frequency probably reflect that the needs for feedback are satisfied.

### *Limitations, Strengths, and Research Opportunities*

Our study's main limitation is the cross-sectional nature of the research design. In order to investigate how the relationships between perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback unfold over time, longitudinal studies are needed. In addition, even though our measures of perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback were psychometrically robust across relatively different samples, we tested our hypotheses in a single sample and we have not successfully established the criterion-related validity of the scales. Accordingly, criterion-related validity should be further examined in future research and our hypotheses should benefit from replications and extensions in different samples to ensure the generalizability of the findings.

While we are not able to draw causal claims from the study given the nature of the design, we are less concerned with the potential influence of common method bias. In line with expert advice (Podsakoff, MacKenzie, & Podsakoff, 2012), we assessed work performance through supervisor ratings to provide different sources of measurement for the dependent variable in the main study. Finally, to provide an even more stringent test of the predictive validity of perceived constructiveness and perceived immediacy and frequency of supervisor performance feedback on work performance, future research could include additional control variables such as perceived leadership characteristics and span of control.

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## Appendix A: Exploratory Factor Analysis

	PFBC	PFBIF
PFBC9: The performance feedback I receive from my immediate supervisor is concerned with how I do my job and not whether I'm better or worse than my colleagues	<b><u>.84</u></b>	
PFBC3: If I do something wrong at work my immediate supervisor provides feedback that focuses on the task and not me as a person	<b><u>.73</u></b>	
PFBC8: If there is discrepancy between my own and my immediate supervisor's evaluation of my performance we come to an agreement after having discussed the matter	<b><u>.65</u></b>	
PFBC1: My immediate supervisor provides feedback that is more concerned with what I'm good at in my job than with I'm not so good at	<b><u>.57</u></b>	
PFBC4: If I do something wrong at work my immediate supervisor provides feedback that helps me doing the task better the next time	<b><u>.53</u></b>	
PFBC7: The performance feedback I receive from my immediate supervisor agrees with how I evaluate my own performance	<b><u>.48</u></b>	
PFBC2: When I receive correcting performance feedback from my immediate supervisor (s)he always follows up with good advice about how I can do things better	.33	-.32
PFBIF1: I often receive performance feedback from my immediate supervisor		<b><u>-.93</u></b>
PFBIF4: I seldom receive performance feedback from my immediate supervisor (r)		<b><u>-.83</u></b>
PFBC5: My immediate supervisor provides clear and specific feedback on how I perform my tasks at work		-.75
PFBIF3: I receive performance feedback from my immediate supervisor immediately after I have done the work		<b><u>-.61</u></b>
PFBC6: The performance feedback I receive from my immediate supervisor is easy to understand	.39	-.46
PFBIF2: The performance feedback I receive from my immediate supervisor is provided far too long after I have done the work (r)		<b><u>-.46</u></b>
Eigenvalues	6.25	1.30
% of variance	44.49	6.56

*Note.*  $N = 135$ . PAR = Performance appraisal reaction. PFBC = Perceived feedback constructiveness. PFBIF = Perceived feedback immediacy and frequency. **Bold and underlined** items are included in the final scales. Extraction method: Principal Axis Factoring (Oblimin rotation).

**TABLE I: Descriptive Statistics, Correlations, and Scale Reliabilities**

	Mean	SD	1	2	3	4	5	6	7
1. Gender <sup>a</sup>	1.70	.49							
2. Education <sup>b</sup>	2.54	.73	.07						
3. Tenure <sup>c</sup>	1.82	.83	.08	.06					
4. Perceived coworker support	4.18	.81	.16	-.08	.03	(.99)			
5. Perceived feedback constructiveness	3.63	.83	-.09	-.05	-.10	.36**	(.85)		
6. Perceived feedback immediacy and frequency	3.29	1.06	-.08	.10	.00	.30**	.54**	(.85)	
7. Work performance	4.12	.78	-.09	-.04	.10	.08	.10	-.04	(.98)

*Note.* <sup>a</sup> 1 = Women; 2 = Men

<sup>b</sup> 1 = Upper high school (or lower); 2 = Bachelor's degree; 3 = Master's degree; 4 = PhD or equivalent.

<sup>c</sup> 1 = 0-3 years; 2 = 4-7 years; 3 = 8-11 years.

\*\* $p < .01$

**Table II: Feedback and Work Performance: HLM Results**

	Work performance			
	Model 1	Model 2	Model 3	Stand. Coeff.
<i>Fixed effects</i>				
Intercept	4.32***	4.28***	4.24***	
Gender <sup>a</sup>	-.13	-.11	-.12	-.08
Education	-.05	-.03	-.02	.00
Tenure	.10	.11	.11	.12
Perceived coworker support	.07	.04	.03	.02
Perceived feedback constructiveness		.19*	.24**	.26**
Perceived feedback immediacy and frequency		-.10	-.11	-.15
Perceived feedback constructiveness × Perceived feedback immediacy and frequency			.13*	.16*
<i>Random effects</i>				
Subordinate level residual variance ( $\sigma^2$ )	.50***	.48***	.47***	
Supervisor level residual variance ( $\tau_{00}$ )	.09	.09	.09	
Pseudo $R^2$	.06	.09	.12	
Pseudo $\Delta R^2$		.04	.03	

*Note.* Standardized coefficients are shown. We used the equation suggested by Hox (2010) to derive the standardized coefficients: Standardized coefficient = (unstandardized coefficient × standard deviation of the explanatory variable) / standard deviation of the outcome variable.

<sup>a</sup>0 = Women, 1 = Men.

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

**Figure I: The Moderating Role of Perceived Feedback Immediacy and Frequency on the Relationship between Perceived Feedback Constructiveness and Work Performance**

