

A within-individual study of interpersonal conflict as a work stressor: Dispositional and situational moderators

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Summary

Focusing on interpersonal conflict as a work stressor, the authors used a within-subjects research design to examine the effect of conflict episodes on employees' negative affect on the job. The roles of agreeableness and social support in moderating the negative effects of conflict episodes were also examined. A two-week experience-sampling study revealed that interpersonal conflict influenced employees' intraindividual fluctuations in negative affect. As predicted, agreeableness and social support influenced individuals' patterns of affective responses to conflict, such that conflict was more strongly associated with negative affect for agreeable employees, and for those with lower levels of social support at work. Overall, the results suggest that both personality (agreeableness) and context (social support) significantly moderate the affective implications of interpersonal conflict at work. Copyright © 2010 John Wiley & Sons, Ltd.

Introduction

Organizations are associative social systems where participants engage in organized activities to attain collective goals (e.g., Blau & Scott, 1962; Etzioni, 1964; Simon, 1976), and interpersonal interactions are fundamental to these organizational activities (e.g., March & Simon, 1958). Although a relatively large proportion of peoples' daily interactions at work are positive (Nezlek, Wheeler, & Reis, 1983; Watson, 2000), evidence suggests that negative events, such as episodes of interpersonal conflict, hold more potency than positive events with regards to their effects on individual well-being (Rook, 2001; Taylor, 1991). Beyond its effect on employee well-being, understanding individuals' reactions to interpersonal conflict has other important implications. Interpersonal conflict at work has been linked to decreased job satisfaction, lower organizational commitment, higher turnover intentions, and increased counterproductive work behavior (Fox, Spector, & Miles, 2001; Frone, 2000; Penney &

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Spector, 2005; Spector & Jex, 1998). Presumably, these negative effects are induced via the job strain that interpersonal conflict produces (e.g., Fox et al., 2001; Karasek, 1979; Spector & Jex, 1998).

In the original article proposing the demands-control model of job strain, Karasek (1979, p. 291) specifically mentions interpersonal conflict as a work stressor by stating that job demands encompass “psychological stressors involved in accomplishing the work load, stressors related to unexpected tasks, and stressors of *job-related personal conflict* [italics added].” Scholars have since noted that despite evidence for its importance as a work stressor, interpersonal conflict has been relatively understudied in the occupational stress literature (Spector & Jex, 1998). Although there has been noteworthy research on general effects of interpersonal conflict at work (e.g., De Dreu & Weingart, 2003; Friedman, Tidd, Currall, & Tsai, 2000; Hagedoorn, Van Yperen, Van de Vliert, & Buunk, 1999; Jehn, 1995; Keenan & Newton, 1985; Rahim, 1983; Spector & Jex, 1998; Thomas, Bliese, & Jex, 2005), scant attention has been paid to employee’s *immediate* distress responses to conflict. Many quotidian work conflicts may be fairly fleeting, as may be their affective and behavioral outcomes. However, that does not mean that their effects are trivial: A single testy exchange may forever lose a customer, and a small but much-needed word of support from a co-worker may stem the negative affect from a conflict episode. Furthermore, we believe examining *intraindividual effects* of interpersonal conflict on employees’ immediate responses in field settings and identifying factors that can diminish such immediate negative effects has the potential to contribute to the literature on conflict as a stressor by understanding the psychological processes by which interpersonal conflict produces strain.

To fill these gaps in the literature, we examined an intraindividual model linking interpersonal conflict—a job stressor (Fox et al., 2001; Keenan & Newton, 1985; Spector, Dwyer, & Jex, 1988)—to an immediate distress reaction—negative affect. In addition, and perhaps more fundamental, we aim to further contribute to the literature on interpersonal conflict by proposing and testing both dispositional (agreeableness) and situational (social support) moderating influences on individuals’ distress reactions to interpersonal conflict. Because the experience of conflict at work is a reflection of the social context, we consider both the personological and situational factors that influence affective reactions at work, in an integrative framework. We believe this approach has the potential to advance the literature regarding person-context influences on employees’ work experiences.

The theoretical framework that we used to build our conceptual model specifying how employees react emotionally to interpersonal conflict and what moderates their reactions is French, Caplan, and Harrison’s (1982) theory of person-environment fit. The aspect of this theory that is most relevant to our predictions concerns individuals’ capacity to deal with job demands such as interpersonal conflict at work. The theory postulates that discrepancies between abilities and demands or between motives and the environment produce strain. That is, when individuals cannot adequately deal with interpersonal conflict (because of lack of support or because their personality does not fit in a conflict-ridden environment) they experience strain reactions. Importantly, both the demands-control-support (DCS) model (Johnson & Hall, 1988) and the situational-congruence model (e.g., Diener, Larsen, & Emmons, 1984; Emmons, Diener, & Larsen, 1986), which we use to derive our hypotheses regarding the moderating effect of social support and agreeableness, respectively, are essentially person-environment fit models.

This study makes several contributions to the literature on workplace interpersonal conflict. The stressful effects of non-task job demands are an understudied aspect of Karasek’s (1979) original model. We, like other researchers (Viswesvaran, Sanchez, & Fisher, 1999), suggest the importance of carefully aligning the nature of work demands or stressors with the factors that alleviate or exacerbate their effects. Empirical support for the buffering effect of social support in attenuating negative reactions to job demands has been inconclusive (Van der Doef & Maes, 1999). One reason could be that social support alleviates only the consequences of stressful interpersonal job demands and not those induced by stressful task-related demands. Mixed results of previous studies could also be due to the

cross-sectional approach that most researchers have taken (i.e., if timing of the social support is critical to its effectiveness, then time-invariant methods will do a poor job of identifying the effects of such support). The present study, using a within-subjects design, conceptualizes and measures conflict and social support as discrete encounters and also considers time-lagged effects. Finally, as mentioned, this study contributes to our understanding of person by situation interactions by integrating personality into the DCS model.

Negative affect and interpersonal conflict: The main effect

Following Keenan and Newton (1985, p.154), who included “negative interpersonal encounters involving covert hostility, verbal aggression, angry exchanges between individuals, and so on” in their definition of interpersonal conflict, we define interpersonal conflict as a negative interpersonal encounter characterized by a contentious exchange, hostility or aggression. Interpersonal conflict is overlapping yet distinct from several other negative workplace phenomena. Interpersonal conflict may be an isolated incident or a common occurrence and, in this sense, it is broader in scope than bullying or social undermining, which are typically described as aggressive behaviors that are repeated and enduring (Duffy, Ganster, & Pagon, 2002; Einarsen, 1999). Interpersonal conflict may include rude behavior but, unlike workplace incivility (Andersson & Pearson, 1999), interpersonal conflict would also include instances of respectful yet contentious disagreement. As noted, interpersonal conflict has long been considered a stressful job demand and as such it should positively influence job strain according to the demands-control model (Karasek, 1979). That is, in the demands-control model (Karasek, 1979, p. 287), “work load demands, conflicts or other stressors. . .place the individual in a motivated or energized state of ‘stress’,” and unless the individual can somehow take action to cope with the stressor, the unreleased energy induced by job stressors will manifest itself internally, producing distress and strain (see Karasek, 1979).

One psychological distress indicator that is often studied when examining short-term effects of job stressors is *negative affect*, and research has found convincing evidence showing that stressful events or demands, including those characterized by high workloads (Ilies, Dimotakis, & De Pater, in press; Ilies, Schwind, Wagner, Johnson, DeRue, & Ilgen, 2007), arguments (Clark & Watson, 1988; Vittengl & Holt, 1998) and interpersonal frustrations (Buunk & Verhoeven, 1991; Peeters, Buunk, & Schaufeli, 1995), correlate with negative affective states both across individuals and within individuals. Furthermore, Watson (1988) has specifically linked negative affect with the stress response and found that negative affect was strongly correlated with a measure of perceived distress (“how much stress (e.g., because of hassles, demands) were you under today?”) in within-individual analyses.

In addition, the literature on daily work hassles documents the daily occurrence of conflict with co-workers or supervisors at work and has established that work hassles in general—and interpersonal conflict in particular—have a direct effect on employees’ negative affect (e.g., Vittengl & Holt, 1998; Zohar, 1999). Average levels of self-reported interpersonal conflict have correlated moderately with negative emotions (e.g., state anxiety and frustration) and with symptoms of depression (Frone, 2000; Spector & Jex, 1998), and there is also evidence to suggest that interpersonal conflict has a strong effect on negative affect relative to other daily stressors (Bolger, DeLongis, Kessler, & Schilling, 1989). Therefore, on the basis of the demands-control model, and given the suggestive empirical evidence, we predict the following,

Hypothesis 1: Interpersonal conflict at work will immediately influence employees’ negative affect, such that employees will report heightened negative affect after periods when they experience more conflict, compared to periods when they experience less conflict.

Importance of time: Temporal nature of relationships

At this juncture it is worth noting that our first hypothesis refers to an *intraindividual* effect manifested within individuals over multiple measurement occasions. In distinguishing between intra- and interindividual levels of analysis, we concur with Watson, Clark, McIntyre, and Hamaker (1992) that these levels address different questions even though they often lead to congruent results. Similarly, Cervone (2005, p. 425) notes, “Numerous writers have explained that within-person and between-person analyses, although they surely may inform one another, nonetheless constitute domains of inquiry that are conceptually distinct.” Whereas analyses at both levels are important, for our specific test of interpersonal conflict episodes as stressful affective events, the intraindividual relationships between the experience of conflict and state affect across time are most relevant.

It is also important to note the temporal nature of our prediction. Several authors have called for an explicit consideration of the role of time in organizational behavior theory and research (Bluedorn & Denhardt, 1988; George & Jones, 2000; Mitchell & James, 2001). We answer that call by examining what Mitchell and James (2001) call a *dynamic relationship* between conflict and negative affect in which both constructs change over time, by explicitly considering the *aggregation period* over which the experience of interpersonal conflict is recalled, and by examining the *duration of relationship* between conflict and negative affect. With respect to aggregation, we followed George and Jones’ (2000) advice to consider the time period over which an experience is assessed; that is, in this study, at each measurement occasion conflict experiences are aggregated (recalled) over the previous three hours and momentary negative affect is reported at the end of each of the three aggregation periods.

With respect to duration, the first hypothesis proposes an *immediate* effect of interpersonal conflict on negative affect. However, as we will explain in more detail shortly, the design of the study involves three equidistant (in time) measurements for each day of the study during working hours, which allows examination of the duration of the relationship between interpersonal conflict and negative affect. In this regard, George and Jones (2000) recommend the introduction of time lags between the measurement of stressors and strains to assess the duration of their relationship. Accordingly, our design enables us to examine the duration of the relationship between conflict and negative affect by examining the dynamic relationship between these two constructs when they are separated by different time lags (i.e., does conflict at time 1 influence negative affect at time 2, at time 3, or both?). Although we do not offer a formal hypothesis for these temporal effects, given the transitory nature of affect and based on previous research that found a diminishing effect on affect for other predictors (e.g., job satisfaction; Judge & Ilies, 2004), we expect that the dynamic relationship between conflict and negative affect will weaken as the time lag between the two constructs increases. This expectation also derives from the hedonic treadmill hypothesis, which proposes that the effects of events wear off over time (Suh, Diener, & Fujita, 1996). Whereas past research has examined significant life events and the decay of their effects over periods of months, however, we examine smaller “hassles” and their decaying effects over the course of a day.

Moderating influences

Thus far, we have hypothesized that the interpersonal conflict experienced by employees at work influences their negative affect, as a distress reaction. We also noted that we expect the effect of interpersonal conflict to weaken as the time interval between the experience of conflict and the assessment of the affective reaction increases. These expectations are consistent with a situational view on affective reactions where intraindividual variations in conflict determine employees’ affective states. Affective events theory (AET; Weiss & Cropanzano, 1996) and other theoretical models of

intraindividual functioning across time and situations (e.g., Mischel & Shoda, 1998), however, suggest that there are also stable differences in individuals' characteristic patterns of intraindividual relationships, and these differences should be dispositional in nature.

As noted, the demand-control (Karasek, 1979) and DCS (Johnson & Hall, 1988) models can be viewed from a more general person-environment fit perspective (French et al., 1982), positing that misfit between one's abilities or preferences and one's job demands leads to distress reactions, strain, and decreased well-being. Similarly, with respect to personality, the situational-congruence model (Diener et al., 1984; Emmons et al., 1986; Suls, Martin, & David, 1998) proposes that individuals experience heightened negative affect in situations that are incompatible with their personality characteristics.

The personality trait that is most relevant to person-environment fit with conflict situations is agreeableness, as this broad behavioral trait is thought to regulate interpersonal interactions (Costa & McCrae, 1992; Trapnell & Wiggins, 1990). Because agreeable individuals are trusting, sympathetic, accommodating, and kind (Costa & McCrae, 1992; Trapnell & Wiggins, 1990), and strive toward communion and getting along with others (Ashton & Lee, 2001; Wiggins, 1991), these individuals fit best in environments characterized by pleasant social interactions. It follows that agreeable individuals should react more strongly (in terms of affective distress) to argumentative, hostile, or other social encounters characterized by interpersonal conflict because "conflict should represent a greater mismatch of their interpersonal orientation than for disagreeable persons" (Suls et al., 1998, p. 88).

Several experience sampling and diary studies have provided support for the moderating effect of agreeableness on individuals' affective reactions to interpersonal conflict. For instance, agreeableness was found in two studies to amplify the degree to which self-initiated quarrelsome behavior and unpleasant affect covary within individuals (Côté & Moskowitz, 1998; Moskowitz & Côté, 1995). These studies were conducted to examine the behavioral concordance hypothesis, which proposes that individuals experience negative affect when they engage in behaviors that are contrary to their nature. This notion bears obvious similarities with the situational-congruency model, but is more restrictive in the sense that it does not include behaviors directed *toward* the individual by others (e.g., a disapproving comment from a co-worker).

More direct evidence is offered by Suls et al. (1998), who found that individuals high in agreeableness responded more negatively to conflict compared to those lower in agreeableness. However, because this study was not particularly focused on interpersonal conflict at work (i.e., besides co-workers, employees, and clients, the other parties involved in interpersonal conflict included relatives, friends, neighbors, spouses, and children), it is unclear whether agreeable individuals were more sensitive to conflict as a work stressor—as we predict—or simply reacted more strongly to a wide variety of unpleasant experiences. On a related note, daily affect was assessed retrospectively at night, whereas we are interested in "real time" experiences of affect at individuals' jobs. Therefore, our research effort has the potential to contribute to the literature on interpersonal conflict beyond Suls et al. by focusing on discrete work experiences (and measuring these experiences and employees' immediate reactions to them in the environment where they happen), and by examining the moderating role of both agreeableness (a personality trait) and workplace social support (conceptualized and measured as a situational influence). In addition to focusing on the work context, the value added is (a) methodological, through momentary assessment thereby removing some of the day-level biases inherent in participants' recollecting experiences and affect at night, (b) theoretical, by providing an integrative framework (i.e., person-environment fit), and (c) practical, by considering environmental buffers.

In sum, based on the situational-congruency model and the supportive empirical evidence, we propose that agreeableness will moderate employees' affective distress reactions to interpersonal conflict at work. Agreeable individuals should be more sensitive to increasing levels of interpersonal

conflict (e.g., more conflict episodes) and should experience stronger increases in negative affect as a result.

Hypothesis 2: Agreeableness moderates employees' affective distress responses to interpersonal conflict at work, such that the intraindividual effect of interpersonal conflict on negative affect strengthens with increasing levels of agreeableness (i.e., the interpersonal conflict—negative affect relationship is more positive for agreeable than disagreeable employees).

As noted, in addition to agreeableness, we also examine whether the extent to which employees receive social support at work moderates their affective distress reactions to interpersonal conflict. Social support at work has been considered to reflect the nature of one's social environment at work, the resources available within an employee's social network, and the quality of a person's relationships at work (e.g., House, Umberson, & Landis, 1988; Humphrey, Nahrgang, & Morgeson, 2007; Johnson & Hall, 1988; Karasek, Triantis, & Chaudhry, 1982). Though the literature on the role of social support in the stress process is somewhat inconsistent (Van der Doef & Maes, 1999), high-quality social relationships at work have been specifically noted for their ability to buffer against the effects of stressors (House et al., 1988, p. 302). Within this broad definition, social support at work has been generally conceptualized and studied as a stable feature of the job (Johnson & Hall, 1988; Humphrey et al., 2007).

Nevertheless, the psychological benefits of social support (e.g., emotional concern, instrumental aid, information; House, 1981) are, in essence, derived from interpersonal encounters. Therefore, scholars of social support have alternatively defined it as an interpersonal transaction (House, 1981) or have studied the socially supportive characteristics of discrete social interactions (Peeters, Buunk, & Schaufeli, 1995). The units of study are the behavioral incidents that constitute support (e.g., conversing with co-workers, receiving information from supervisor). In this paper, we adopt this latter conceptualization of social support drawn from discrete interpersonal encounters, assuming that the extent to which employees engage in such interpersonal encounters can vary across days or within a workday. It is worth noting that the two ways of conceptualizing social support at work, (a) as a stable job characteristic or (b) as a time-varying construct reflecting discrete interpersonal encounters, are related in that the average level of time-varying social support reflects social support as a job characteristic.

Conceptually, the role of social support in the relationships between potentially stressful job demands—such as interpersonal conflict—and negative affect is central to the DCS (Johnson & Hall, 1988) model of job strain. Johnson and Hall have proposed the DCS model as an extension to Karasek's (1979) demands-control model. In the DCS model, as well as in other conceptual treatments (e.g., House, 1981; Karasek et al., 1982), the moderating role of social support in the stressor-strain relationship has been labeled a "buffering effect." Evidence for a buffering effect (i.e., moderation) is provided when the relationship between stressors and strain is stronger given lower levels of support (Viswesvaran et al., 1999). Social support is seen as a resource from which a person can draw strength for use across various situations, or which a person can use to cope with a specific problem. Social contacts can attenuate the negative impact of interpersonal conflict by freeing personal resources that can be used to deal directly with the problem, by reinstating positive self-image, or by counteracting the affective consequences of the conflict. According to the "undoing hypothesis" (Fredrickson & Levenson, 1998), positive emotions caused by social support may speed the process of recovery from negative events.

Importantly, with respect to the two potential distress-preventing factors from the DCS model—decision latitude and social support—it has been suggested that decision latitude on the job may be less effective in attenuating the stressful effect of social job demands, and therefore social support may

be more important in such instances. On this point, Fox et al. (2001, p. 293) note “Having control over specific tasks (i.e., task autonomy) may be helpful in reducing the stressfulness of task-related stressors such as workload, but it will not affect the stressfulness of unrelated stressors such as interpersonal conflict.” Following this rationale, in this study, rather than focusing on decision latitude or job control (the main focus of the demands-control model), we examine the buffering effects of social support in an attempt to match the social theme of the job stressor that is at the center of this investigation (i.e., interpersonal conflict).

In the past two decades, considerable evidence has accumulated for the importance of social support at work (Dormann & Zapf, 1999; Etzion, 1984; Evans & Steptoe, 2001; George, Reed, Ballard, Colin, & Fielding, 1993; Halbesleben, 2006; Karlin, Brondolo, & Schwartz, 2003; Luszczynska & Cieslak, 2005; Peeters et al., 1995; Thomas et al., 2005; Viswesvaran et al., 1999). That is, social support has been shown to safeguard against a number of negative outcomes including increases in cardiovascular symptoms (e.g., Evans & Steptoe, 2001; Karlin et al., 2003), burnout (e.g., Etzion, 1984; Halbesleben, 2006), and negative affect (Buunk & Verhoeven, 1991; George et al., 1993; Peeters et al., 1995).

Perhaps the most direct evidence for the role of social support in the attenuation of negative reactions to interpersonal conflict comes from Peeters et al. (1995). These authors used an event-recording method to capture female secretaries’ stressful events, perceived social support, and negative affect over a one-week period. They found within-and between-persons buffering effects of instrumental (task related) social support, but only between-persons effects for intimate (or personal) social support. Their study did not focus exclusively on interpersonal conflict, of interest in the present study. Also, they asked participants to report “stressful events,” thereby leading to a possible confound of the events with the outcome. Nevertheless, based on their suggestive results and the conceptual analysis presented above, we expect that social support should ameliorate the deleterious effects of interpersonal conflict at work.

Hypothesis 3: Social support at work moderates employees’ affective distress responses to interpersonal conflict at work, such that increasing levels of social support should weaken the intraindividual effect of interpersonal conflict on negative affect (i.e., the interpersonal conflict—negative affect relationship will be stronger at lower rather than higher levels of social support).

Earlier we noted the temporal nature of our predictions, and the explicit attention paid to the aggregation of conflict experiences. Aggregation issues are also important when examining the moderation role of social support. That is, some researchers have noted that investigations of buffering effects have rarely measured *discrete* stressful events or events aggregated over a short time period, and instead have focused on records of *cumulative* life events or on life crises (Cohen & Wills, 1985; Kessler, Price, & Wortman, 1985). We believe it would be useful to demonstrate the potential for social support, conceptualized as a time-varying construct reflecting discrete interpersonal encounters, to serve as an immediate coping resource for the minor stressful events that take place over short time periods every day in the workplace. In addition, we also examine whether the direct stressful effect of interpersonal conflict is of shorter duration when employees receive high levels of social support.

Method

To examine support for the hypotheses, we conducted a field study wherein full-time employees were asked to complete three surveys daily, from work, over a period of two weeks. To capture the episodic nature of interpersonal conflict at work, the experience-sampling surveys asked participants to report

conflict episodes they experienced during the three-hour period before the survey, using a checklist developed in a prior research effort. Participants were also asked to report the social support they received during the same period and their momentary negative affect. In addition, they completed a separate personality survey and secured informant personality ratings from significant others.

Participants

Eighty-two full-time unionized employees from a large Midwestern university participated in the study. The employees were recruited via e-mail, and were compensated up to \$50 for their participation, depending upon how many surveys they completed. Seventy-one per cent of the participants were female, and they had a mean age of 39.96 ($SD = 11.05$) with a mean tenure in their current job of 10.68 years ($SD = 9.43$).

Procedure

Employees wishing to participate were directed to a web page that included a description of the study and an electronic consent form. After completing the consent form, they were linked to another web page where they completed the personality measure. The following week, participants began completing Internet-based surveys three times a day (at 11:00 AM, 2:00 PM, and 5:00 PM), where they reported interpersonal conflict episodes they experienced during the three hours prior to the survey, as well as social support and momentary negative affect. The website was configured such that the participants could only access the surveys from one hour prior to the designated time to one hour after the designated time. This ensured that the participants did not complete multiple surveys at once.

Participants completed these surveys over a two-week period, beginning on a Monday and not including the weekend. Given our expectations for the duration of the effects of interpersonal conflict outlined in the introduction, a two-week period offers enough observations to capture the intraindividual effect and to estimate individuals' characteristic slopes reliably in order to be able to predict between-individual differences among these slopes. Participants could complete 30 of these surveys in total (three per day for 10 days). Of the 82 participants in the initial sample, 18 were eliminated because they did not report any interpersonal conflict episodes, and another 15 were eliminated because they completed fewer than 20 surveys.¹ In all, the 49 employees included in the final sample completed 1270 surveys, or an average of 25.9 surveys each ($SD = 2.75$). We compared those who were excluded with the final sample and found that these 33 individuals did not differ in gender, age, tenure, or self- and other-rated agreeableness. We also examined whether the number of surveys provided by participants influenced the results of the study, using the final sample ($N = 49$). The number of surveys was not associated with either conflict or negative affect, and it did not predict the strength of the intraindividual association between conflict and negative affect.

Measures

To assess interpersonal conflict at work, we used a five-item checklist that included the following events: "I had a fight with a co-worker over a work-related issue," "Co-worker(s) showed disapproval

¹This may have produced a certain restriction in range on our measure of interpersonal conflict, making these results somewhat conservative.

of the way I handled a work situation,” “A colleague took jabs at or needled me,” “Had to explain an improper behavior or action to co-worker(s) and/or supervisor,” and “Supervisor showed disapproval of the way I handled a work situation.” These events reflect conflict with others over both task and relationship issues. To measure social support, we used a six-item checklist that assessed work-related social support (“Co-worker helped with a certain task or problem,” “Co-worker or customer gave information that helped me in my work,” “Co-worker gave advice on how to handle things at work,” “Co-worker gave his/her opinion on a problem concerning my work,” “Co-worker explained how to perform a certain task or activity,” and “Supervisor gave advice on how to deal with a certain co-worker or customer”). Parallel to the conflict measure, these events reflect support from others with respect to both task and relationship issues.

The checklists for interpersonal conflict and social support were derived from a more extensive list of events developed on the basis of previous research on conflict and social support at work (Buunk & Verhoeven, 1991; Peeters et al., 1995; Suls et al., 1998; Vittengl & Holt, 1998). That is, in a pilot study, we administered an initial checklist (70 items) to a different sample of 156 employees who were asked to report the frequency with which they engage in interpersonal various encounters at work and to rate the pleasantness of each encounter.² From the initial checklist we selected the six most frequently experienced conflict encounters and the six most frequently experienced social support encounters. We eliminated one conflict item, “A supervisor or co-worker said something that hurt my feelings,” because of potential content overlap with negative affect.

We measured negative affect with the 10 adjectives from the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988), asking participants to indicate the degree to which they felt each affective state described by the adjectives (e.g., upset, nervous, scared, distressed) at the time they were completing the survey. The average (across measurements) reliability was $\alpha = 0.87$. Agreeableness was measured with 12 items from the NEO-FFI (Costa & McCrae, 1992). Of the 49 participants included in the final sample, 41 also secured informant ratings (e.g., from a spouse, partner, close friend, or relative) for their agreeableness. Internal consistency for the agreeableness scale was $\alpha = 0.71$ for those scores provided by the focal employee sample and $\alpha = 0.81$ for the informant reports.

Analyses and Results

Correlations and descriptive statistics

Table 1 presents the correlations between the study variables. Self and other ratings of agreeableness were substantially correlated ($r = 0.42, p < 0.01$) and displayed similar patterns of correlation with the other variables.³ On the basis of this convergence between self and other ratings, and to maximize statistical power, we used the self-rated agreeableness scores to further analyze the data. Interestingly, social support and interpersonal conflict were positively correlated within individuals (the between-individual correlation was also positive, but not significant statistically), suggesting that periods of heightened interpersonal activity imply, to some extent, both conflict and support.

²Seventy-three per cent of the participants in the pilot study were female, they had a mean age of 43.5 ($SD = 9.86$) with a mean tenure in their current job of 9.75 years ($SD = 8.90$).

³This correlation is actually higher than the meta-analytic estimate (uncorrected for unreliability) for the correlation between self-ratings of agreeableness and observer ratings provided by close relatives ($\bar{r} = .35$; Connolly, Kavanagh, & Viswesvaran, 2007).

Table 1. Means (*M*), standard deviations (*SD*), between- and within-individual correlations among study variables

	<i>M</i>	<i>SD</i> _b	<i>SD</i> _w	1	2	3	4	5
1. Self-rated agreeableness	3.98	0.45	—	1.00	—	—	—	—
2. Other-rated agreeableness	4.01	0.44	—	0.42**	1.00	—	—	—
3. Social support	1.98	1.75	2.24	-0.04	-0.13	1.00	0.11**	-0.04
4. Interpersonal conflict	0.26	0.26	0.87	-0.21	-0.05	0.26	1.00	0.37**
5. Negative affect	0.64	0.40	0.58	-0.35*	-0.34	-0.05	0.14	1.00

Notes: Correlations below the diagonal were computed between individuals, using each participant's mean scores for the experience-sampled variables. Correlations above the diagonal represent within-individual associations, and were computed by standardizing the level 1 regression coefficients for predicting one variable with the other in fixed-coefficients HLM models. *M* = mean. *SD*_b = standard deviation computed between individuals. *SD*_w = within-individual standard deviation. *N* = 1214–1270 (level 1) and *N* = 41–49 (level 2).

p* < 0.05 (two-tailed); *p* < 0.01 (two-tailed).

Specification of multilevel model

To test the intraindividual and cross-level hypotheses, we used Hierarchical Linear Modeling (HLM5; Bryk, Raudenbush, & Congdon, 2000). In essence, this strategy allowed us to simultaneously model intra- and interindividual relationships among the variables and parameters of interest. At the intraindividual level (level 1 in HLM), we included the effects of time-varying predictors (i.e., interpersonal conflict, social support, the product of conflict with social support) on time-varying negative affect in a random-coefficients model. The predictor scores were centered relative to each individual's mean score on the respective predictor scale (i.e., all predictor scores represent individuals' deviations from their own mean score). This approach eliminates all interindividual variance from the predictor scores (i.e., each individual's deviations have a mean of zero, and there is no between-individual variance among null scores) which means that the estimates provided by these analyses reflect strictly intraindividual variation (see Ilies, Schwind, & Heller, 2007). We adopted this approach because we studied intraindividual effects of interpersonal conflict, and therefore wanted to eliminate the potential confound that some individuals generally experience more conflict than others or that those with chronically high levels of negative affect would tend to report more conflict.

The intraindividual regression coefficients for interpersonal conflict, social support, and their interaction (testing H1 and H3) were allowed to vary randomly across individuals by specifying random error terms at the second level of analysis (we modeled these effects as "random-coefficients" in HLM). We also hypothesized that there would be systematic between-individual variation in the intraindividual coefficients (individuals' characteristic intercept and slope values), and we sought to explain these between-individual differences with agreeableness scores at the second level of analysis (testing H2). In addition, to account for possible autocorrelated residuals, we controlled for lagged negative affect (the negative affect score on the previous occasion; see Ilies & Judge, 2002; Williams & Alliger, 1994). Also, to account for possible diurnal effects (i.e., systematic intra-day variations), we controlled for the measurement period within a day (morning, mid-day or end-of-day). The effects of the control variables were modeled as fixed-coefficients.

Tests of hypotheses

Table 2 shows the HLM results used to evaluate the hypotheses; these results were estimated in a final model that included the main effects of interpersonal conflict and social support, the control variables and the conflict × social support interaction at the first level of analysis (within individuals), and the

Table 2. Main effect of interpersonal conflict on negative affect and moderating influences

Model	Coefficient	T-value
Main effects (testing H1)		
Intercept (baseline β_0)	0.63	11.59*
Conflict (baseline β_1)	0.29	6.45*
Social support (baseline β_2)	-0.02	3.83*
Cross-level interaction (testing H2)		
Agreeableness effect on		
β_0 (intercept)	-0.32	-1.98
β_1 (conflict)	0.25	3.01*
Level 1 interaction (testing H3)		
Conflict \times social support	-0.02	-2.95*

Notes: $N = 1214$ – 1270 ratings, provided by 49 participants. All level 1 predictor scores were centered relative to the individuals' means to eliminate between-individual variance; the level 1 coefficients were allowed to vary randomly across participants. These parameter estimates are not standardized. The model controlled for lagged negative affect, to account for possible autocorrelation in the data, and for the measurement period within a day (morning, mid-day, or end-of-day), to account for possible diurnal effects.

* $p < 0.01$.

main effect of agreeableness (on average negative affect) and the conflict \times agreeableness interaction at the second level of analysis (between individuals). The first hypothesis proposed that interpersonal conflict positively influences employees' negative affect at the intraindividual level. To test this hypothesis, we regressed momentary negative affect on interpersonal conflict scores (reflecting reports of conflict for the three-hour period preceding the survey) at level 1 in HLM. Interpersonal conflict was associated with higher negative affect (standardized $\beta = 0.44$, $p < 0.001$) in support of H1. By itself, interpersonal conflict explained 23 per cent of the intraindividual variance in negative affect.

The second hypothesis proposed that agreeableness moderates employees' affective distress responses to interpersonal conflict. Before testing this hypothesis, we examined the between-individual variance in the level 1 regression slopes for predicting negative affect with conflict in a random-coefficients model with no interindividual predictors, and indeed, there was significant variance in these regression slope estimates ($p < 0.001$). Next, we examined the hypothesized cross-level interaction by regressing the level 1 intercept and regression slopes for predicting negative affect with interpersonal conflict on employees' agreeableness scores.

As predicted by Hypothesis 2, agreeableness had a substantial moderating effect on the influence of interpersonal conflict on negative affect that was statistically significant ($p < 0.01$). Agreeableness explained 23 per cent of the interindividual variance in the estimates of the effects of interpersonal conflict on negative affect. The cross-level interaction between agreeableness and interpersonal conflict is illustrated graphically in Figure 1 (plotted at one standard deviation above and below the mean for both variables). This plot clearly shows that employees who scored higher on agreeableness were more sensitive to the stressful effects of conflict than those who scored lower on agreeableness, in that the within-individual regression line for a prototypical agreeable individual is steeper than the regression line for a low-agreeableness individual.

Hypothesis 3 predicted that social support would buffer the effect of interpersonal conflict on negative affect. To test this effect, we computed a product term (interpersonal conflict \times social support) that we used as a level 1 predictor to test the interaction at the intraindividual level. Results supported the interactive effect of interpersonal conflict with social support in that the level 1 regression coefficient for the product term was statistically significant ($p < 0.01$). In Figure 2, we illustrate the interactive effect between interpersonal conflict and social support in predicting negative affect (again, plotted at one standard deviation above and below the mean for both variables).

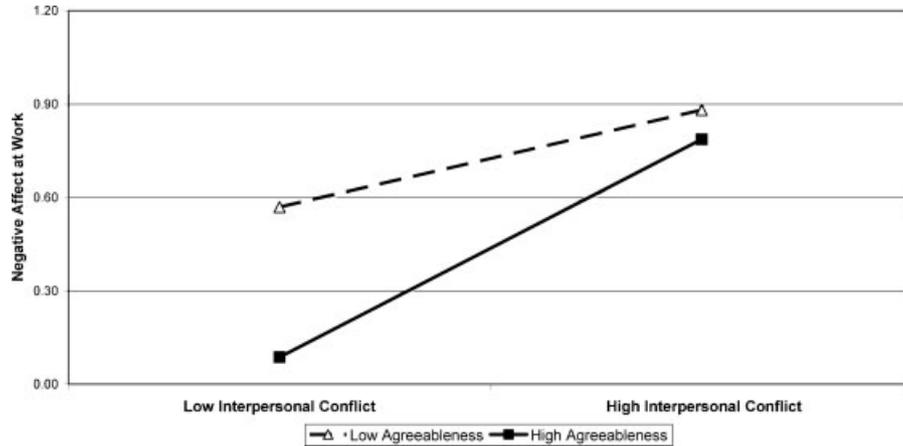


Figure 1. The cross-level moderating effect of agreeableness. *Note:* The two regression lines portray the intraindividual relationship between time-varying interpersonal conflict and negative affect, across repeated measurements for two hypothetical individuals who score one standard deviation below the mean (the top regression line) and one standard deviation above the mean (the bottom regression line) on agreeableness

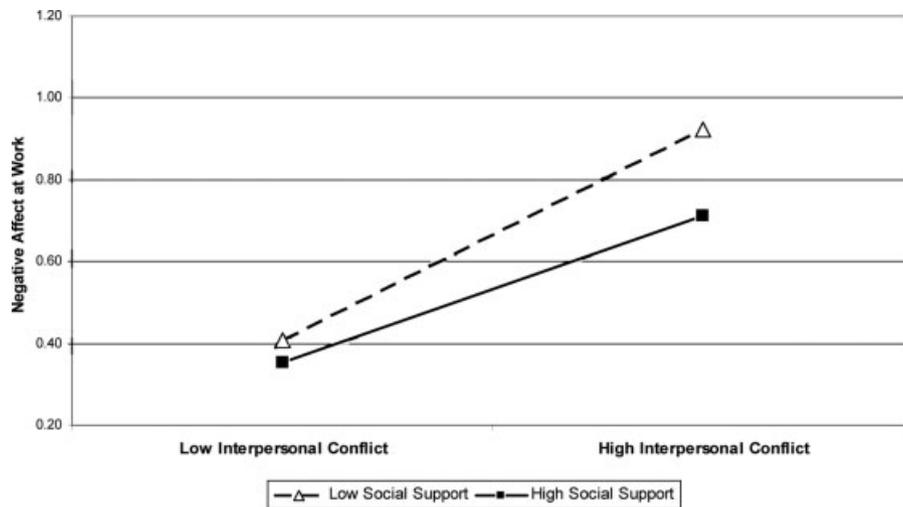


Figure 2. The intraindividual moderating effect of social support. *Note:* The two regression lines portray the intraindividual relationship between time-varying interpersonal conflict and negative affect, across repeated measurements for two hypothetical individuals who report receiving low social support (one standard deviation below the mean on social support for the top regression line) and high social support (one standard deviation above the mean on social support for the bottom regression line) over the period when interpersonal conflict was assessed

Testing temporal effects and causal conditions

To summarize, at the intraindividual level, the data support an immediate stressful effect of conflict on negative affect (supporting H1) as well as the role of social support in buffering this stressful effect (supporting H3). Next, we tested the intraindividual relationship between conflict and negative affect, as well as the moderating role of social support, when different time lags separated the predictor and the

criterion to estimate the duration of the effects on affective distress. To perform these tests, we constructed a day-level data file in which each participant had up to 10 records. This data file includes three variables measuring negative affect corresponding to the three assessments conducted in each day of the study (negative affect at times 1, 2, and 3, or NA-t1, NA-t2, and NA-t3). Because, conceptually, we expected the association between conflict and negative affect to be a causal conflict-to-affect effect, we only considered conflict at time 1 as a predictor in these analyses (as well as social support at time 1 and the interaction between conflict and social support at time 1). With this data file, we estimated models that related conflict, social support, and negative affect across the 10 days of the study at level 1, and included persons at level 2.

First, interpersonal conflict significantly predicted NA-t1 ($B = 0.35, t = 4.77$), which supports the first hypothesis at the day level of analysis (with the time 1 data). The interaction between conflict and social support had a significant effect on NA-t1 ($B = -0.09, t = -2.59$). Second, conflict predicted NA-t2 (albeit more weakly; $B = 0.12, t = 2.25$) and the interaction of conflict with social support was also significant when predicting NA-t2 ($B = -0.07, t = -2.76$). Third, we predicted NA-t3 with conflict, social support and their interaction. In this analysis, conflict predicted negative affect only when social support was low; that is, the main effect of conflict was not significant ($B = 0.06, t = 1.43$) but the moderated effect by support on NA-t3 was significant ($B = -0.02, t = -2.50$). Fourth, we examined whether agreeableness moderates the magnitudes of the within-individual effects of conflict on NA-t2 and on NA-t3, but neither cross-level interaction effect was significant ($B = 0.19, t = 1.26$ and $B = -0.04, t = -0.34$). These results show that (a) the stressful effect of interpersonal conflict at work lasts beyond the immediate effect predicted by the first hypothesis, (b) the main effect of conflict (regardless of support) disappears when the time lag is about six hours, (c) lack of social support prolongs the negative effects of conflict, and (d) the duration of the effects of conflict on negative affect is not influenced by individuals' agreeableness.⁴

Discussion

In social psychology, increasing attention has been given to what Berscheid (1999) calls "relationship science," or the study of individuals' ongoing interactions with one another. Although this literature has led to numerous insights, Berscheid (1999) argues that the relationship literature has focused on social behaviors in laboratory settings to the neglect of studying intact social relationships. She notes, "It is disconcerting that social psychologists have neglected the impact of relationships' environments, because most of us are Lewinians and subscribe to his thesis that behavior is a function of the interaction between the properties of the people and the properties of their environment" (Berscheid, 1999, p. 264). In organizational behavior, field research that examines the dynamics through which personality traits interact with discrete experiences such as interpersonal conflict to predict affect, attitudes, and behavior is sorely lacking.

Our results highlight the importance of interpersonal interactions for individuals' affect at work and, moreover, support the Lewinian perspective Berscheid (1999) notes in her review. A strength of the present study is the sampling of employees' real-time experiences. Regarding employees' relation with their environment, our findings show that interpersonal conflict correlates with affect at work *within*

⁴A reviewer wondered whether the provision of social support was evenly distributed over time during the workday. Examining the mean scores for the three measurement times showed that social support did not vary much by time of day: Across all participants, the average social support score was $M = 2.13$ at Time 1, $M = 1.91$ at Time 2, and $M = 2.07$ at Time 3.

individuals and therefore these results add to our understanding of the exogenous factors that relate to state affect at work (Weiss & Cropanzano, 1996) and replicate previous general (i.e., not work-specific) findings with regard to interpersonal conflict and negative affect (Suls et al., 1998) in a field study of full-time employees. Affective states represent a mediating mechanism through which many work experiences impact work attitudes and behavior (e.g., Kelloway, Barling, & Shah, 1993; Penney & Spector, 2005). The present study enhances our understanding of employees' affective experiences, which have proved useful in predicting important work outcomes, such as job satisfaction (e.g., Ilies & Judge, 2002; Niklas & Dormann, 2005), citizenship behavior (Ilies, Scott, & Judge, 2006; Scott & Judge, 2006) and task performance (Beal, Weiss, Barros, & MacDermid, 2005).

The effect of interpersonal conflict on employee affective distress reactions is likely to be moderated by several factors, and we examined two in this study. First, we found that receiving social support on the job buffers the negative consequences of conflict. Perceived support reflects important interpersonal processes and relationships (McCaskill & Lakey, 2000). Helpful and concerned acts of others provide one mechanism through which employees form perceptions of support. This is the first experience-sampling study to show that discrete instances of social support mitigate the distress associated with interpersonal conflict incidents. This finding highlights the complex nature of the effects of individuals' social environment at work on their experiences of distress but also has practical implications. That is, given that interpersonal conflict is sometimes unavoidable, encouraging employees to give social support to their co-workers or subordinates would reduce the negative consequences of conflict.

Second, agreeableness affected the impact of discrete interpersonal conflict episodes on individual affective reactions. These effects are consistent with affective events theory, which explicitly acknowledges that individuals are predisposed to react more or less intensely to certain situations based on personality traits (Weiss & Cropanzano, 1996). Even though agreeable individuals experienced less negative affect in the absence of conflict, compared to those who are less agreeable, they were more sensitive to interpersonal conflict in that the effect of conflict on negative affect was stronger for them as compared to less agreeable individuals. Thus, whereas interpersonal conflict produces affective distress in all individuals, it has stronger consequences for highly agreeable individuals, as predicted by the situational-congruence model. Specifically, because agreeable people seek harmonious social relations with others (Graziano, Jensen-Campbell, & Hair, 1996), they are more distressed when that harmony is disrupted in the form of conflict (see Suls et al., 1998). Another potentially interesting finding with respect to agreeableness concerns its negative zero-order association with average interpersonal conflict ($r = -0.21$). Although this association did not reach traditional statistical significance, it suggests that those who are more agreeable report or perhaps "attract" less interpersonal conflict at work.⁵

The guiding theoretical framework of person-environment fit emphasizes the similarity between traditionally distinct models. Both the situational congruence model and the DCS model operate on the notion that individuals fare better when their capacities and personal characteristics are compatible with environmental demands. One of the contributions of the present research is its joint consideration of situational and dispositional moderators amounting to a person \times situation analysis. In its current instantiation, the DCS model does not explicitly consider personality, although researchers have emphasized the benefit of identifying individual vulnerability factors to job demands (Van der Doef & Maes, 1999). We examined agreeableness because the interpersonal nature of this trait thematically matches that of interpersonal conflict and social support. Research has shown that matching aspects of the DCS model more carefully not only makes theoretical sense, but also results in more consistently supportive findings (Van der Doef & Maes, 1999). Future research that also considers task-related demands, such as workload, should examine other individual differences that are likely to moderate

⁵We thank an anonymous reviewer for this observation.

their effects (e.g., conscientiousness). Moreover, self-concept traits, such as core self-evaluations (Judge, Locke, Durham, & Kluger, 1998), might predict stress reactions, and exhibit moderating effects of coping styles on stress outcomes.

Another theoretical contribution of the present research is the incorporation of temporal considerations. Previous research examining the buffering role of social support on the negative effects of high job demands has been largely inconclusive (see Van der Doef & Maes, 1999). One limitation of previous research is the static assessment of stressors and support that is captured in cross-sectional methodology. Whereas cross-sectional studies aggregate interpersonal conflict, social support, and affective distress over extended periods of time, we measured discrete episodes of conflict and social support provided within the same timeframe of three hours. It is possible that the timely provision of support is crucial. Interestingly, the effects of interpersonal conflict were no longer apparent after six hours, except for those individuals who reported low levels of social support. These results suggest that social support decreases not only the intensity, but also the duration, of affective distress and sheds light onto the mechanisms of the buffering effect. Future research can link the within-individual stressful effects of job demands to chronic problems that can be detected by cross-sectional studies (e.g., is there a 'threshold' effect or a 'prolonged exposure' effect?). In any case, if we can identify factors that prevent discrete demands from having stressful effects, we can reduce chronic distress.

Limitations

Although experience-sampling methodology allows the examination of research questions not answerable by between-person studies, we note three important limitations of our findings. First, all time-sampled constructs were measured with self-reports, which raises the question of whether common method bias explains the results. However, by using person-centered scores for the predictors in the intraindividual analyses we have effectively eliminated the influence of individual differences in response tendencies that typically inflate relationships between self-rated scores.⁶ Moreover, common method bias is a less compelling causal explanation when moderating effects are found (Evans, 1985) and when measuring constructs over time (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Another potential source of common method bias exists if the questions asked of participants prompted them to form implicit theories about how interpersonal conflict, social support, and affect should relate to one another. To address this possibility future research could employ informant ratings. Because we studied the effects of perceived conflict, it would be inappropriate (and very difficult) to collect informant ratings for these subjective work experiences. With respect to the criterion, negative affect, future studies could use informant reports (though daily informant reports are difficult to obtain) or physiological measures that correlate with negative affect (e.g., blood pressure; Ilies, Dimotakis, & Watson, *in press*).

Second, despite the fact that experience-sampling methodology uses repeated measures across time, it cannot conclusively show causal relationships between variables measured at the same time. Specifically, in our study, we assume that the conflict events influenced employees' negative affect, and not the other way around. Indeed, Aquino, Grover, Bradfield, and Allen (1999, p. 267) found that individuals high in negative affect were actually targets of conflict more often than those low in negative affect, possibly because their demeanor spurned attacks or because they provoked the conflict themselves.

⁶This is not to say that we have eliminated all sources of common method or rater variance. Common method/rater effects caused by day-based biases, such as a particularly good mood on a certain day causing a respondent to report low conflict and low negative affect, can inflate intraindividual estimates.

Third, conflict episodes and instances of social support were positively correlated in this study. While we proposed that this correlation could be a reflection of heightened interpersonal activity, it also calls attention to the likelihood that some of the social support that employees receive at work is a direct result of interpersonal conflict they have experienced. The theoretical basis of our hypotheses did not necessitate that support be conflict-specific to reduce strain. Instead, individuals gain social resources from workplace support that when pooled together (i.e., and measured using the checklist of supportive events) allow them to cope with social problems for the various reasons we cited. A challenging yet worthwhile task for future research is to assess whether social support, in a general sense (as was assessed in this study), or support in response to conflict, in specific, is more effective in reducing strain.

Finally, our sample may be unique and the results may not generalize to the broader population of employees. Specifically, our sample consisted of mostly female employees working in a university setting who were all members of unions. Thus, our findings may not apply to groups of employees with different gender compositions, in different industries, or who are not unionized.

Implications and future research

In contemporary organizations, groups increasingly appear to be the organizing structure of choice (Morgeson, Reider, & Campion, 2005). Given the importance of interpersonal conflict found in this study, and given that social cohesion is an important indicator of a team's successful functioning (van Vianen & de Dreu, 2001), our results may provide one explanation for why interpersonal conflict, especially when it pertains to relationships (i.e., as opposed to task conflict), is negatively associated with team satisfaction and effectiveness (De Dreu & Weingart, 2003). Thus, in addition to encouraging social support among team members, organizations might be advised to undertake efforts to avert interpersonal conflict, especially when teams are performing complex tasks (De Dreu & Weingart, 2003). This might be accomplished by fostering trust among team members (Simons & Peterson, 2000), promoting norms of openness (Jehn, 1997), and aligning team members' goals and rewards such that they are cooperatively rather than competitively linked (Alper, Tjosvold, & Law, 2000; Johnson, Hollenbeck, Humphrey, Ilgen, Jundt, & Meyer, 2006). In addition, future research might contribute to our understanding of the implications of interpersonal conflict by estimating the specific effects of task conflict and relationship conflict on negative affect or on other strain indicators, examining their relative strength, and perhaps proposing and testing different moderators. Measuring the intensity of each conflict episode may also enable more fine-grained analyses of the effects of various types of conflict.

The source of interpersonal conflict and social support in the workplace is another interesting avenue for future research. Experience sampling methodology could be used to examine how emotional outcomes vary as a function of conflict with a co-worker versus one's supervisor and under what circumstances one or the other is a more effective source of support. Using a different methodology, social network analysis could identify with whom an employee is chronically in conflict, as well as his or her key providers of support. Alternatively, one could examine individuals in a work unit who are most frequently identified as a source of conflict ("troublemakers") or support ("peacemakers").

In this study, we examined "interactionalism"—or the degree to which the person and the environment in concert influence affect at work. In contrast, we did not assess what Wiggins and Trobst (1999) label "interpersonalism"—or the degree to which individuals' personalities interrelate to influence outcomes such as affective reactions, attitudes, and behaviors. Although some initial research has investigated interactions among co-workers (Sherony & Green, 2002), more research is needed. It would be particularly interesting to investigate the interaction among co-worker personalities in terms of their effects on affective reactions to interpersonal work stressors and other stimuli. For example,

individuals who are personally dominant prefer submissive interaction partners, and vice-versa (Tiedens & Fragale, 2003). It has yet to be seen whether such tendencies generalize to a work context.

Future research examining situational and dispositional moderators of distress reactions may wish to look at more specific forms of interpersonal conflict that are potentially more severe in nature, such as bullying or abusive supervision. We suspect that the buffering role of social support would generalize to such contexts. However, given that such conflict episodes would represent especially “strong situations” it is unclear whether the moderating role of agreeableness would hold given that overpowering situations tend to mute personality effects. Individuals low on agreeableness may experience equally high levels of distress compared to their more agreeable counterparts given repeated and severe abuse.

Our results suggest that employees should seek social support when they experience interpersonal conflict at work. In a parallel fashion, employees may seek social support in response to positive experiences at work. For example, a co-worker can be responsive and encouraging when an employee shares news of a favorable project outcome (e.g., positive client response) with him or her. This phenomenon, termed interpersonal capitalization (Gable, Gonzaga, & Strachman, 2006; Langston, 1994), has only been studied recently and presents a vast new area for research on social support in the workplace. Research on employees’ reactions to stressful (negative) events would be complemented by a better understanding of their experience of positive events. A future line of research examining both positive and negative experiences at work and considering both buffering of negative influences and capitalizing on positive influences would advance our understanding of and ability to enhance employee well-being.

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Timothy A. Judge (Ph.D., University of Illinois at Urbana-Champaign) is the Matherly-McKethan Eminent Scholar of Management at the Warrington College of Business at the University of Florida. His primary research interests are in the areas of personality and intelligence, moods and emotions, job attitudes, leadership, and careers.

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