

WORK–FAMILY CONFLICT AND EMOTIONS: EFFECTS AT WORK AND AT HOME

TIMOTHY A. JUDGE
Warrington College of Business
University of Florida

REMUS ILIES
Eli Broad College of Business
Michigan State University

BRENT A. SCOTT
Warrington College of Business
University of Florida

This study investigated the effect of work–family conflict on the emotions of guilt and hostility, and the implications of work–family conflict and these emotions for job satisfaction and marital satisfaction. Using experience-sampling methodology, data were collected from a sample of 75 individuals over a period of 2 weeks (producing 625 data points). Results revealed that within individuals, family-to-work conflict experienced at work, and work-to-family conflict experienced at home, were positively associated with guilt and hostility at work and at home, respectively. In addition, state hostility mediated the negative effect of work-to-family conflict at home on daily marital satisfaction. Finally, cross-level interaction effects were observed such that work–family conflict more strongly affected the emotions of those scoring high on trait guilt and trait hostility.

Though the literature on work and family has made considerable progress over the past quarter-century (e.g., Kossek & Ozeki, 1998), and much is now known about the antecedents and consequences of work–family conflict (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005), until recently, relatively little research has focused on the role of traits, moods, and emotions in work–family conflict (Friede & Ryan, 2005; Wharton & Erickson, 1993). Friede and Ryan (2005, p. 204) noted “The individual is a key influence on his or her experience of role conflict or enrichment” (p. 204), and Wharton and Erickson (1993) commented, “Even though studies of work–family relations acknowledge multiple roles, these accounts overlook their emotional components” (p. 458). A growing body of research suggests that an affective trait—negative affectivity—is

Correspondence and requests for reprints should be addressed to Timothy A. Judge, College of Business, 211 D Stuzin University of Florida, PO Box 117165, Gainesville, FL 32611; timothy.judge@cba.ufl.edu.

associated with heightened levels of work–family conflict (Bruck & Allen, 2003; Carlson, 1999; Frone, Russell, & Cooper, 1993; Stoeva, Chiu, & Greenhaus, 2002). A close correlate of negative affectivity—Neuroticism (see Watson, 2000)—also has been associated with increased levels of work–family conflict (Grzywacz & Marks, 2000; Wayne, Musisca, & Fleeson, 2004).

Although these studies are noteworthy in revealing that mood-dispositional traits are a potential source of work–family conflict, less well understood is the relationship between transient emotions and work–family conflict. Two studies by Williams, Alliger, and colleagues are noteworthy contributions in this area. Williams, Suls, Alliger, Learner, and Wan (1991) examined role juggling in a sample of working mothers, finding that juggling work and family roles resulted in higher negative affect and lower task enjoyment. Moreover, these authors also found several interactions involving personality, though not in the hypothesized direction (e.g., they found that interrole juggling led to decreased task enjoyment for extraverts more than introverts). Williams and Alliger (1994), in a sample of working parents in Albany, NY, found that work–family juggling (intrusion of one role on the other) and in-role juggling (balancing tasks within a role) predicted different emotions. These studies are commendable for several reasons. First, they are among the first studies in the work–family domain to relate work and family demands to affect. Second, they are noteworthy in that they are, perhaps, the earliest studies in organizational psychology to use experience-sampling methodology, where individuals are surveyed multiple times to assess and predict within-individual variation.

In building upon the extant research, there are several important areas for potential contribution. First is the question of whether one should focus on broad affective dimensions or discrete emotions. According to Watson (2000), affect can be conceptualized and measured at two hierarchical levels. The first, upper level separates affect in terms of valence, yielding the two broad affective dimensions of positive affect and negative affect. The second, lower level differentiates among various discrete positive (e.g., joviality, attentiveness) and negative (e.g., guilt, hostility) emotions that share variance with the corresponding broad affective dimensions yet are distinct enough to warrant separate consideration. When considering workplace processes such as work–family conflict, the broad dimensional approach has its limitations. Lazarus and Cohen-Charash (2001) commented, “The differences among discrete emotions may be more important (or at least as important) for understanding problems of adaptation than the similarities within each grouping” (p. 52). Therefore, in considering the emotional impact of work–family conflict, it is important to consider discrete emotional states, which past research has not done *in situ*.

Second, if discrete emotions are to be studied in relation to work–family conflict, which are to be studied? In terms of valence, given that work–family conflict tends to represent a negative event, and relationships between events and emotions are likely to be stronger when the valence of the event and emotion are equivalent (Ajzen & Fishbein, 1977), we focus on negative emotions rather than positive emotions. With regards to specific negative emotions, according to Watson’s (2000) hierarchical structure of affect, the broad dimension of negative affect is indicated by the discrete emotions of fear, sadness, guilt, and hostility. Of these core emotions, as we discuss shortly, the emotions of guilt and hostility seem most closely linked to work–family conflict. Yet, with the exception of a study that used a between-individual measure of employment-related guilt as an indicator of satisfaction with parental role performance (Aycañ & Eskin, 2005), these specific emotions are unstudied in the work–family conflict area.

A third general issue is that both within-individual variation and between-individual variation may be relevant to work–family pressures and their affective implications (Williams et al., 1991). Because the typical study in the work–family conflict area is between-individual (analyzing how some individuals experience more work–family conflict than others), within-individual variation implicitly is treated as measurement error. Thus, if we are to fully explain work–family conflict, it is important to examine within-individual variation in work–family conflict and its affective and attitudinal consequences.

Accordingly, the purpose of the present study was to test hypotheses interrelating dispositional traits (trait guilt and trait hostility), work–family conflict, emotions at work and at home, and two attitudinal outcomes (job satisfaction and marital satisfaction). At the core of the model are two emotions—guilt and hostility—and two forms of work–family conflict (family-to-work conflict and work-to-family conflict) experienced at work and at home. As Weiss (2002) commented, “Work. . . is a place where all of our basic processes, including emotional processes, play out daily. . . events at work have real emotional impact on participants” (p. 1). Our effort is an attempt to respond to Weiss’ (2002) call for more research on the affective implications of work on individuals, and in particular the role conflict that is experienced by those who span both work and family roles. Moreover, we follow the recommendations of Netemeyer, Boles, and McMurrian (1996) to assess work–family conflict in each domain by examining family-to-work conflict at work and work-to-family conflict at home. In the next section of the paper, we define the constructs considered in the study and develop formal hypotheses with respect to the relationships among these constructs.

*Construct Definitions and Hypothesis Development**Definitions*

Hostility and guilt. Although most research on hostility has considered it a trait, it is productive to also consider hostility as an emotion (i.e., hostile affect; Zwaal, Prkachin, Husted, & Stones, 2003). Following Barefoot (1992) and Lazarus and Cohen-Charash (2001), we define hostility as reflecting the experience of anger. Guilt is defined as a regretful response to wrongdoing (see Eisenberg, 2000). Guilt is a moral emotion in that it generally is associated with counterfactual thinking (what one should have done; Berndsen, van der Pligt, Doosje, & Manstead, 2004). The choice of hostility and guilt as our emotions of focus fits well with the notion of “outward-” and “inward-” focused emotions, both of which may be relevant to the study of work–family conflict. Specifically, hostility is an outward-focused emotion in that it is directed toward another (e.g., Brissette & Cohen, 2002), but guilt is an inward-focused emotion in that it is directed toward oneself—in other words, a self-conscious emotion (Tangney, 1999).

Given that we also examine guilt and hostility as traits in this study, we use the terms “guilt” and “hostility” to refer to fluctuating affective states corresponding to the two emotions, and we use the terms “trait guilt” and “trait hostility” to refer to stable individual differences in guilty and hostile tendencies. These labels adhere to Watson’s (2000) distinction between affective states and affective traits. The former are short-term, transient feelings, whereas the latter are stable individual differences in individuals’ tendencies to experience affect and emotions.

Family-to-work and work-to-family conflict. According to Greenhaus and Beutell (1985), work–family conflict is a form of interrole conflict in which the demands from one domain (work or family) are incompatible with role demands stemming from another domain (family or work). Following the distinction between family-to-work and work-to-family conflict proposed in the literature (e.g., Gutek, Searle, & Klepa, 1991; Kossek & Ozeki, 1998; Netemeyer et al., 1996), we define family-to-work conflict as the interference of family with work and work-to-family conflict as the interference of work with family life. In keeping with these definitions, previous research has considered work–family conflict to be defined by its *direction*. Specifically, family-to-work conflict is an interference specifically defined by its cause (family) and consequence (work). Work-to-family conflict represents the other side of the same coin (work interferes with family). In this study, we add another restriction beyond direction: namely, *domain*. That is, though the direction of family-to-work and work-to-family conflicts are critical to their definition, it may be equally

important to consider the domain in which these concepts are experienced (i.e., reported by respondents). If one stipulates that family-to-work and work-to-family conflicts are best considered in the domain in which they currently are experienced, then this requires that family-to-work conflict be measured at work and work-to-family conflict be measured at home. This context-report stipulation stands in contrast to past research, which has asked participants to not only recall their sense of family-to-work conflict and work-to-family conflict in the aggregate (with the attendant memory biases), but also to recall these at the same time (with the attendant mood or other spillover effects).

This addition to our operational definition of work–family and family–work conflict has obvious methodological implications. However, it has theoretical implications as well. For example, past research has found work–family conflict to be related to job satisfaction (Grandey, Cordeiro, & Crouter, 2005) and indeed meta-analytic evidence suggests that between-individual differences in work-to-family conflict correlate more strongly with job satisfaction than do individual differences in family-to-work conflict ($r_c = -.27$ vs. $r_c = -.18$, respectively; Kossek & Ozeki, 1998). Though these results make sense from a context-direction view (work-to-family conflict predicts job satisfaction because work is the source of the conflict), as we will note in the hypotheses section, they do not necessarily generalize to a context-report view. Specifically, if work–family and family–work conflicts are best conceptualized and measured *in situ*, and the same holds true for job satisfaction, then at the within-individual level one would expect the most salient conflict is defined by the domain rather than the cause.

Job satisfaction and marital satisfaction. Following Locke (1976), we define job satisfaction as “a pleasurable or positive emotional state resulting from an appraisal of one’s job or job experiences” (p. 1300). Marital satisfaction is defined as “an attitude of greater or lesser favorability toward one’s own marital relationship” (Symonds & Horvath, 2004, p. 446). Traditionally, both job and marital satisfaction have been conceptualized as stable attitudes, and respondents’ scores on satisfaction constructs have been treated as between-individual variables. More recently, however, an emergent stream of research focused on modeling intraindividual variations in affect, attitudes, and behavior has conceptualized job and marital satisfaction as evaluative states that vary substantially over time (e.g., Fuller, Stanton, Fisher, Spitzmuller, Russell, & Smith, 2003; Heller & Watson, 2005; Ilies & Judge, 2002; Judge & Ilies, 2004). Conceptually, Hastie and Parke (1986) and Schwarz and Bohner (2001) suggested that attitudinal states are “on-line” judgments constructed at the time of assessment that are influenced by information that is readily available at that time. On this point, Ilies and Judge (2004) defined job satisfaction as “a latent

evaluative tendency of one's job that accounts for the covariation between work stimuli and responses and is manifested through discrete evaluative states during the working day" (p. 371). Ilies and Judge further argued that job satisfaction could be assessed not only as a general attitude but also as a discrete state by asking respondents to provide momentary or daily evaluations of their jobs. Hence, on the basis of the conceptual arguments and empirical evidence described above, and to keep with the intraindividual focus of our investigation, we conceptualize job and marital satisfaction as evaluative states that fluctuate over time, and we formulate hypotheses aimed at explaining these fluctuations.

Hypotheses

In hypothesizing the link between work–family conflict and emotions, we are guided by appraisal theorists on emotions, who attempt to describe the sources and ensuing cognitive processes underlying emotional experience. Smith and Lazarus (1993) argued that when an event is experienced, individuals appraise the event along multiple dimensions. Several of these dimensions concern the degree to which the event affects current goals or objectives (e.g., degree to which the event interferes with current goals and objectives, importance of the event to these goals and objectives, etc.). Therefore, one would expect the event to affect the domain in which goals are currently appraised. Indeed, MacDermid, Seery, and Weiss (2002) explicitly considered the effect of work and nonwork events on domain-specific emotional reactions (also acknowledging the possibility of cross-domain effects, a topic to which we return after the Hypotheses section). In accordance with this perspective, we take the general view that work–family conflict is linked to the target of the conflict and to the domain in which it is experienced. Thus, for example, if while at work a person perceives that family obligations interfere with work (family-to-work conflict), then it is likely that particular emotions at work are influenced because work is both the target and the domain in which the conflict is experienced.

Turning to the particular emotions considered in this study, people experience guilt when they perceive that their "actual behavior is inconsistent with norms about how one should behave" (Berndsen et al., 2004, p. 56). Guilt is one of the "moral emotions"—emotions that individuals experience when they feel they have violated internal or external values or norms (Harris, 2003). People feel guilty when a negative evaluation is directed toward their actions or behaviors (what they do or fail to do), as opposed to shame (also a moral emotion), which is experienced when such evaluation is directed toward the self (Harris, 2003). By definition, family-to-work conflict prevents employees from performing effectively at work.

Greenhaus and Beutell (1985) concluded that conflict occurs when “(a) time devoted to the requirements of one role makes it difficult to fulfill requirements of another, (b) strain from participation in one role makes it difficult to fulfill requirements of another, or (c) specific behaviors required by one role make it difficult to fulfill requirements of another” (p. 76). It follows that employees will tend to feel guilty when they experience family-to-work conflict because they cannot effectively complete work tasks.

As noted, hostile affective states correspond to the experience of anger (Lazarus & Cohen-Charash, 2001), which is a basic emotion that has been intensively examined (see Eckhardt, Norlander, & Deffenbacher, 2004; Plutchik, 2003). Individuals feel and act hostile when their persona or their property is harmed or threatened or when they are prevented from achieving their goals (Frijda, 1988). Because family-to-work conflict perceptions signal that the interference of family issues prevents employees from achieving work goals, to the extent to which these goals are aligned with employees’ personal goals, it follows that employees will experience hostility at work when they experience heightened family-to-work conflict.¹ In sum,

Hypothesis 1: Within-individuals, family-to-work conflict experienced at work is positively related to (a) guilt at work and (b) hostility at work.

The first hypothesis conveys our expectation that when employees experience heightened family-to-work conflict at work, they should also tend to experience increased guilt and hostility. Likewise, in the family domain, when employees experience work-to-family conflict, they are prevented from fulfilling their family obligations and from engaging in family activities (e.g., spending more time with children and significant-others) important for their objectives in the family domain (Hammer & Thompson, 2003). As a consequence, they should tend to experience guilt and hostility.

¹Given that sadness appears as a discrete emotion in a common classification of negative affects (Watson, 2000), one might wonder whether it is appropriate to focus solely on the negative emotions of guilt and hostility. Sadness is a controversial emotion. Some scholars view it as a basic emotion, on the same level as anger and guilt or shame (Frijda, 1994). However, relative to other, related emotions such as grief, it is difficult to isolate proximal causes or objects of sadness, which is a defining characteristic of most emotions (Frijda, 1994). In short, one can feel sad without necessarily feeling sad *about* something. Moreover, some argue that sadness is a dimensional mood state, lying at the pole opposite to that of pleasantness (Russell, 1997). Barr-Zisowitz (2000) reviews thinking on the topic of sadness, and comes to the conclusion that, due to various ontological and epistemological difficulties, it would be better to focus on anger and distress. For these reasons, we did not include sadness (though we do include it, indirectly, in analyses where we control for the mood dimension of negative affect, which includes sadness among other negative emotions).

Hypothesis 2: Within individuals, work-to-family conflict experienced at home is positively related to (a) guilt at home and (b) hostility at home.

To summarize, we predict that employees' experiences of increased guilt and hostility are associated with heightened perceptions of conflict. To be more specific, and in line with Affective Events Theory (Weiss & Cropanzano, 1996), we contend that these resultant emotional states are experienced in the role where conflict prevents the achievement of role-specific goals (e.g., employees experience increased guilt and hostility *at work* when they perceive increased family-to-work conflict because family life interferes with *work-specific* activities).

We now turn to job satisfaction and marital satisfaction, both of which are viewed as indicators of employee well-being (e.g., Edwards & Rothbard, 1999; Heller, Watson, & Ilies, 2004). According to role theory, individuals maintain multiple identities, and conflict results when the demands of these identities interfere with one another (Baldwin, Ellis, & Baldwin, 1999). Because family-to-work conflict is the interference of family with work activities, and work-to-family conflict is "when work demands and activities impede the performance of family responsibilities and the quality of family life" (Stoeva et al., 2002, p. 4), conflict should influence satisfaction from the role being impeded. Hence, family-to-work conflict should be associated with reduced job satisfaction and work-to-family conflict should be associated with lower marital satisfaction. Indeed, between individuals, evidence supports a negative effect of family-to-work conflict on job satisfaction (Eby et al., 2005) and of work-to-family conflict on marital satisfaction (Matthews, Conger, & Wickrama, 1996).

In sum, there is conceptual support and empirical evidence for negative influences of work-family conflict on job and marital satisfaction. But what are the psychological mechanisms governing these influences? To explain these processes, we propose that the experience of negative emotions associated with work-family conflict leads to job and marital dissatisfaction. As with all attitudes, job and marital satisfaction can be expected to be influenced by affective experiences (Brief & Weiss, 2002). As noted, recent research (e.g., Heller & Watson, 2005; Ilies & Judge, 2002) has uncovered substantial intraindividual fluctuations in job and marital satisfaction and found evidence that these fluctuations represent substantive processes. Conceptually, emotions influence satisfaction through a mood-congruency effect (see Ilies & Judge, 2002). Mood congruency theory is largely based on associative network models of memory, which suggest that emotions impose an organizational structure on concepts in memory (e.g., Blaney, 1986). Negative emotions activate negatively valenced information and cognitions, and individuals retrieve negatively valenced

material more easily from memory (Rusting & DeHart, 2000). It follows that negative emotions increase the likelihood of making negative assessments or judgments regarding the job or marriage, leading to lower satisfaction. Indeed, there is evidence that emotional states influence both state job satisfaction (Ilies & Judge, 2002) and state marital satisfaction (Heller & Watson, 2005) within individuals across time, though this research was focused on broad mood dimensions and not on distinct emotions.

Hence, work–family conflict has negative emotional implications; these negative emotions should have a negative influence on employees' satisfaction with their jobs and marriages. Therefore, the experience of negative emotions explains, at least in part, the intra-individual impact of work–family conflict on role satisfaction. Because emotions are by nature ephemeral (Lazarus & Cohen-Charash, 2001), they should affect the satisfaction judgments in proximity to when they are experienced, which is consistent with mood-congruency theory predictions with respect to the immediate activation effects of positive and negative emotions.

Hypothesis 3: Within individuals, (a) family-to-work conflict experienced at work is negatively related to job satisfaction measured at work, and (b) this relationship is partially mediated by guilt and hostility at work.

Hypothesis 4: Within individuals, (a) work-to-family conflict experienced at home is negatively related to marital satisfaction measured at home, and (b) this relationship is partially mediated by guilt and hostility at home.

Moderating Role of Trait Guilt and Trait Hostility

As Friede and Ryan (2005) noted, personality influences have been neglected in work–family research. More generally, as argued by Mischel and Shoda (1998), individual differences may affect patterns of intra-individual processing, such that certain intra- or within-individual relationships are stronger for some people than for others. Accordingly, we examine the moderating roles of trait guilt and trait hostility on the effects of conflict on the corresponding emotions. As Lazarus (1994, p. 79) noted, whereas an emotion state “refers to a transient reaction to specific kinds of adaptational encounters,” an emotion trait is “a disposition or tendency to react in a particular way to an adaptational encounter,” generally in the form of experiencing a given emotional state more intensely. Due to this close correspondence between state and trait conceptualizations of affect, we focus on trait guilt and trait hostility and not on broader traits such as negative affect (though we do control for this latter trait).

In terms of trait guilt, as Parrott and Harré (1996) noted, guilt is the assignment of blame in violating a cultural norm or rule. In distinguishing

the act of *being* guilty from *feeling* guilty (for breaking or violating a rule), Taylor (1996) argued that one might be guilty whether or not the rule is just. If the rule is seen as just, then one would internalize the blame and feel guilty (Kugler & Jones, 1992). If the rule is seen as unjust, then one may well be angry at being deemed guilty. Because work–family conflict involves a perceived failure to meet standards or obligations in the work or family domain—the crossing of a boundary or violation of an inner code (Demos, 1996), it stands to reason that guilt and anger will follow from work–family conflict, with the relative strength of these emotions depending on the degree to which the individuals believe themselves responsible for the conflict. Because “a guilt-prone person feels distressed whenever s/he acts contrary to the inner code” (Demos, 1996, p. 75), one would expect that those high in trait guilt will be particularly predisposed to feel guilty in light of work–family conflict.

By the same logic, one would expect those high in trait hostility to be particularly prone to hostile emotions in light of work–family conflict. Indeed, trait hostility has been defined as a reactivity disposition (i.e., high hostiles are more reactive to negative stimuli; Smith & Gallo, 1999). Those scoring high on trait hostility should be more emotionally reactive because they are more likely to have a hostile attribution bias (see LeBlanc & Barling, 2004). Supporting this view, Brissette and Cohen (2002) found that interpersonal conflict was especially likely to translate into negative affective reactions for those high on trait hostility.

Hypothesis 5: The within-individual relationships of family-to-work conflict experienced at work with guilt at work (a), and of work-to-family conflict experienced at home with guilt at home (b), are stronger for individuals high in trait guilt.

Hypothesis 6: The within-individual relationships of family-to-work conflict experienced at work with hostility at work (a), and of work-to-family conflict experienced at home with hostility at home (b), are stronger for individuals high in trait hostility.

Cross-Domain Influences

Although we have constructed our hypotheses based on the assumption that the emotional consequences of work–family conflict are bound to the domain to which the conflict is directed (e.g., family-to-work conflict at work is related to emotions at work because work is the domain to which the conflict is applied or targeted), this assumption may be overly narrow. Specifically, it is possible that the emotional reactions to work–family conflict are based on the *cause*, rather than the *target* or *outcome*, of the conflict. For example, individuals may feel guilty or hostile at home because, while at home, they recall or anticipate family obligations that either interfered or will interfere with work activities. Likewise, individuals

may feel guilty or hostile at work because, while on the job, they recall or anticipate work obligations that either interfered or will interfere with family activities. Though we believe that the contextual bounding and ephemeral nature of emotions (Frijda, 1994; Lazarus & Cohen-Charash, 2001; Watson, 2000) means that family-to-work conflict experienced at work will most directly impact emotions experienced at work, and work-to-family conflict experienced at home will most directly impact emotions experienced at home, we investigate cross-domain effects (i.e., relationship of family-to-work conflict on emotions at home, relationship of work-to-family conflict on emotions at work) on an exploratory basis.

Method

Participants

Data were collected with two samples, both of which are original to this study. The first sample was comprised of employed individuals recruited from StudyResponse (Stanton & Weiss, 2002), a nonprofit service that provides participants from a variety of occupations (e.g., administration and customer service) who are interested in completing surveys. The second sample consisted of administrative staff from several universities in the southeastern United States. Participants from both samples were recruited via an e-mail requesting their voluntary participation. Included in the e-mail was a statement that participants needed to be full-time employees who had spouses/significant others. For the first sample, we obtained complete data for 35 of the 100 individuals who initially signed up for the study.² For the second sample, we received complete data for 40 of the 44 individuals who signed up. Participants who completed the study requirements (from both samples) received \$50 in return for their participation.

For the first sample, we were able to collect demographic information on gender and age only (part of our agreement with the StudyResponse service was that we would not collect potentially identifiable information). The majority (66%) of this sample was female, and the average age was 37 years. Data were collected in March 2003. For the second sample, 88%

²We attribute our 35% response rate for the first sample to participants failing to carefully read the stipulations of the study before signing up. The advertisement stated that participants needed to be working full-time and to be able to provide spousal ratings. However, some participants who had signed up asked whether they could participate if they were not married or did not work full-time. These participants were instructed not to complete the study. Nevertheless, 57 of these individuals did complete the initial trait guilt and trait hostility measures. A comparison of these scores from the respondents included in the final sample to those excluded revealed no significant difference (e.g., for trait hostility: $M_R = 2.51$ vs. $M_E = 2.55$, $t_{1,90} = .20$, $p = .84$), which provides evidence that the sample was unbiased on the dispositional measures.

were women, and the average age was 37 years (these data were collected in February 2004). Thirty-four individuals from the second sample provided additional demographic data: They were mostly Caucasian (94%), had two children on average (range: 0–6), were married (with one exception), and had an average job tenure of 5.56 years ($SD = 4.35$).

Procedure

We used interval-contingent experience-sampling methodology (e.g., Ilies & Judge, 2002), whereby participants completed a work and a home survey, each workday, for a period of 2 weeks (10 working days). The daily work survey assessed family-to-work conflict, emotion, and job satisfaction, and the daily home survey assessed work-to-family conflict, emotion, and marital satisfaction. Participants completed the daily work survey via the Internet after receiving a daily e-mail reminder. The daily home surveys were completed on printed questionnaires that were sent to the respondents together with self-addressed, stamped envelopes. In addition, participants completed a one-time survey assessing trait guilt, trait hostility, and trait negative affect. We also collected spousal ratings of marital satisfaction by having each participant's spouse rate his/her satisfaction with the marriage. Spousal ratings of marital satisfaction are expected to be substantially correlated because both spouses rate the same construct (the quality of their marriage), and previous research has reported correlations ranging from .40 to .80 across various measures of relationship satisfaction (Watson, Hubbard, & Wiese, 2000; see also Westman, Vinokur, Hamilton, & Roziner, 2004). Participants gave their respective spouse a printed questionnaire along with a prepaid return envelope. To maintain confidentiality, we had the spouses identify their responses using only the focal participant's ID number and asked them to return the surveys directly to us.

We obtained 288 out of a possible 350 experience-sampled ratings from the first sample and 337 out of a possible 400 from the second sample. Across both samples, participants completed 87.3% of the daily work surveys and 83.4% of the daily home surveys. Overall, combining the samples and the daily work and home surveys, 75 individuals provided 625 experience-sampled ratings out of a possible 750, which corresponds to an overall response rate of 83.3% across individuals and time periods.³ Timestamps were collected electronically for the daily work surveys and manually (i.e., via self-report) for the daily home surveys in order to

³We explored whether levels of conflict or emotion were related to subsequent missing responses (e.g., whether family-to-work conflict, guilt, or hostility experienced at work predicted missing responses on the subsequent home survey). No significant findings emerged, suggesting that missing responses were not related to the substantive variables in the study.

provide evidence that the work and home surveys were completed during work hours and during evenings, respectively (all individuals in the study worked “regular” shifts—i.e., no participant worked a second or third shift). Unfortunately, it was not possible to estimate the average submission time for the respondents from the first sample because they were located in different time zones, and the electronic time stamps recorded the submission time according to the server time. For the respondents from the second sample, the average response time was 11:39 AM Eastern Time (these respondents were located in the southeast) and there was some variability around respondents’ average response time for the daily work surveys (the standard deviation was 1 hour and 44 minutes). With respect to the home surveys, for the combined sample, the self-reported time stamps indicated that the average response time was 7:12 p.m. with a standard deviation of 1 hour and 55 minutes.⁴

Measures

Family-to-work conflict and work-to-family conflict. We measured family-to-work conflict and work-to-family conflict by adapting scales that have been used widely in research on work–family conflict (e.g., Adams, King, & King, 1996; Gutek et al., 1991; Kopelman, Greenhaus, & Connolly, 1983). Participants were instructed each day to indicate, using a 1–5 response format, the extent to which they agreed with the four statements comprising each scale. Items were modified to reflect the potentially transient nature of the constructs (e.g., family-to-work conflict: “Today, I have felt too tired at work because of the things I have had to do at home”; work-to-family conflict: “Right now after work, I feel too tired to do some of the things I’d like to do here at home”). The average coefficient alpha for these scales, across days, was $\bar{\alpha} = .83$ (family-to-work conflict) and $\bar{\alpha} = .78$ (work-to-family conflict).

Guilt and hostility. We assessed guilt and hostility both at work and at home as momentary emotional states using the Positive and Negative Affect Schedule—Expanded Form (PANAS-X; Watson & Clark, 1994). For the work survey, participants were instructed to “indicate to what extent you experience the following states right now” using a 7-point scale with anchors 1 = *very slightly or not at all* to 7 = *very much*. For the home survey, a 5-point scale was used with anchors 1 = *very slightly or not at all* to 5 = *very much*.⁵ Guilt was assessed with a six-item adjective-based (e.g., “guilty,” “blameworthy”) measure; the average (across days)

⁴Timestamps revealed that one participant completed the home surveys in the morning (e.g., 8 a.m.). Consequently, we removed this participant from all subsequent analyses.

⁵We unintentionally used different scale points for the work and home measures of guilt and hostility. However, research has demonstrated that internal consistency (Bendig, 1954), concurrent and predictive validity (Matell & Jacoby, 1971), and proportion of scale used

coefficient alpha for the guilt scale was $\bar{\alpha} = .94$ for work scores and $\bar{\alpha} = .90$ for home scores. The hostility measure included adjectives such as “angry” and “hostile,” and the average coefficient alpha for the hostility scale (six items) was $\bar{\alpha} = .91$ for work scores and $\bar{\alpha} = .83$ for home scores.

Job and marital satisfaction. We measured job satisfaction with the five-item version of the Brayfield and Rothe (1951) scale and marital satisfaction with the five-item scale developed by Norton (1983). Each day, participants indicated their agreement with the statements using a 5-point scale with anchors 1 = *strongly disagree* to 5 = *strongly agree*. Items were modified to reflect the diurnal nature of the surveys (e.g., job satisfaction: “Right now, I feel fairly satisfied with my present job”; marital satisfaction: “At this very moment, I feel that I have a good marriage”). The average (across days) coefficient alpha for the satisfaction scales was $\bar{\alpha} = .85$ (job satisfaction) and $\bar{\alpha} = .97$ (marital satisfaction). In addition, each participant’s spouse completed a one-time measure of marital satisfaction using the same scale as above, though without the temporal modifications ($\alpha = .95$).

Personality traits. We assessed trait guilt using the six-item guilt subscale of the PANAS-X (Watson & Clark, 1994), with instructions modified to reflect traits rather than states. Participants were instructed to “indicate to what extent you generally feel this way, that is, how you feel on average” using a 5-point scale with anchors 1 = *very slightly or not at all* to 5 = *very much*. Coefficient alpha for this scale was $\alpha = .92$. We measured trait hostility using Buss and Perry’s (1992) scale. Participants were instructed to indicate the extent to which they agreed with nine statements using a 5-point scale with anchors 1 = *strongly disagree* to 5 = *strongly agree*. An example item is: “I wonder why sometimes I feel so bitter about things.” Coefficient alpha for this scale was $\alpha = .84$. Given that trait guilt and trait hostility are indicators of the broader construct of negative affect (e.g., Watson, 2000), we also measured trait negative affect as a control variable by having participants respond to 10 items from the PANAS-X ($\alpha = .91$).

Analyses

To test our hypotheses, we used hierarchical linear modeling (HLM; Byrk & Raudenbush, 1992). HLM allows one to analyze multiple levels of analysis in a series of regression equations. In this study, there are two

(Matell & Jacoby, 1972) is independent of the number of scale points utilized, suggesting that the use of a 7-point scale for the work measures of guilt and hostility and the use of a 5-point scale for the home measures of guilt and hostility should not affect our substantive results.

levels of analysis. The first level (Level 1) variables consist of the daily measures of experienced conflict, emotions, and satisfaction (at this level, the data file contains multiple records for each individual). To test the within-individual hypotheses, the daily criterion variables are regressed on the daily predictor variables at Level 1, and at Level 2 the pooled parameters (intercept and beta) across all the individuals in the sample are estimated. For the cross-level hypothesis (Hypotheses 5 and 6), the individuals' characteristic (Level 1) slopes and intercepts are regressed on the Level 2 variables (trait guilt and trait hostility). As suggested by Hofmann, Griffin, and Gavin (2000), we centered the Level 1 predictor variables at each individual's mean in order to remove any between-individual variance in estimates of the relationships among the variables. Hence, the intra-individual estimates obtained from HLM are unconfounded by individual differences such as personality.

Results

We combined the two samples in order to increase statistical power. Conceptual similarities between the two samples suggested that combining the samples was justifiable. For example, a substantial number of participants from both samples worked in similar occupations (administration). In addition, the average age of participants in both samples was 37, and the majority of participants were women. Though these similarities suggested that participants were from a similar population, in order to provide empirical evidence for combining the two samples, we examined whether the sample moderated the within-individual associations among the Level 1 variables; no such moderating effects were detected.

Table 1 presents descriptive statistics and correlations among the study variables. Correlations below the diagonal represent between-individual correlations. Correlations above the diagonal represent within-individual correlations and were calculated by standardizing the coefficients obtained from single independent variable regressions in HLM. The strong correlation ($r = .72, p < .01$) between the aggregated within-individual ratings of marital satisfaction and the spousal ratings of marital satisfaction provide evidence for the validity of the marital satisfaction self reports. In addition, the mean levels of family-to-work conflict and work-to-family conflict were similar to mean levels reported in existing studies of working adults (e.g., Adams et al., 1996; Frone, Russell, & Cooper, 1992; Gutek et al., 1991; Judge, Boudreau, & Bretz, 1994; Netemeyer et al., 1996), suggesting that our sample was typical in terms of conflict. Though the mean levels of guilt and hostility, both at work and at home, appear relatively low (on average, across persons and time, the means were approximately 9% of the scale maximum), they are consistent with existing evidence on

TABLE 1
Correlations Among Study Variables Both Within and Between Individuals

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Family-to-work conflict (work)	2.03	.57	—	.18**	.16*	-.09	.10*	.03	.01	-.10*	—	—
2. Guilt (work)	1.62	.74	.55**	—	.71**	-.11	.16	.20**	.02	-.03	—	—
3. Hostility (work)	1.63	.65	.47**	.81**	—	-.24**	.20**	.12*	.20**	-.04	—	—
4. Job satisfaction (work)	2.97	.23	.07	.05	.05	—	-.10**	.03	-.05	.01	—	—
5. Work-to-family conflict (home)	2.56	.69	.42**	.40**	.49**	.12	—	.11*	.20**	-.10*	—	—
6. Guilt (home)	1.30	.52	.43**	.77**	.48**	-.07	.26*	—	.41**	-.17**	—	—
7. Hostility (home)	1.31	.41	.51**	.64**	.69**	-.07	.35**	.74**	—	-.27**	—	—
8. Marital satisfaction (home)	4.22	.78	-.54**	-.50**	-.50**	.07	-.31*	-.44**	-.56**	—	—	—
9. Trait guilt	2.33	1.39	.29*	.60**	.47**	.08	.21	.57**	.47**	-.29*	—	—
10. Trait hostility	2.28	.71	.36**	.44**	.44**	-.01	.19	.34**	.37**	-.27*	.65**	—
11. Marital satisfaction (spousal rating)	4.39	.71	-.34**	-.29*	-.27*	.14	-.09	-.21	-.32**	.72**	-.25*	-.23*

Notes. Variables 1 through 8 are within-individual variables. Variables 9 through 11 are between-individual variables. Correlations below the diagonal represent between-individual (aggregated) scores ($N = 74$). Correlations above the diagonal represent standardized regression coefficients calculated from HLM Level-1 analyses between one predictor and one criterion ($N = 625$). Means and standard deviations were calculated for between-individual (aggregated) scores. * $p < .05$, ** $p < .01$.

TABLE 2
*Parameter Estimates and Variance Components of Null Models for All Level-1
 Endogenous Variables*

Dependent variable	Intercept γ_{00}	Within-individual variance ρ^2	Between-individual variance τ_{00}	Percent variability within-individual
Guilt (work)	1.597**	.361	.490**	42.4%
Hostility (work)	1.606**	.374	.369**	50.3%
Job satisfaction (work)	2.967**	.093	.043**	68.5%
Guilt (home)	1.306**	.113	.255**	30.8%
Hostility (home)	1.319**	.147	.149**	49.6%
Marital satisfaction (home)	4.234**	.214	.569**	27.4%

Notes. γ_{00} = pooled intercept representing average level of dependent variable across individuals. ρ^2 = within-individual variance in dependent variable. τ_{00} = between-individual variance in dependent variable. Percent variability within-individual is computed as: $\frac{\rho^2}{(\rho^2 + \tau_{00})}$. $N = 74$. ** $p < .01$.

the relative infrequent occurrence of momentary negative affective states (Watson, 2000).

Given that participants reported guilt and hostility at the same time, and because our analyses focused on explaining within-individual variations in guilt and hostility, we examined whether these two emotional states were distinguishable over time (within individuals). To do so, we performed within-individual factor analyses on the guilt and hostility data. These analyses are conceptually equivalent to a pooled P-technique factor analysis (i.e., P-technique factor analysis is typically conducted on repeated measures data from a single individual; see Nesselroade, McArdle, Aggen, & Meyers, 2002). Results showed that for both work and home scores, the two-factor model represented the actual data more accurately (more closely) than an alternative one-factor model (e.g., Standardized Root Mean Square Residual was .05 and .06 for the two-factor model, compared to .08 and .11 for the one-factor model, for work and home scores, respectively). Hence, following Nesselroade et al. (2002), the hypothesized separation between guilt and hostility is supported by the data.

Before testing the within-individual hypotheses, it was necessary to determine whether substantial within-individual variance existed in the dependent variables. Table 2 presents the results of null models (which do not include Level-1 or Level-2 predictors) estimated in HLM. The total variance in a given variable is partitioned into between- and within-individual components, and the intercept for each variable represents the

TABLE 3
HLM Results of Within-Individual Models

Dependent variable Level-1 predictor(s)	\hat{B}	SE	T-value	$\hat{\beta}$
Guilt (work)				
Family-to-work conflict (work)	.23	.06	3.89**	.19
Hostility (work)				
Family-to-work conflict (work)	.19	.06	2.86**	.17
Job satisfaction (work)				
Family-to-work conflict (work)	-.05	.03	-1.61	-.10
Guilt (home)				
Work-to-family conflict (home)	.08	.03	2.44*	.12
Hostility (home)				
Work-to-family conflict (home)	.13	.04	3.34**	.21
Marital satisfaction (home)				
Work-to-family conflict (home)	-.09	.05	-2.04*	-.09
Marital satisfaction (home)				
Guilt (home)	.00	.09	.03	.00
Hostility (home)	-.42	.10	-4.08**	-.27
Work-to-family conflict (home)	-.05	.04	-1.12	-.05

Note. \hat{B} = unstandardized HLM coefficient, SE = standard error, $\hat{\beta}$ = standardized HLM coefficient. All predictors were centered at individuals' means to eliminate between-individual variance. Trait guilt, trait hostility, and trait negative affect were entered in the HLM equation as Level 2 (between-individual) predictors of the Level 1 slopes and intercepts. $N = 619$. * $p < .05$, ** $p < .01$.

average level of that variable, pooled across individuals. As shown in the table, there was a significant amount of between-individual variance in all six dependent variables (guilt and hostility both at work and at home, job satisfaction, and marital satisfaction). In addition, a substantial portion of the total variance in the scores on each dependent variable was within-individuals. For example, 50.3% of the total variance in hostility at work was intra-individual.

Table 3 provides results obtained from the series of regression equations estimated in HLM for each dependent variable. For the sake of clarity, only standardized coefficients are presented in the text. As shown in Table 3, family-to-work conflict assessed at work was positively related to both guilt at work ($\hat{\beta} = .19, p < .01$) and hostility at work ($\hat{\beta} = .17, p < .01$) supporting Hypotheses 1a and b, respectively. In support of Hypotheses 2a and b, work-to-family conflict experienced at home was positively related to both guilt at home ($\hat{\beta} = .12, p < .05$) and hostility at home ($\hat{\beta} = .21, p < .01$).

The direct effect specified in the third hypothesis (i.e., family-to-work conflict negatively influences job satisfaction; Hypothesis 3a) was not

supported by the data (though the effect was in the expected direction, it failed to reach statistical significance). As a consequence, the mediating effect of guilt and hostility (Hypothesis 3b) also was not supported (there was no effect to be mediated).

The fourth hypothesis stated that work-to-family conflict experienced at home would be negatively related to marital satisfaction (Hypothesis 4a) and that guilt and hostility experienced at home would mediate this effect. Indeed, work-to-family conflict did significantly predict marital satisfaction ($\hat{\beta} = -.09, p < .05$), and after controlling for guilt and hostility at home, the coefficient for work-to-family conflict experienced at home became nonsignificant ($\hat{\beta} = -.05, ns$). Hence, guilt and hostility at home mediated 45% of the relationship between work-to-family conflict experienced at home and marital satisfaction.

Before testing the cross-level moderating effects of trait guilt and trait hostility, we examined the variance of the intra-individual slopes for the relationships of interest. In HLM, we regressed each emotion (guilt at work, hostility at work, guilt at home, hostility at home) on the corresponding predictor (family-to-work conflict at work, work-to-family conflict at home) without the Level-2 moderators (trait guilt and trait hostility). The Level-1 predictors were centered at individuals' means. Chi-square tests revealed that significant ($p < .01$) amounts of variance existed in the intra-individual slopes for the four relationships examined.

The cross-level moderation results are presented in Table 4. Controlling for trait negative affect and trait hostility, trait guilt significantly predicted the regression coefficient of the within-individual relationship between family-to-work conflict at work and guilt at work (Hypothesis 5a) and the regression coefficient of the within-individual relationship between work-to-family conflict at home and guilt at home (Hypothesis 5b). Trait guilt explained 52.6% of the between-individual variance in the intra-individual slope for predicting guilt at work with family-to-work conflict at work and 24.6% of the between-individual variance in the intra-individual slope for predicting guilt at home with work-to-family conflict at home. Controlling for trait negative affect and trait guilt, trait hostility significantly predicted the regression coefficient of the within-individual relationship between work-to-family conflict at home and hostility at home (Hypothesis 6b), explaining 16.7% of the between-individual variance in the intra-individual slope. However, trait hostility failed to moderate the within-individual relationship between family-to-work conflict at work and hostility at work (Hypothesis 6a).

Importantly, trait negative affect did not moderate any of the within-individual conflict emotion relationships, supporting the use of trait guilt and trait hostility as cross-level moderators. Figure 1 shows plots of the moderating effect of trait guilt on the within-individual relationship

TABLE 4
*HLM Interaction Results for Trait Guilt and Trait Hostility
 on Conflict–Emotion Relationships*

Model/Predictor	Guilt (work)		Hostility (work)	
	Coefficient	T-Value	Coefficient	T-Value
Cross-level interaction model				
Trait guilt effect on				
B_0 (Intercept)	.30	2.01*	-.09	-.80
B_1 Family-to-work conflict (work)	.29	2.77**	.13	1.27
Trait hostility effect on				
B_0 (Intercept)	.15	1.10	.23	1.94
B_1 Family-to-work conflict (work)	.14	1.43	.17	1.45
Trait negative affect effect on				
B_0 (Intercept)	-.03	-.16	.36	2.29*
B_1 Family-to-work conflict (work)	-.16	-1.32	.03	.18
Model/Predictor				
Cross-level interaction model				
Model/Predictor	Guilt (home)		Hostility (home)	
	Coefficient	T-Value	Coefficient	T-Value
Trait guilt effect on				
B_0 (Intercept)	.34	2.43*	.05	.41
B_1 Work-to-family conflict (home)	.11	2.19*	-.01	-.30
Trait hostility effect on				
B_0 (Intercept)	-.02	-.26	.06	.76
B_1 Work-to-family conflict (home)	-.00	-.07	.14	2.01*
Trait negative affect effect on				
B_0 (Intercept)	-.17	-1.19	.12	.84
B_1 Work-to-family conflict (home)	-.04	-.72	.04	.57

Notes. B = unstandardized Level-1 regression coefficients. Family-to-work conflict and work-to-family conflict were centered at individuals' means to eliminate between-individual variance. ** $p < .01$, * $p < .05$.

between work-to-family conflict and guilt at home and of the moderating effect of trait hostility on the within-individual relationship between work-to-family conflict and hostility at home. In each case, the effect of conflict on emotions increased as levels of the corresponding trait increased. Stated differently, individuals high on trait guilt or trait hostility tended to experience stronger negative corresponding emotions as a result of conflict than individuals low on these traits.

Additional Analyses

In our primary analyses, we examined conflict–emotion association within-domain (family-to-work conflict at work and emotions at work, work-to-family conflict at home and emotions at home). In order to

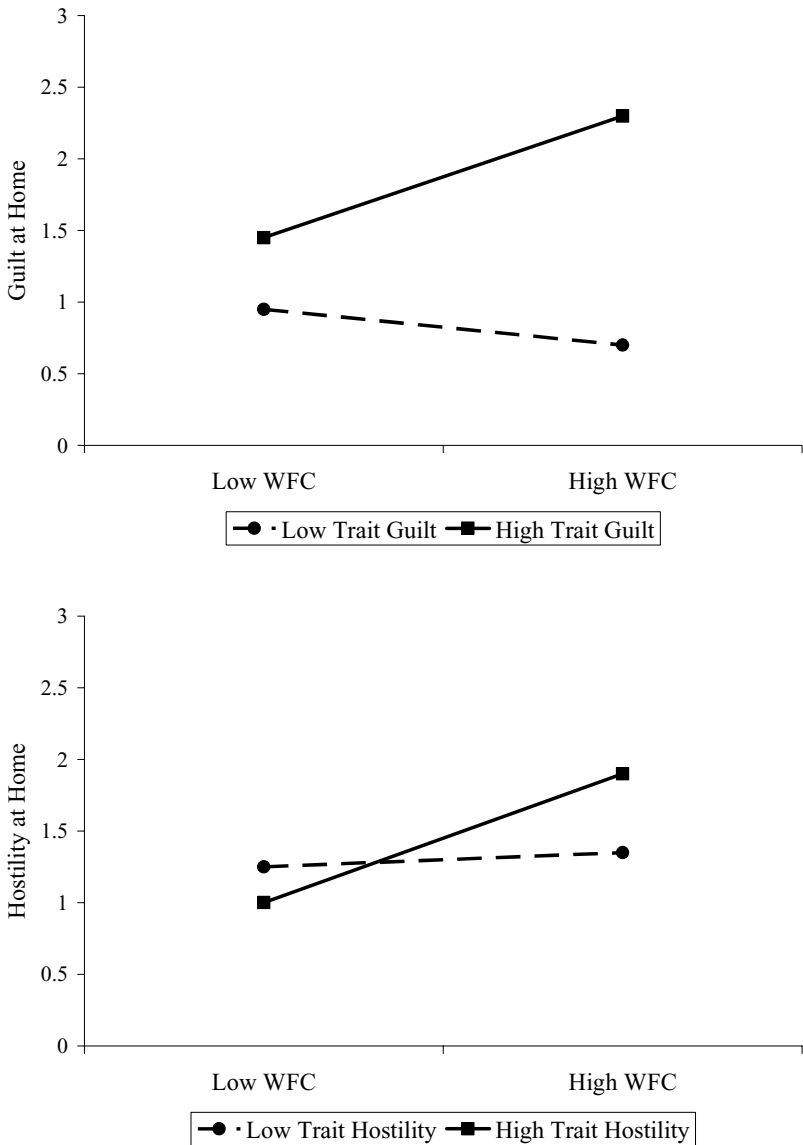


Figure 1: Plots of the Cross-Level Moderating Effects of Trait Guilt (Trait Hostility) on the Within-Individual Relationships Between Work-to-Family Conflict and Guilt (Hostility) at Home

(Notes: WFC = work-to-family conflict). Although not presented due to space limitations, the plot for the significant moderating effect of trait guilt on the intra-individual relationship between family-to-work conflict at work and guilt at work was similar to the plots in Figure 1.

explore the possibility of cross-domain association (e.g., whether conflict in one domain is related to emotions in another domain), we conducted additional analyses examining the following relationships: (a) whether family-to-work conflict experienced at work predicted emotions (guilt and hostility) experienced later at home, (b) whether work-to-family conflict experienced at home predicted emotions experienced at work the following day, (c) whether emotions experienced at work predicted work-to-family conflict experienced at home later the same day, and (d) whether emotions experienced at home predicted family-to-work conflict experienced at work the following day. All but one (guilt experienced at home predicted family-to-work conflict experienced at work the following day [$\hat{\beta} = .20$, $p < .05$]) of the above relationships were nonsignificant. Taken together, these results support our initial assertion that conflict–emotion effects are proximal and in the same domain.

In addition, because we conceptualize the experience of conflict as occurring when individuals are prevented from achieving goals within a given domain, we focused on family-to-work conflict experienced at work and work-to-family conflict experienced at home, which are consistent with this conceptualization. However, it is possible that cross-domain conflicts may occur, as individuals may either think about or perceive work-to-family conflict while at work, or family-to-work conflict while at home. Accordingly, we re-examined our results after controlling for these cross-domain influences, with work-to-family conflict experienced at work and family-to-work conflict experienced at home measured using the same scales as above, modified slightly to reflect the setting in which participants completed the measures (e.g., work-to-family conflict at work: “Tonight after work, I will feel too tired to do some of the things I’d like to do at home,” $\bar{\alpha} = .76$; family-to-work conflict at home: “Today, my personal demands were so great that they took away from my work,” $\bar{\alpha} = .83$). These cross-domain effects were not significant. Moreover, results controlling for cross-domain influences remained similar with two exceptions: Family-to-work conflict was no longer related to hostility experienced at work, and the relationship between work-to-family conflict and marital satisfaction became marginally significant ($p = .09$).

Finally, the lack of support for the hypothesized interactive effect of trait hostility and family-to-work conflict on hostility at work (Hypothesis 6a) raises the question of whether our design and sample size afforded enough power to detect such an effect. To address this question, we used the Power IN Two-level designs program (PINT) written by Bosker, Snijders, and Guldemond (2003) to estimate the expected standard deviation of the cross-level interaction coefficient based on a variety of number of participants/number of observations per participant combinations (see also Snijders & Bosker, 1993, 1999). First, we estimated the standard

deviation of the cross-level interaction between family-to-work conflict and trait hostility using the actual HLM estimates obtained from the analysis predicting hostility at work with family-to-work conflict (e.g., residual Level 1 variance), and the actual mean and variance of the trait hostility scores. For a sample of 75 people with an average of eight observations per person, the expected standard deviation was estimated at .058. With alpha at .05 (one-sided), this expected standard deviation translates to a power of .76 to detect a cross-level interaction of .26 (the same magnitude of the interaction between work-to-family conflict and trait hostility in predicting hostility at home, accounting for the different within-individual standard deviations of the predictor and criteria scores). Though this power was reasonably adequate, future research using higher numbers of respondents and more observations per individual would be more likely to detect such a cross-level effect, if it indeed exists. For example, with $N = 125$ and 15 observation per individual, the power to detect the same .26 effect would be .89.

Discussion

The role of discrete negative emotions in organizational life has been relatively neglected. To be sure, a considerable amount of organizational research has focused on negative mood (state and trait negative affect). However, specific negative emotions are little studied in organizational behavior. As Brief and Weiss (2002) commented, the “exclusive focus on positive affect makes it less useful for understanding the effect of negative mood states or discrete emotions” (p. 293). Given the dual importance of work and family roles to most individuals, and the frequent conflicts between these roles for many of us, the study of negative emotions in the work–family area seems particularly apropos. Moreover, negative emotions tend to be more differentiated than positive emotions (Fredrickson, 1998), which further attests to the benefits of studying discrete negative emotions.

Perhaps the key finding is that work–family conflict generates specific emotional reactions in the form of guilt and hostility. In focusing on guilt and hostility, we responded to Weiss’ (2002) call for studying discrete emotions: “Discrete emotions need to be studied along with general mood states because such discrete experiences have different effects not captured by simple affective sign” (p. 2). Our results show that family-to-work conflict experienced at work is associated with feelings of guilt and hostility at work, and by the same token, work-to-family conflict experienced at home is associated with feelings of guilt and hostility at home. Though participants did not experience guilt and hostility at high levels, they did experience these states in concert with family-to-work and work-to-family

conflict. Furthermore, because we explained within-individual variations in guilt and hostility, our analyses controlled for individuals' mean scores on these variables. Therefore, the relatively low levels of guilt and hostility were not problematic for our particular investigation.

Although feelings of guilt and hostility are important in and of themselves, according to Affective Events Theory (Weiss & Cropanzano, 1996), emotions serve as mediators between environmental changes (events) and attitudinal reactions. Our results partially support this conceptualization of emotions in finding that work–family conflict is associated with emotional states that have attitudinal implications for individuals at home. Specifically, we found that heightened work-to-family conflict experienced at home is associated with decreased marital satisfaction, and this relationship is mediated by guilt and hostility experienced at home.

In general, our results support the assumption that emotional reactions are based on the domain in which they are experienced and targeted. In other words, when individuals at work perceive that family obligations interfere with work activities, this is more important in shaping their affect at work than the perception that work obligations interfere with family activities. The same domain-consistent effects operate at home: When at home, individuals' feelings are more likely to be affected by the perception that work obligations interfere with family time than the perception that family activities are interfering with work obligations. These results are in accordance with appraisal theories of emotions. As Lazarus (1991) noted, "As an effect or dependent variable, emotion is the result of appraisals of the significance of what has happened for personal well-being" (p. 353). In our results, that appraisal is most dependent on the domain in which the appraisal is generated and on the target upon which the appraisal is oriented. In short, if "emotion is set in motion by a perception" (Sartre, 1948, p. 51), then the strength of the perception–emotion relationship should be a function of the proximity of the perception to the emotion, where proximity can be viewed as a result of the domain (where the perception and emotion are experienced) and the target of the perception (the domain that the perception concerns). Of course, the root cause of the perception could be relevant, but our results do not support this in the work–family context of this study.

Another key finding is that the emotional reactions to work–family conflict vary by personality. At work and at home, individuals high in trait guilt and trait hostility were more affected by family-to-work and work-to-family conflict than were those low in the two traits. Hostility has been conceptualized as emotional reactivity, and evidence indicates that individuals scoring high on trait hostility are more reactive to negative events (e.g., Elovainio, Kivimäki, Vahtera, Virtanen, & Keltikangas-Järvinen, 2003). In the context of this study, trait hostility was associated with heightened

hostile emotions in that the effect of work-to-family conflict was associated with greater hostile emotions for individuals high on trait hostility (the same result did not operate, though, with family-to-work conflict). Moreover, trait guilt led to greater vulnerability to work-family conflict in that both forms of conflict (work-to-family and family-to-work) generated more guilty emotions for individuals high on trait guilt. In keeping with the vulnerability model of emotions (Miller, Smith, Turner, Guijarro, & Hallet, 1996), it appears that affective traits predispose individuals to deeper effects of work-family conflict.

Limitations and Future Research

First, an issue that merits further investigation is the functional nature of the emotions examined in this article. Guilt and hostility are classified as negative emotions inasmuch as they represent negative affect (Watson, 2000). Hence, many view these emotions, particularly hostility, as dysfunctional, with destructive consequences. Indeed, anger is associated with health problems (Miller et al., 1996) and aggressive behavior toward others (Averill, 1993). On the other hand, although the functionality of cathartic expression has been debated in the literature (Bushman, 2002), some theorists suggest that aggressive behavior in response to anger may serve as a form of mood repair (Bushman, Baumeister, & Phillips, 2001). Therefore, anger may be a means of coping or a means of correcting perceived wrongs (Larsen, Diener, & Lucas, 2002). As for guilt, Tangney (2001) noted that it is a “quintessential” moral emotion that can serve numerous constructive, “relationship-enhancing functions” (p. 127). Guilt can help restore work-family balance in that it serves various relationship-enhancing functions, including motivating people to treat partners well and avoid transgressions, minimizing inequities and enabling less powerful partners to get their way, and redistributing emotional distress (Baumeister, Stillwell, & Heatherton, 2001). Hence, future research should investigate further the functionality of these forms of emotion in response to work-family conflict.

Second, a potentially important topic to be explored further is the motivational consequences of these emotions. The British empiricist David Hume wrote when speaking of the motivating nature of emotions (what he termed passions), “Nothing can oppose or retard the impulse of passion, but a contrary impulse” (Hume, 1739/2003, p. 430). If emotions are what proximally motivate us into action, as Hume believed and as some research supports (Edwards, 1999), then the question becomes what specific behaviors do the emotions produce? Do individuals who feel guilty as a result of work-family conflict actually undertake actions to reduce the conflict? Does hostility propel us into protective actions where otherwise we would

lack the courage? In the realm of work–family conflict and otherwise, these are interesting questions for future research to investigate.

We did not measure discrete work–family events that may cause emotional responses (MacDermid et al., 2002). In keeping with Affective Events Theory (Weiss & Cropanzano, 1996) and building on the work of Basch and Fisher (2000), future research should investigate the work–family episodes that are most important in producing emotional reactions. Such investigations may well reveal that the events that provoke guilty emotions are quite different from those that lead to hostility. Moreover, these findings could suggest interventions that would eliminate or ameliorate the negative affective reactions resulting from work–family conflict (assuming most individuals find these emotions aversive).

In addition, we did not fully investigate the effects of contextual variables, such as marital status and the number of children present in the household, which may have influences on work–family conflict and emotion. Although we were able to collect more contextual information from the participants in the second sample, our agreement with the StudyResponse service limited the collection of such information in the first sample. However, the fact that we did not assess such context effects does not invalidate our findings as (a) our within-individual findings are net of any person-level effects, and (b) our cross-level findings indicate that trait guilt and trait hostility influences employees' emotional reactions to conflict within the range of environments that characterize our sample. Though contextual variables may still influence the average levels of our within-individual (e.g., family-to-work conflict) and between-individual (e.g., trait hostility) variables, or may moderate our within-individual relationships, *post hoc* analyses limited to the second sample (on which we had additional contextual information) revealed that number of children was neither significantly related to any of our variables nor a moderator of our within-individual relationships. Marital status was already controlled in that all but one of the participants from the combined sample were married; excluding this participant from the analyses did not alter the results. Nonetheless, future research should examine contextual influences more comprehensively.

Theoretically, there is a difference between experiencing an emotion and expressing it (Aune, Aune, & Buller, 1994). The link between emotional experience and expression may be affected by the person and the situation. Individuals differ in their expressiveness, with some individuals being reluctant to express negative emotions—even to romantic partners (Aune et al., 1994). In terms of the situation, there are “display rules”—standards that govern the appropriate expression of emotions (Ashforth & Humphrey, 1993)—that may discourage the individual from expressing emotions related to family-to-work conflict at work and work-to-family

conflict at home. Do individuals perceive such display rules at work and at home, and how do these rules relate to emotions experienced versus those expressed? Although we did not investigate such processes in this study, it would be an interesting topic for future research.

As noted by Greenhaus and Powell (2003) and MacDermid et al. (2002), positive spillover or enhancement between work and family roles has been neglected in the literature, and our study is no exception. With our focus on conflict, we have ignored the positive connections between work and family roles that may enrich individuals' work and family lives. For example, recent work has shown that individuals who share positive events with others are happier than those who keep such events to themselves (Fredrickson, 1998). Generalized to the work–family area, it would be interesting to see if individuals who converse with coworkers about family matters enjoy positive spillover and whether emotions such as joy and love are enhanced by capitalizing attempts and other positive spillover actions.

In researchers' thinking about positive spillover between work and family roles, the implicit assumption is that positive attitudes and behaviors in one domain affect the other. For example, one might argue that in juggling myriad responsibilities on the job, an employee transfers these skills to improve home life, or that when a positive event generates a pleasant mood in one domain, the mood may spill over onto feelings in the other domain (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006). However, another, quite different, way to consider positive implications of the work–life interface is to consider the possibility that conflict might be, at least in some cases, "positive." How might this be the case? Even putatively negative states such as conflict can generate positive outcomes, such as when task conflict may facilitate group performance (though in most cases task conflict is negatively related to group performance; De Dreu & Weingart, 2003). Even stresses and strains have positive functions, depending on the type of stress and how it is experienced (Lepine, Podsakoff, & Lepine, 2005). Indeed, Carlson et al.'s (2006) work–family enrichment measure includes items that assess ways in which familial pressures make one more efficient at work, and vice-versa. Therefore, though we have focused on the negative affective implications of work–family conflict, future research should focus on the conditions under which conflict perceptions may generate actions that produce positive short- or long-term outcomes.

The constructs considered to vary on a daily basis were all assessed with self-reports provided at the same points in time. These data do not allow us to test the causal flow in the intra-individual associations (e.g., between emotional states and conflict experiences). Furthermore, it is possible that trait guilt and trait hostility moderate the associations between conflict and

emotions because individuals with high negative affectivity are more likely to interpret stimuli negatively (Friede & Ryan, 2005) and, therefore, are more reactive to work or family demands in terms of both perceived conflict and reported negative emotions. However, the fact that controlling for trait negative affect did not change the substantive results should alleviate this concern.

With respect to the conflict-emotions associations, though causal effects in both directions are possible, conceptually (and in accordance with Affective Events Theory [Weiss & Cropanzano, 1996]), it seems more likely that one experiences guilt, for example, because family-work interference prevents one from fulfilling one's job duties than that one perceives that his/her family life interferes with his/her work activities because he/she feels guilty due to a different reason. As noted in the results, post-hoc analyses predicting work-family conflict with emotions revealed only one significant relationship out of four: Guilt experienced at home predicted family-to-work conflict experienced at work the following day. These results provide some evidence that conflict leads to emotions and not vice versa. However, to better address this issue, future research should measure emotions and conflict at multiple times during the day to model lagged associations between the variables. Of course, taking multiple measures at work and at home on the same day may be too cumbersome for both participants and their organizations. Nevertheless, research that is able to gain access to such data has the potential to clarify the issue of causality.

One issue that limits the generalizability of these results concerns the possibility that our sample was subject to self-selection bias. As suggested by an anonymous reviewer, it is possible that employees who experience very high job demands (and increased work-family conflict) would be less likely to participate in research. However, the extent to which respondents experience low work and family demands and low conflict in general does not affect the within-individual results presented in this paper because we estimated the effect of within-person variations in conflict on within-person variation in emotion, thus analyses controlled for the average level of conflict experienced by each respondent. Nevertheless, it is possible that the extent to which demands and conflict fluctuated over the study period for the employees in our sample was different from the extent of these fluctuations in the general population.

Finally, many participants returned the daily home surveys in batches at the end of the study rather than after each day, and thus it is possible that participants completed multiple home surveys on a given day and indicated incorrect time stamps. However, we see arguments against this possibility. First, we offered no incentive for participants to "cheat" and complete the home surveys all at once, in that pay was not contingent

upon completing a certain number of home surveys. Second, the electronic timestamps collected along with the work surveys indicated that no participants completed multiple work surveys on the same day, suggesting that no participant completed multiple home surveys on the same day. Although we chose a paper rather than electronic format for the home surveys so as not to exclude those without Internet access, future researchers utilizing paper surveys should attempt to ensure that participants return their surveys each day.

Practical Implications

Given that work–family conflict appears to have important consequences for individuals’ emotional experiences at work and at home, a practical question arises: Do these emotional experiences have important consequences for individuals and organizations? Research on emotional contagion (Hatfield, Cacioppo, & Rapson, 1994) suggests that employees who experience negative emotions such as anger and guilt will “infect” coworkers, customers, and clients with their emotional states. Therefore, when work–family conflict causes employees to feel guilty and angry, it is likely that the service encounter (Gutek, Bhappu, & Liao-Troth, 1999) will be affected negatively. As noted by Tan, Foo, and Kwek (2004), emotional transmission can occur even during relatively brief encounters. Hence, one clear implication of the results is that organizations might be well served in reducing work–family conflict in order to reduce the expression of negative emotions.

Moreover, because organizations generally wish to deny conflict even when it does exist, paradoxically they may be fostering the very conflict they wish to avoid (Bodtker & Jameson, 2001). If organizations turn a deaf ear to episodes of work–family conflict, they may unwittingly encourage employees to vent the ensuing negative emotions toward undesired outlets—namely coworkers and customers. One possible solution to this problem is to open communication channels, which both increases the probability that work–family conflicts can be resolved or at least ameliorated and the probability that the expression of negative emotions will be directed away from customers and toward organizational representatives who ostensibly better “handle” the emotional expressions (Bodtker & Jameson, 2001), as well as possibly act on the sources of the complaints. Of course, beyond the profit/effectiveness motive, one might argue that as centers of human activity and interaction in society, organizations have a responsibility, where possible and feasible, to ameliorate work–family conflicts, particularly when such conflicts have implications for individuals’ emotional functioning, as was shown in the present study.

Finally, because all individuals, at one time or another, experience feelings of guilt and hostility at work, and undoubtedly some of these feelings emanate from work–family issues, proactive organizations will decide how to deal with such emotions rather than assuming they do not exist. Some organizations may seek to dampen the expression of such feelings with implicit or explicit display rules, which may temporarily suppress the expression of negative emotions but ultimately also serve to increase employee stress even further (Bono & Vey, 2005). Other organizations may encourage the expression of such emotions through appropriate channels, such as working parent discussion list, affinity groups, EAP programs, and so forth. Finally, most work–family programs are relatively cognitive/structural in that they focus on “rational” programs to reduce work–family conflict such as childcare, telework, wellness programs, and so on (see Hammer, Cullen, & Shafiro, 2006). Although such programs may have emotional benefits, organizations and work–family scholars may wish to consider the benefits (and costs) of addressing experienced emotions more directly, through some of the avenues noted above.

Conclusion

In reviewing the literature on affect in organizational psychology, Brief and Weiss (2002) commented, “Perhaps the most glaring example of the narrowness of organizational research is the overemphasis of the study of mood at the expense of discrete emotions” (p. 297). By studying individuals’ emotional reactions—in the form of guilt and hostility—to work–family conflict, the present study responds to this concern. Moreover, by testing both between- and within-individual effects in a dynamic design, we respond to MacDermid et al.’s (2002) call for more longitudinal studies in the work–family area. In so doing, the present study revealed that both traits and states are relevant to work–family issues. Fleeson (2004) stated: “The variability in behavior within one person is at least as great as the variability in behavior across a group of people” (p. 85). Our study supports this notion and further supports person \times situation interactionism in finding that personality predicts the within-individual pattern of covariation among time-sampled constructs.

REFERENCES

- Adams GA, King LA, King DW. (1996). Relationships of job and family involvement, family social support, and work–family conflict with job and life satisfaction. *Journal of Applied Psychology, 81*, 411–420.
- Ajzen I, Fishbein M. (1977). Attitude–behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin, 84*, 888–918.

- Ashforth BE, Humphrey RH. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18, 88–115.
- Aune KS, Aune RK, Buller DB. (1994). The experience, expression, and perceived appropriateness of emotions across levels of relationship development. *Journal of Social Psychology*, 134, 141–150.
- Averill JR. (1993). Illusions of anger. In Felson RB, Tedeschi JT (Eds.), *Aggression and violence: Social interactionist perspectives* (pp. 171–192). Washington, DC: APA.
- Aycan Z, Eskin M. (2005). Relative contributions of childcare, spousal support, and organizational support in reducing work–family conflict for men and women: The case of Turkey. *Sex Roles*, 53, 453–471.
- Baldwin JH, Ellis GD, Baldwin BM. (1999). Marital satisfaction: An examination of its relationship to spouse support and congruence of commitment among runners. *Leisure Sciences*, 21, 117–131.
- Barefoot JC. (1992). Developments in the measurement of hostility. In Friedman HS (Ed.), *Hostility, coping, and health* (pp. 13–31). Washington, DC: APA.
- Barr-Zisowitz C. (2000). Sadness—Is there such a thing? In Lewis M, Haviland-Jones JM (Eds.), *Handbook of emotions* (2nd ed., Ch. 38, pp. 607–622). New York: Guilford.
- Basch J, Fisher CD. (2000). Affective events–emotions matrix: A classification of work events and associated emotions. In Ashkanasy NM, Härtel CE, Zerbe WJ (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 36–48). Westport, CT: Quorum.
- Baumeister RF, Stillwell AM, Heatherton TF. (2001). Interpersonal aspects of guilt: Evidence from narrative studies. In Parrott WG (Ed.), *Emotions in social psychology: Essential readings* (pp. 295–305). New York: Psychology Press.
- Bendig AW. (1954). Reliability and the number of rating scale categories. *Journal of Applied Psychology*, 38, 38–40.
- Berndsen M, van der Pligt J, Doosje B, Manstead ASR. (2004). Guilt and regret: The determining role of interpersonal and intrapersonal harm. *Cognition and Emotion*, 18, 55–70.
- Blaney PH. (1986). Affect and memory: A review. *Psychological Bulletin*, 99, 229–246.
- Bodtker AM, Jameson JK. (2001). Emotion in conflict formation and its transformation: Application to organizational conflict management. *International Journal of Conflict Management*, 12, 259–275.
- Bono JE, Vey MA. (2005). Toward understanding emotional management at work: A quantitative review of emotional labor research. In Härtel CE, Zerbe WJ, Ashkanasy NM (Eds.), *Emotions in organizational behavior* (pp. 213–233). Mahwah, NJ: Erlbaum.
- Bosker RJ, Snijders TAB, Guldemond H. (2003). PINT (Power IN Two-level designs): Estimating standard errors of regression coefficients in hierarchical linear models for power calculations (user's manual, version 2.1). (<http://stat.gamma.rug.nl/snijders/>).
- Brayfield AH, Rothe HF. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35, 307–311.
- Brief AP, Weiss HM. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, 53, 279–307.
- Brissette I, Cohen S. (2002). The contribution of individual differences in hostility to the associations between daily interpersonal conflict, affect, and sleep. *Personality and Social Psychology Bulletin*, 28, 1265–1274.
- Bruck CS, Allen TD. (2003). The relationship between big five personality traits, negative affectivity, type A behavior, and work–family conflict. *Journal of Vocational Behavior*, 63, 457–472.

- Bushman BJ. (2002). Does venting anger feed or extinguish the flame? Catharsis, rumination, distraction, anger, and aggressive responding. *Personality and Social Psychology Bulletin*, 28, 724–731.
- Bushman BJ, Baumeister RF, Phillips CM. (2001). Do people aggress to improve their mood? Catharsis beliefs, affect regulation opportunity, and aggressive responding. *Journal of Personality and Social Psychology*, 81, 17–32.
- Buss AH, Perry M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452–459.
- Byrk AA, Raudenbush SW. (1992). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks, CA: Sage.
- Carlson DS. (1999). Personality and role variables as predictors of three forms of work–family conflict. *Journal of Vocational Behavior*, 55, 236–253.
- Carlson DS, Kacmar KM, Wayne JH, Grzywacz JG. (2006). Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior*, 68, 131–164.
- De Dreu CKW, Weingart LR. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, 88, 741–749.
- Demos J. (1996). Shame and guilt in early New England. In Harré R, Parrott WG (Eds.), *The emotions: Social, cultural, and biological dimensions* (pp. 74–88). London: Sage.
- Eby LT, Casper WJ, Lockwood A, Bordeaux C, Brinley A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior*, 66, 124–197.
- Eckhardt C, Norlander B, Deffenbacher J. (2004). The assessment of anger and hostility: A critical review. *Aggression and Violent Behavior*, 9, 17–43.
- Edwards DC. (1999). *Motivation and emotion: Evolutionary, physiological, cognitive, and social influences*. Thousand Oaks, CA: Sage.
- Edwards JR, Rothbard NP. (1999). Work and family stress and well-being: An examination of person–environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes*, 77, 85–129.
- Eisenberg N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology*, 51, 665–697.
- Elovainio M, Kivimäki M, Vahtera J, Virtanen M, Keltikangas-Järvinen L. (2003). Personality as a moderator in the relations between perceptions of organizational justice and sickness absence. *Journal of Vocational Behavior*, 63, 379–395.
- Fleeson W. (2004). Moving personality beyond the person–situation debate: The challenge and the opportunity of within-person variability. *Current Directions in Psychological Science*, 13, 83–87.
- Fredrickson BL. (1998). What good are positive emotions? *Review of General Psychology*, 2, 173–186.
- Friede A, Ryan AM. (2005). The importance of the individual: How self-evaluations influence the work–family interface. In Kossek EE, Lambert SJ (Eds.), *Work and life integration: Organizational, cultural, and individual perspectives* (pp. 193–209). Mahwah, NJ: Erlbaum.
- Frijda N. (1988). *The emotions*. Cambridge, UK: Cambridge University Press.
- Frijda N. (1994). Varieties of affects: Emotions and episodes, moods, and sentiments. In Ekman P, Davidson RJ (Eds.), *The nature of emotions: Fundamental questions* (pp. 59–67). New York: Oxford University Press.
- Frone MR, Russell M, Cooper ML. (1992). Prevalence of work–family conflict: Are work and family boundaries asymmetrically permeable? *Journal of Organizational Behavior*, 13, 723–729.

- Frone MR, Russell M, Cooper ML. (1993). Relationship of work–family conflict, gender, and alcohol expectancies to alcohol use/abuse. *Journal of Organizational Behavior*, 14, 545–558.
- Fuller JA, Stanton JM, Fisher GG, Spitzmuller C, Russell SS, Smith PC. (2003). A lengthy look at the daily grind: Time series analysis of events, mood, stress, and satisfaction. *Journal of Applied Psychology*, 88, 1019–1033.
- Grandey A, Cordeiro B, Crouter A. (2005). A longitudinal and multisource test of the work–family conflict and job satisfaction relationship. *Journal of Occupational and Organizational Psychology*, 78, 305–323.
- Greenhaus JH, Beutell NJ. (1985). Sources and conflict between work and family roles. *Academy of Management Review*, 10, 76–88.
- Greenhaus JH, Powell GN. (2003). When work and family collide: Deciding between competing role demands. *Organizational Behavior and Human Decision Processes*, 90, 291–303.
- Greenhaus JH, Powell GN. (2006). When work and family are allies: A theory of work–family enrichment. *Academy of Management Review*, 31, 72–92.
- Grzywacz JG, Marks NF. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5, 111–126.
- Gutek BA, Bhappu AD, Liao-Troth MA. (1999). Distinguishing between service relationships and encounters. *Journal of Applied Psychology*, 84, 218–233.
- Gutek BA, Searle S, Klepa L. (1991). Rational versus gender role explanations for work–family conflict. *Journal of Applied Psychology*, 76, 560–568.
- Hammer L, Thompson C. (2003). Work–family role conflict. In Pitt-Catsouphes M, Kossek E (Eds.), *Sloan work and family encyclopedia*. (http://www.bc.edu/bc_org/avp/wfnetwork/rft/wfpedia/index.html).
- Hammer LB, Cullen JC, Shafiro MV. (2006). Work–family best practices. In Jones F, Burke RJ, Westman M (Eds.), *Work–life balance: A psychological perspective* (pp. 261–275). New York: Psychology Press.
- Harris N. (2003). Reassessing the dimensionality of the moral emotions. *British Journal of Psychology*, 94, 457–473.
- Hastie R, Parke B. (1986). The relation between memory and judgment depends on whether the judgment task is memory-based or on-line. *Psychological Review*, 93, 258–268.
- Hatfield E, Cacioppo JT, Rapson RL. (1994). *Emotional contagion*. Cambridge, UK: Cambridge University Press.
- Heller D, Watson D. (2005). The dynamic spillover of satisfaction between work and marriage: The role of time and mood. *Journal of Applied Psychology*, 90, 1273–1279.
- Heller D, Watson D, Ilies R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin*, 130, 574–600.
- Hofmann SA, Griffin MA, Gavin MB. (2000). The application of hierarchical linear modeling to organizational research. In Klein K, Kozlowski S (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 75–170). San Francisco: Jossey-Bass.
- Hume D. (1739/2003). A treatise of human nature. (<http://manybooks.net/pages/humedavidetext03trthn10/429.html>).
- Ilies R, Judge TA. (2002). Understanding the dynamic relationship between personality, mood, and job satisfaction: A field experience-sampling study. *Organizational Behavior and Human Decision Processes*, 89, 1119–1139.
- Ilies R, Judge TA. (2004). An experience-sampling measure of job satisfaction and its relationships with affectivity, mood at work, job beliefs, and general job satisfaction. *European Journal of Work and Organizational Psychology*, 13, 367–389.

- Judge TA, Boudreau JW, Bretz RD. (1994). Job and life attitudes of male executives. *Journal of Applied Psychology*, 79, 767–782.
- Judge TA, Ilies R. (2004). Affect and job satisfaction: A study of their relationship at work and at home. *Journal of Applied Psychology*, 89, 661–673.
- Kopelman RE, Greenhaus JJ, Connolly TF. (1983). A model of work, family, and interrole conflict: A construct validation study. *Organizational Behavior and Human Decision Processes*, 32, 198–215.
- Kossek EE, Ozeki C. (1998). Work–family conflict, policies, and the job–life satisfaction relationship: A review and directions for organizational behavior–human resources research. *Journal of Applied Psychology*, 83, 139–149.
- Kugler K, Jones WH. (1992). On conceptualizing and assessing guilt. *Journal of Personality and Social Psychology*, 62, 318–327.
- Larsen RJ, Diener E, Lucas RE. (2002). Emotion: Models, measures, and individual differences. In Lord RG, Klimoski RJ, Kanfer R (Eds.), *Emotions in the workplace* (pp. 64–106). San Francisco: Jossey-Bass.
- Lazarus RS. (1991). Progress on a cognitive–motivational–relational theory of emotion. *American Psychologist*, 46, 819–834.
- Lazarus RS. (1994). The stable and unstable in emotion. In Ekman P, Davidson RJ (Eds.), *The nature of emotion: Fundamental questions* (pp. 79–85). New York: Oxford Press.
- Lazarus RS, Cohen-Charash Y. (2001). Discrete emotions in organizational life. In Payne RL, Cooper GL (Eds.), *Emotions at work: Theory, research, and applications for management* (pp. 45–81). Chichester, UK: Wiley.
- LeBlanc MM, Barling J. (2004). Workplace aggression. *Current Directions in Psychological Science*, 13, 9–12.
- Lepine JA, Podsakoff NP, Lepine MA. (2005). A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, 48, 764–775.
- Locke EA. (1976). The nature and causes of job satisfaction. In Dunnette MD (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1343). Chicago: Rand McNally.
- MacDermid SM, Seery BL, Weiss HM. (2002). An emotional examination of the work–family interface. In Lord RG, Klimoski RJ, Kanfer R (Eds.), *Emotions in the workplace* (pp. 402–427). San Francisco: Jossey-Bass.
- Matell MS, Jacoby J. (1971). Is there an optimal number of Likert scale items? Study I: Reliability and validity. *Educational and Psychological Measurement*, 31, 657–674.
- Matell MS, Jacoby J. (1972). Is there an optimal number of alternatives for Likert-scale items? *Journal of Applied Psychology*, 56, 506–509.
- Matthews LS, Conger RD, Wickrama KAS. (1996). Work–family conflict and marital quality: Mediating processes. *Social Psychology Quarterly*, 59, 62–79.
- Miller TQ, Smith TW, Turner CW, Guijarro ML, Hallet AJ. (1996). Meta-analytic review of research on hostility and physical health. *Psychological Bulletin*, 119, 322–348.
- Mischel W, Shoda Y. (1998). Reconciling processing dynamics and personality dispositions. *Annual Review of Psychology*, 49, 229–258.
- Nesselroade JR, McArdle JJ, Aggen SH, Meyers JM. (2002). Dynamic factor analysis models for representing process in multivariate time-series. In Moskowitz DS, Hersberger SL (Eds.), *Modeling intra-individual variability with repeated measures data: Methods and applications* (pp. 235–265). Mahwah, NJ: Erlbaum.
- Netemeyer RG, Boles JS, McMurrian R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, 81, 400–410.

- Norton R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 45, 141–151.
- Parrott WG, Harré R. (1996). Some complexities in the study of emotions. In Harré R, Parrott WG (Eds.), *The emotions: Social, cultural, and biological dimensions* (pp. 1–20). London: Sage.
- Plutchik R. (2003). *Emotions and life*. Washington, DC: APA.
- Russell JA. (1997). Reading emotions from and into faces: Resurrecting a dimensional-contextual perspective. In Russell JA, Fernandez-Dols JM (Eds.), *The psychology of facial expression* (pp. 295–320). Cambridge, UK: Cambridge University Press.
- Rusting CL, DeHart T. (2000). Retrieving positive memories to regulate negative mood: Consequences for mood-congruent memory. *Journal of Personality and Social Psychology*, 78, 737–752.
- Sartre J. (1948). *The emotions* (B. Frechtman trans.). New York: Philosophical Library.
- Schwarz N, Bohner G. (2001). The construction of attitudes. In Tesser A, Schwarz N (Eds.), *Blackwell handbook of social psychology: Intra-individual processes* (Vol. 1). Oxford, UK: Blackwell.
- Smith CA, Lazarus RS. (1993). Appraisal components, core relational themes, and the emotions. *Cognition and Emotion*, 7, 233–269.
- Smith TW, Gallo LC. (1999). Hostility and cardiovascular reactivity during marital interaction. *Psychosomatic Medicine*, 61, 436–445.
- Snijders TAB, Bosker RJ. (1993). Standard errors and sample sizes in two-level research. *Journal of Educational Statistics*, 18, 237–260.
- Snijders TAB, Bosker RJ. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. London: Sage Publications.
- Stanton JM, Weiss EM. (2002). *Online panels for social science research: An introduction to the Study Response project*. (Tech. Rep. No. 13001). Syracuse, NY: Syracuse University, School of Information Studies.
- Stoeva AZ, Chiu RK, Greenhaus JH. (2002). Negative affectivity, role stress, and work-family conflict. *Journal of Vocational Behavior*, 60, 1–16.
- Symonds D, Horvath AO. (2004). Optimizing the alliance in couple therapy. *Family Process*, 43, 443–455.
- Tan HH, Foo MD, Kwek MH. (2004). The effects of customer personality traits on the display of positive emotions. *Academy of Management Journal*, 47, 287–296.
- Tangney JP. (1999). The self-conscious emotions: Shame, guilt, embarrassment, pride. In Dalglish T, Power MJ (Eds.), *Handbook of cognition and emotion* (pp. 541–568). New York: Wiley.
- Tangney JP. (2001). Constructive and destructive aspects of shame and guilt. In Bohart AC, Stipek DJ (Eds.), *Constructive and destructive behavior* (pp. 127–145). Washington, DC: APA.
- Taylor G. (1996). Guilt and remorse. In Harré R, Parrott WG (Eds.), *The emotions: Social, cultural, and biological dimensions* (pp. 57–73). London: Sage.
- Watson D. (2000). *Mood and temperament*. New York: Guilford Press.
- Watson D, Clark LA. (1994). *The PANAS-X: Manual for the positive and negative affect schedule—Expanded form*. Unpublished manuscript, University of Iowa.
- Watson D, Hubbard B, Wiese D. (2000). General traits of personality and affectivity as predictors of satisfaction in intimate relationships: Evidence from self- and partner-ratings. *Journal of Personality*, 68, 413–449.
- Wayne JH, Musisca N, Fleeson W. (2004). Considering the role of personality in the work–family experience: Relationships of the big five to work–family conflict and facilitation. *Journal of Vocational Behavior*, 64, 108–130.

- Weiss HM. (2002). Antecedents of emotional experiences at work. *Motivation and Emotion*, 26, 1–2.
- Weiss HM, Cropanzano R. (1996). Affective events theory: A theoretical discussion of the structure, causes, and consequences of affective experiences at work. *Research in Organizational Behavior*, 18, 1–74.
- Westman M, Vinokur AD, Hamilton VL, Roziner I. (2004). Crossover of marital dissatisfaction during military downsizing among Russian army officers and their spouses. *Journal of Applied Psychology*, 89, 769–778.
- Wharton AS, Erickson RJ. (1993). Managing emotions on the job and at home: Understanding the consequences of multiple emotional roles. *Academy of Management Review*, 18, 457–486.
- Williams KJ, Alliger GM. (1994). Role stressors, mood spillover, and perceptions of work–family conflict in employed parents. *Academy of Management Journal*, 37, 837–868.
- Williams KJ, Suls J, Alliger GM, Learner SM, Wan CK. (1991). Multiple role juggling and daily mood states in working mothers: An experience sampling study. *Journal of Applied Psychology*, 76, 664–674.
- Zwaal C, Prkachin KM, Husted J, Stones M. (2003). Components of hostility and verbal communication of emotion. *Psychology and Health*, 18, 261–273.