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Abstract:

Work exhaustion of information technology (IT) professionals is a serious concern. This study offers a unique perspective on IT professional work exhaustion by drawing on two theoretical domains: emotional labor and conflict management. Emotional labor theory is concerned with employee's display of emotion in the workplace while conflict management theory addresses one's preferred style when conflict arises. This study identifies links between the ways in which one responds to conflict situations and the way in which one monitors and controls emotional displays. The experience of conflict tends to generate negative emotions while display rules govern appropriate emotional demeanors in the workplace. The findings suggest that the perception of display rules influences conflict management styles. Furthermore, conflict management styles influence the use of strategies of deep acting and surface acting which have differential relationships with work exhaustion.

Keywords: IT Professional, Work Exhaustion, Emotional Labor, Conflict Management.

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I. INTRODUCTION

Information technology (IT) professionals are an integral part of today's business environment. This profession comprises a diverse group of professionals who perform many different types of responsibilities in many different types of organizations. IT professionals are often characterized as boundary spanners who must interact with business colleagues in many different areas of the organization (Pawlowski & Robey, 2004). Shared information technology, which supports business processes, serves as the boundary object that drives these interactions and brings IT professionals into contact with customers and colleagues both internal and external to an organization (Bassellier & Benbasat, 2004; Levina, 2005). Because IT professionals' ability to work productively with others is critical to effective support and maintenance of a firm's technological infrastructure (Fink & Neumann, 2007), it is important to further our understanding of how IT professionals interact with others in the workplace. One potential problem that may arise from this interaction is work exhaustion.

IT professional work exhaustion has long been an issue of concern because of its potential impacts to the individual and to organizations. Industry managers face ongoing worries about retaining and motivating valuable IT employees in the face of ever-increasing workloads (Levinson, 2010). Academic research has identified numerous detrimental outcomes of exhaustion including reduced organizational commitment, lowered productivity and work quality, reduced customer service, and increased absenteeism and turnover (Moore, 2000; Maudgalya, Wallace, Daraiseh, & Salem, 2006; Pawlowski, Kaganer, & Cater, 2007). Established antecedents to work exhaustion focus primarily on constructs drawn from organizational behavior theory such as role conflict, role ambiguity, and perceived workload (Moore, 2000; Kim & Wright, 2007). Authors have also begun to expand our understanding of IT professional work exhaustion by examining additional factors including work-family conflict (Ahuja, McKnight, Chudoba, George, & Kacmar, 2007), interpersonal relationships in the workplace (Huarng, 1998, 2001) and the emotional factors that stem from those relationships (Rutner, Hardgrave, & McKnight, 2008). In this paper, we build on this interpersonal perspective by integrating elements from two theoretical areas: conflict management theory and emotional labor theory.

In the IT profession and in other business areas, conflict is an unavoidable part of the work environment because different parties pursue their desired outcomes (Robey, Smith, & Vijayasarathy, 1993; Barki & Hartwick, 2001). Conflict management theory suggests that the manner in which conflict is handled can impact outcomes to both employees and their organization. Productive conflict management increases the creative tension among different parties or groups in an organization, which leads to more-creative solutions to problems at hand (Gobeli, Koenig, & Bechinger, 1998). On the other hand, poorly managed conflict can lead to hostility, reduced communication, and decreased task performance (Sawyer, 2001; Yeh & Tsai, 2001). In addition to effects on organizational outcomes, conflict can also impact individual employees. Stress resulting from poorly managed conflict can lead to emotional exhaustion, absenteeism, turnover intention, and reduced professional efficacy (van Dierendonck & Mevissen, 2002; Giebels & Janssen, 2005). Thus, an exploration of conflict management theory offers promise in increasing our understanding of IT professional work exhaustion.

Emotional labor refers to the management of emotional displays in the workplace (Hochschild, 1983; Ashforth & Humphrey, 1993). In many business environments, there are expectations (termed display rules) that employees show positive emotions (such as friendliness, good cheer, and enthusiasm) and suppress negative emotions (such as fear, anger, and hostility). However, employees' felt emotions do not always match those they are expected to display. Individuals may employ two strategies, deep acting and surface acting, to produce the desired emotional displays (Hochschild, 1983). The strategy used impacts several outcomes including work exhaustion (Cote & Morgan, 2002; Lewig & Dollard, 2003; Rutner et al., 2008).

The conceptual linkage between these two theoretical areas has been given scant attention; Nair (2008, p. 368), claiming that "the literature on conflict has developed with an almost complete neglect of emotions" , has challenged researchers to "explore the relationship between conflict management and emotion management" (p. 375). We agree that the convergence of these two theoretical areas deserves further study. Integrating these two theories will potentially lend insight into the influence of emotional display expectations on conflict-management styles and on their emotional display strategies. Therefore, we pose the following research question: How do emotional display rules, conflict-management styles, and emotional management strategies impact IT professional work exhaustion?

II. CONFLICT MANAGEMENT THEORY

Conflict in information systems (IS) can stem from several sources including a lack of shared decision making and goals between users and developers, uncertainty about the benefits of the systems, or the division of responsibilities in the systems-development process (Smith & McKeen, 1992). Conflict in a technical support setting may occur when support personnel prioritize help requests differently than users believe they should. IT managers, like other types of managers, must frequently deal with conflict situations as they interact with employees and other stakeholders. Researchers studying conflict in the information systems arena have found that not only is it an unpleasant experience for participants but also that it negatively impacts the outcomes of IS development projects (Robey et al., 1993; Barki & Hartwick, 2001).

Numerous studies have examined the negative effects of conflict on both individuals and organizations. Outcomes include burnout (which incorporates work exhaustion, along with reduced professional efficacy and cynicism), absenteeism (Giebels & Janssen, 2005; van Dierendonck & Mevissen, 2002), reduced quality of work life, work disruption, poor work performance (Cohen, Birkin, Garfield, & Webb, 2004), and physical and psychosomatic complaints (De Dreu, van Dierendonck, & Dijkstra, 2004). However, some researchers have suggested that, under some circumstances, conflict may lead to positive outcomes including creative problem solving (Smith, 1969), improved group cohesiveness (Bell & Blakeney, 1977; Jehn & Mannix, 2001), and better organizational decision making (Schwenk, 1990). Researchers have frequently noted that one of the keys to realizing positive outcomes from conflict lies in the way that it is managed (Bell & Blakeney, 1977; Wall & Callister, 1995; Barki & Hartwick, 2001). In the following section, we discuss several conflict-management styles.

Conflict-Management Styles

Researchers have identified several distinct conflict-management styles and classified them in various ways (e.g., Knapp, Putnam, & Davis, 1988; Tinsley & Brett, 2001; Nauta, De Dreu, & Van Der Vaart, 2002). The dual concern model is one of the most widely accepted methods of organizing and describing conflict-management styles. Based on the work of Blake and Mouton (1964), this model arranges conflict-management styles on a two-dimensional grid. Blake and Mouton label these dimensions "concern for people" and "concern for production, while other authors term them "cooperativeness" and "assertiveness" (Thomas, 1976, 1992) or "concern for others" and "concern for self" (Rahim, 1983).

The styles resulting from combinations of high, moderate, and low values on these two dimensions have been given varying titles; however, their meaning remains comparable. Figure 1 (adapted from those in Blake and Mouton (1964), Rahim (1983) and Thomas (1992)) shows several of the varying conflict-management styles and their position relative to the two proposed dimensions. In this paper, we adopt the terminology that Barki and Hartwick (2001) use and refer to these styles as avoiding, asserting, compromising, accommodation, and problem solving.

Avoiding is the style characterized by low levels of both assertiveness (concern for self) and cooperativeness (concern for others) (Rahim, 1983; Thomas, 1992; Barki & Hartwick, 2001). One avoids discussing the issues and refuses to participate in a problem solving process. The position represented by low cooperativeness and high assertiveness is termed asserting (Barki & Hartwick, 2001). This style is characterized by one party achieving their goal at the cost of the other(s). Low assertiveness combined with high cooperativeness is represented by accommodation (Thomas, 1992; Barki & Hartwick, 2001). In this style, the conflict is played down and one party will often yield to the wishes of another. The condition of moderate levels of both the cooperativeness and assertiveness dimensions is represented by the compromising style (Bell & Blakeney, 1977; Rahim, 1983; Thomas, 1992; Barki & Hartwick, 2001), which is characterized by give and take. Finally, a conflict-management style characterized by high levels of both assertiveness and cooperativeness is termed problem solving (Barki & Hartwick, 2001). When this style is employed, the party works to understand the reasons for the conflict and attempts to find a solution that meets both parties' goals.

One assumption underlying the dual concern model is that individuals are predisposed to a dominant conflict style that is followed consistently both during discrete conflict episodes and across multiple conflict episodes (Nicotera, 1994). While conflict-management style choices are influenced by stable factors such as culture and personality (Kaushal & Kwantes, 2006), there is evidence that the assumption of a single dominant style oversimplifies conflict participants' behavior.

First, an individual may employ different conflict-management styles at different times, in different contexts, and when dealing with different interaction partners. For example, one is more likely to employ direct, assertive styles when dealing with subordinates or peers than with organizational superiors (Drory & Ritov, 1997; Nguyen & Yang, 2012). Likewise, one may employ avoiding or accommodating styles when the conflict outcome is of relatively low

importance (Pruitt, 1995) or when one believes that maintaining a strong relationship with the other party is more important than achieving a particular conflict outcome (Tjosvold & Sun, 2002).

		Assertiveness or concern for self		
		High	**Moderate**	**Low**
Cooperativeness or concern for others	**High**	**Problem solving** Barki & Hartwick (2001) **Confronting** Bell & Blakeney (1977), Gobeli et al. (1998) **Integrating** Rahim (1983) **Collaboration** Thomas (1976, 1992)		**Accommodation** Thomas (1976, 1992), Barki & Hartwick (2001) **Smoothing** Bell & Blakeney (1977) **Obliging** Rahim (1983), Gobeli et al. (1998)
	Moderate		**Compromising** Bell & Blakeney (1977), Rahim (1983), Thomas (1992), Barki & Hartwick (2001) **Give and take** Gobeli et al. (1998) **Sharing** Thomas (1976)	
	Low	**Asserting** Barki & Hartwick (2001) **Forcing** Bell & Blakeney (1977), Gobeli et al. (1998) **Dominating** Rahim (1983) **Competitive** Thomas (1976), Thomas (1992)		**Avoiding** Thomas (1976), Rahim (1983), Thomas (1992), Barki & Hartwick (2001) **Withdrawing** Bell & Blakeney (1977), Gobeli et al. (1998)

Figure 1. Conflict-Management Styles

Second, an individual may employ different conflict-management styles in a given conflict incident. If one's initially selected style does not result in the desired outcome(s), the conflict participant may switch to another style in an attempt to reach a satisfactory conclusion (Pruitt, 1995). A conflict participant may also employ different styles with respect to different elements of the conflict. For example, in a technique described as firm flexibility (Pruitt, 1995), one may maintain one's determination to achieve their ultimate goal but be willing to compromise or accommodate the other party in how that goal is achieved. The term "conglomerated conflict behavior" describes such combinations of styles in a given conflict episode (Van de Vliert, Nauta, Giebels, & Janssen, 1999, p. 477). This perspective of combining conflict-management styles has been adopted by many conflict researchers. For example, Thomas, Thomas, and Schaubhut (2008) compare the effects of assertive versus unassertive conflict-management styles. Chung-Yan and Moeller (2010) investigate the impact of combined problem solving and compromising styles. Munduate, Ganaza, Peiro, and Euwema (2007) present a more-extensive review of empirical studies using combinations of conflict-management styles.

Building on the perspective that the five previously described conflict-management styles are not always enacted as discrete behavioral responses, Van de Vliert and Euwema (1994) expand on the standard dual concern model by examining additional dimensions of agreeableness and activeness. In this context, they use agreeableness to describe the use of conflict resolution behaviors that tend to give a pleasant and relaxed impression. They associate

agreeableness with behaviors described as kind, pleasant, and understanding. They describe disagreeable conflict resolution behaviors as those associated with an unpleasant and strainful impression. They associate disagreeableness with behaviors described as cruel, formal, tense, and antagonistic. They use the dimension of activeness to describe the degree to which conflict participants will take action to pursue their goals. Active behaviors include confronting, discussing, and forcing, whereas passive behaviors include avoiding and giving in.

Using the dimensions of agreeableness and activeness to characterize the five conflict-management styles derived from the dual concern model, Van de Vliert and Euwema (1994) develop a useful taxonomy of conflict behavior. They make their first distinction on the agreeableness dimension. They classify competition behaviors (including both direct and indirect fighting) as disagreeable on this dimension, which they map to the asserting conflict-management style. They label behaviors on the agreeable end of the dimension as cooperative. They further subdivide these behaviors on the activeness dimension. On the passive end of the scale, they include the conflict-management styles of avoiding and accommodating in the nonconfrontation group of behaviors. On the active end of the scale, they include the conflict-management styles of compromising and problem solving in the negotiation group of behaviors. Van de Vliert and Euwema (1994) confirm the validity of this taxonomy by observing the conflict behavior of police officers in a laboratory experiment. See Figure 2 for the Van de Vliert and Euwema model (note that the assertiveness conflict-management style is represented by both direct and indirect fighting in this figure).
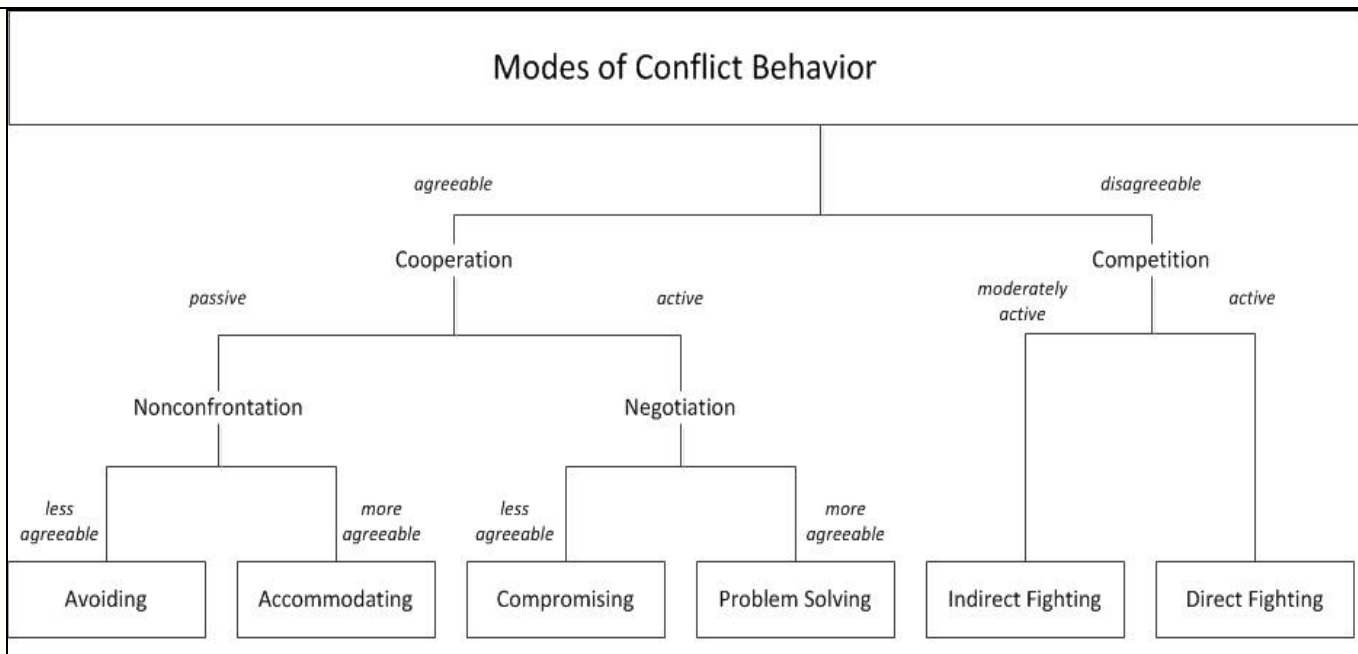

Figure 2. Van de Vliert and Euwema's (1994) Modes of Conflict Behavior

For our purpose, we believe that categorizing conflict-management styles using Van de Vliert and Euwema's (1994) taxonomy is desirable for two reasons. First, considering the agreeableness and activeness dimensions along with the dual concern models' underlying dimensions allows us additional insight into conflict behaviors while we hypothesize about the relationship between conflict behavior and emotion management styles. Second, while the five conflict management strategies the dual concern model proposes are often discussed as discrete constructs, in practice, individuals may not always follow the same strategies in all situations or even in a given situation. Rather, they may have a set of preferred styles for different situations or they may employ a blend of styles (Munduate et al., 1999). Thus, we believe that these conglomerated conflict behaviors may represent a more-accurate reflection of the behavior modeled in this study than would discrete modeling of the five different styles. For these reasons, we employ the grouping that Van de Vliert and Euwema (1994) suggest. In Section 3, we describe the relationship between emotional management and conflict management, and represent competition by the asserting style, nonconfrontation by the avoiding and accommodating styles, and negotiation by the problem solving and compromising styles.

III. EMOTIONAL LABOR THEORY

As we state in Section I, the management of emotional displays in the workplace (Hochschild, 1983; Ashforth & Humphrey, 1993) is a component of emotional labor theory. Many employees, especially those in customer-facing roles, are subject to display rules, which are expectations that they will monitor and control the public expression of

emotion in given situations (Ashforth & Humphrey, 1993). In many business settings, employees are subject to expectations to put forth a positive emotional display and suppress the portrayal of negative emotion. These expectations are termed positive display rules and negative display rules, respectively. There are some settings in which employees are expected to portray negative emotions (i.e., urgency or anger) and suppress positive emotions (i.e., sympathy or compassion). These expectations may be derived from various motivating factors including explicitly stated employer mandates, implicit professional norms, or personal desires to use one's emotional display to influence other's reactions (Cote & Morgan, 2002; Rafaeli & Sutton, 1987).

Employees' felt emotion is not always consistent with the desired emotional display, which causes individuals to use emotional display strategies to present the desired demeanor. In Hochschild's (1983) original study of bill collectors and flight attendants, she defines deep acting as occurring when employees work to control emotions they are experiencing to bring them into agreement with accepted norms. Deep acting, sometimes termed "faking in good faith", refers to an attempt by employees to actually induce the feelings that they wish to display (Ashforth & Humphrey, 1993; Grandey, 2003; Rafaeli & Sutton, 1987). In contrast, surface acting may be defined as "faking in bad faith". Surface acting occurs when an employee displays an emotional facade that complies with the behavioral norm, yet conflicts with the emotions he is experiencing. Surface acting is simply an attempt to simulate the desired emotional display by manipulating one's facial expressions and both verbal and non-verbal cues with no attempt to actually change the discrepant underlying emotion (Ashforth & Humphrey, 1993; Grandey, 2003; Rafaeli & Sutton, 1987). This distinction is important because deep acting has been identified as a healthier approach than surface acting when employees must cope with a discrepancy between felt emotions and desired emotional displays. Surface acting has consistently been associated with increased work exhaustion, while deep acting shows either no such relationship or a much weaker relationship (Holman, Chissick, & Totterdell, 2002; Brotheridge & Lee, 2003; Grandey, 2003; Rutner, Riemenschneider, O'Leary-Kelly, & Hardgrave, 2011).

Researchers studying emotional labor have called for an extension of this theory from traditional human-service occupations to other types of employees. As Ashforth and Humphrey (1993, pp. 109-110) point out, "it is difficult to imagine an organizational role to which display rules would not apply at various points". There has been only a limited amount of research exploring emotional labor in IT professionals. Rutner et al. (2011) studied IT professionals and examined emotion-related job expectations. They found that IT professionals appear to be comparable to other groups that have been studied. More specifically, they show that positive display expectations predicted deep acting, but not surface acting. Conversely, negative display expectations predicted surface acting but not deep acting. Furthermore, surface acting was positively related to work exhaustion, while deep acting was not. Another study (Rutner et al., 2008) found that emotional dissonance predicted work exhaustion in IT professionals. In our study, we extend the extant research by exploring the relationship between conflict-management styles and emotional labor, specifically surface acting and deep acting.

IV. INTEGRATING CONFLICT MANAGEMENT AND EMOTIONAL LABOR

Here, we link conflict management theory and emotional labor theory in two ways. First, we posit a relationship between emotional display rules and conflict-management styles. Second, we also explore a relationship between conflict-management styles and emotion management strategies. Conflict is an inherently emotional experience (Bodtker & Jameson, 2001; Jordan & Troth, 2004). Some have suggested that the discomfort often associated with conflict is due to the experience of accompanying negative emotion (Barki & Hartwick, 2001; Bodtker & Jameson, 2001). This may be especially true in an organizational setting where excessive displays of emotion are generally discouraged but conflicts are common. The expression of emotion in the workplace is governed by emotional display rules.

Display rules are expectations that an employee will present a desired emotional demeanor while interacting with others in the workplace. In some cases, these expectations are explicitly mandated to further organizational goals, while ,in other cases, employees may be personally motivated to project a desired emotional display with the desired goal of influencing others' emotional reactions (Rafaeli & Sutton, 1987; Sutton, 1991). Employees' perceptions regarding appropriate emotional displays are influenced by supervisors' expectations (Diefendorff & Richard, 2003) and by feedback from colleagues and coworkers (Sutton, 1991). IT professionals' attitudes regarding emotional displays may also be influenced by their desire to maintain productive working relationships with business colleagues and IT users (Rutner et al., 2011).

To our knowledge, no studies to date have explored the relationship between display rules and the use of conflict-management styles. We base our hypotheses in this area on a consideration of how display rules may be interpreted in a work setting. As Diefendorff, Richard, and Croyle (2006, p.273) point out, "display rules are often not explicitly stated by organizations but exist as unwritten norms". These norms may be conveyed to employees through a variety of informal socialization processes and feedback from coworkers (Rafaeli & Sutton, 1987; Seymour & Sandiford, 2005). The importance of setting an example of appropriate behavior in the workplace is recognized by

IT professionals (Rutner et al., 2011). Combined with a recognition that IT professionals must develop positive working relationships with customers and clients (Bassellier & Benbasat, 2004; Markus & Benjamin, 1996), it is reasonable to expect that, when one wishes to express a desired emotional demeanor (embraces a specific attitude), one may also enact specific behaviors (actual behavior) that are consistent with that demeanor. IT professionals' attitudes regarding appropriate behaviors in the workplace may also influence their behaviors when conflict arises. In other words, positive display rules or perceptions that one should appear to be friendly, helpful, and positive may also be linked to a desire to actually be friendly, helpful, and positive, which leads an employee who perceives high levels of positive display rules to be more likely to adopt more-cooperative conflict management strategies such as problem solving or compromising. Negative display rules or perceptions that one should avoid expressing anger, hostility, or aggression may lead to a reluctance to aggressively pursue one's self interest in a dispute and, therefore, lead to the use of nonconfrontational conflict-management styles such as accommodating and avoiding. The absence of display rules, either positive or negative, may be interpreted as a license to display felt negative emotion and, therefore, lead to the adoption of the more-disagreeable competition conflict-management style. Thus, we propose:

> **Hypothesis 1:** The perception of positive display rules is directly related to the use of negotiation conflict-management styles (problem solving and compromising).

> **Hypothesis 2:** The perception of negative display rules is directly related to the use of nonconfrontation conflict-management styles (accommodating and avoiding).

> **Hypothesis 3a:** The perception of positive display rules is inversely related to the use of competition conflict-management style (asserting).

> **Hypothesis 3b:** The perception of negative display rules is inversely related to the use of competition conflict-management style (asserting).

We also propose relationships between emotional management strategies and conflict-management styles. Having selected a conflict-management style, an individual will employ various tactics to influence others, which includes manipulating their own emotional displays (Barry, 1999). This control over emotional expression is especially important when one experiences anger or frustration in a conflict situation. Conflict-management styles have been described as behaviors "oriented toward the intensification, reduction, and resolution of the tension" that is associated with being in conflict (De Dreu, Harinck, & Van Vianen 1999, p. 371). Conflict researchers have also recognized the importance of emotional displays in reaching desired outcomes: "During conflict, expressions of anger may influence the behavior of opponents, which may, in tum, affect whether conflict is resolved or whether it escalates" (Van Kleef & Cote, 2007, p. 1557). Controlling emotional displays may also have implications beyond the immediate conflict situation because angry outbursts may tend to reduce trust and increase the potential for retaliation (Gibson & Callister, 2010). Thus, we expect that conflict participants will tend to select emotional display strategies that are consistent with their chosen conflict-management styles.

When theorizing about the techniques that a conflict participant may employ to manipulate their emotional display, we considered both the underlying dimensions posited by the dual concern model (Blake & Mouton, 1964)—concern for self (aka assertiveness) and concern for others (aka cooperativeness)—and the agreeableness and activeness dimensions used to categorize conflict-management styles (Van De Vliert & Euwema, 1994). These dimensions influence a participant's choice of conflict-management style and may also influence the tactic, deep acting and/or surface acting, which is used to control emotional displays.

The emotional display strategies of deep and surface acting are differentiated by one's internal effort to truly embody perceived display rules. Because emotional display rules (both externally mandated and internally motivated) are driven by the impression one makes on others in the workplace, levels of cooperativeness (the degree to which one is concerned with other's interests) may impact the extent to which one wishes to project display rule-compliant emotion and one's use of emotional labor strategies to enact those expectations. In other words, an individual feeling greater concern for others' interests may be more likely to engage in deep acting in order to convey the sincerity of the actor's concern for the interaction partner's interests. Likewise, when one feels lower concern for others and is confronted with a discrepancy between felt emotion and display rules, the individual may be more likely to simply put on the appropriate mask through surface acting.

Further, individuals who tend to enact more-agreeable conflict management behavior are likely to have a greater interest in making a positive impression on others. Thus, these people may be more interested in expending effort to present the desired emotional display than those who employ disagreeable behaviors. Because deep acting requires

effort to bring one's felt emotion into line with desired emotional display, individuals engaging in active conflict-management styles may be more likely to employ deep acting than those using passive conflict-management styles.

Van de Vliert and Euwema's (1994) negotiation group of behaviors includes the compromising and problem solving conflict-management styles. These styles are characterized by moderate-to-high concern for both self and others, high levels of agreeableness, and high levels of activeness. Individuals employing these conflict-management styles may be more likely to truly feel the enthusiasm desired by positive display rules and to believe that inappropriate negative outbursts would be distressing for interaction partners. A high degree of activeness suggests that they would be willing to expend effort to maintain pleasant relationships and would, therefore, prefer deep acting to surface acting. Thus, we expect that these individuals will be more likely to engage in deep acting when felt emotion differs from a desired emotional display. Thus, we propose:

> **Hypothesis 4:** IT professionals employing negotiation styles (either problem solving or compromising) are likely to engage in deep acting.

The nonconfrontation group of behaviors includes the avoiding and accommodating conflict-management styles (Van De Vliert & Euwema, 1994). These conflict-management styles are characterized by low levels of concern for self, high levels of agreeableness, and low levels of activeness. While individuals employing these styles may recognize the importance of display rules, they may also have lower personal motivation to use emotional displays to achieve a desired goal. These passive conflict-management styles represent attempts to minimize occurrences of conflict either by withdrawing from the situation (avoiding) or by giving in to the other party's interest (accommodating). However, they are differentiated by their levels of agreeableness, with accommodating being more agreeable than avoiding. An employee enacting a more-agreeable conflict-management style may have greater concern over the apparent sincerity of their emotional display and may, therefore, employ deep acting. However, one who wishes to withdraw from a conflict situation may simply use surface acting to control the leakage of an appropriate feeling. Thus, these individuals may employ either deep acting or surface acting when confronted with a discrepancy between felt and desired emotions. Thus, we propose:

> **Hypothesis 5a:** IT professionals employing nonconfrontation styles (either accommodating or avoiding) are likely to engage in surface acting.
>
> **Hypothesis 5b:** IT professionals employing nonconfrontation styles (either accommodating or avoiding) are likely to engage in deep acting.

The asserting conflict-management style, referred to as competition by Van de Vliert and Euwema (1994), is characterized by low concern for others' interests and high concern for one's self-interests (Blake & Mouton, 1964; Van De Vliert & Euwema, 1994; Barki & Hartwick, 2001). Although this style is also characterized by high levels of activeness, it is also associated with low levels of agreeableness (Van de Vliert & Euwema, 1994). Because these individuals have already chosen a conflict-management style characterized as leaving an unpleasant and strainful impression, we expect that these individuals using it will be unlikely to engage in deep acting due to their lack of concern for others' emotional reactions. While assertive conflict managers may simply disregard display rules in some conflict situations altogether, the display of anger or frustration may not be acceptable in all situations. For example, one might feel compelled to restrict such expressions when dealing with a difficult customer who might report overtly rude behavior. In such situations, surface acting may be employed to present the appropriate front with no attempt at sincerity (Seymour & Sandiford, 2005). By displaying appropriate, but obviously false, emotion, the employee is able to retain some sense of control over their personal expression. Thus, employees using the competition conflict-management style are expected to employ surface acting when they find it necessary to control emotional displays. Thus, we propose:

> **Hypothesis 6:** IT professionals employing a competition style (asserting) are likely to engage in surface acting.

The model formed by the hypotheses stated above positions conflict-management style as a mediator of the established relationship between display rules and emotional display strategies. Display rules embody employees' perceptions that a desired emotional display must be shown in a given situation. Both conflict-management styles and emotional display strategies may be characterized as behavioral responses to a situation and the perceived demands of that situation. While it is possible that the relationships between these constructs may vary from those illustrated in our model, we can speculate that an employee in a conflict situation may hold a desire to resolve the conflict as their primary motivation. Therefore, controlling emotional displays, either through deep acting or surface acting, may be a tool employed to reach the desired goal. Jordan and Troth (2004, p. 198) point out that "emotional management revolves around the regulation of emotions—that is, an individual's ability to connect or disconnect

from an emotion depending on its usefulness in any given situation". Because the direct relationships between display rules and emotional display strategies are maintained in the model, conflict management strategies are expected to partially mediate those relationships. Thus, we propose:

Hypothesis 7: Negotiation will partially mediate the relationship between positive display rules and deep acting.

Hypothesis 8: Nonconfrontation will partially mediate the relationship between negative display rules and surface acting.

V. EFFECTS OF WORK STRESSORS

In order to position this model in the literature regarding IT professional work exhaustion, we incorporate three traditional role stressors that have been shown to contribute to work exhaustion. Role conflict is "incompatibility and incongruity in the expectations associated with a particular job role" (Guimaraes & Igbaria, 1992, p. 277). This conflict is felt when employees have the sense of being pulled in different directions by incompatible job requirements. These differing expectations may stem from one or more individuals or from different groups (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Role ambiguity is "the lack of clear and precise information regarding what is expected of the role incumbent" (Baroudi, 1985, p. 342). A role incumbent may experience ambiguity because of a lack of information about job expectations, about how to meet those expectations, or about the consequences of role performance (Van Sell, Brief, & Schuler, 1981). Role conflict and role ambiguity are work stressors that have been shown to have a strong relationship with work exhaustion (Cordes & Dougherty, 1993; Lee & Ashforth, 1996. These stressors represent demands on an employee's resources and have consistently been positively linked to higher levels of work exhaustion. High workloads are endemic to the IT environment and have also been shown to contribute to work exhaustion (Moore, 2000). These stressors represent demands on an employee's resources and have consistently been positively linked to higher levels of work exhaustion. Thus, we propose:

Hypothesis 9: Role ambiguity will be positively related to work exhaustion.

Hypothesis 10: Role conflict will be positively related to work exhaustion.

Hypothesis 11: Perceived workload will be positively related to work exhaustion.

Figure 3 illustrates our hypotheses. In order to appropriately illustrate our hypotheses, we model some conflict-management styles as reflective first-order factors associated with second-order constructs representing the groupings derived from Van De Vliert and Euwema (1994). We show problem solving and compromising as reflective first-order factors for the negotiation style. We show accommodating and avoiding as reflective first-order factors for the nonconfrontation style. In order to evaluate these hypotheses, we extend an existing model examining emotional labor in IT professionals drawn from Rutner et al. (2011). We do not present formal hypotheses for the relationships drawn from that model. In Section 7, we report on the tests of these hypotheses and the knowledge gained from those examinations.

VI. METHODS

Survey Development

We gathered data to test the hypotheses in this study through a cross-sectional survey. We drew the measurement items from established scales (see Appendix A for details). We made minor modifications and additions to adapt the scales to the IT-workforce context. We conducted both face-validity evaluations and a pilot study to assess the measurement items before conducting the full study. Based on these evaluations, we made minor changes to the wording of some scale items. Reliability for all the measurement scales was at or near acceptable levels. Exploratory factor analysis of the pilot data showed reasonable evidence for convergent and discriminant validity, with only a few items showing low loadings or cross loadings on other factors. We retained all measurement items in the full survey with only slight modifications (see Table 1).

Full Study

Three organizations agreed to participate in the full study (one organization was a national retailer, one was an organization involved in transmitting and monitoring electrical power, and one was a data-services organization). Although this was a convenience sample, all three organizations employed large numbers of IT professionals in a variety of job positions. Due to the potential for display rules to vary across these three organizations, we included

organization as a control variable in the model positioning it as an antecedent to work exhaustion (these relationships are not depicted in Figure 1 to maintain its readability). We distributed the full survey to 529 IT professionals. Two hundred ninety-four surveys were completed. We found 22 responses were to be unusable, which left 272 usable surveys (response rate: 51.4%). Table 2 reports respondents' demographic data. Note that the data reported in this study was part of a larger data collection effort; findings from this data set were also reported in Rutner et al. (2011).
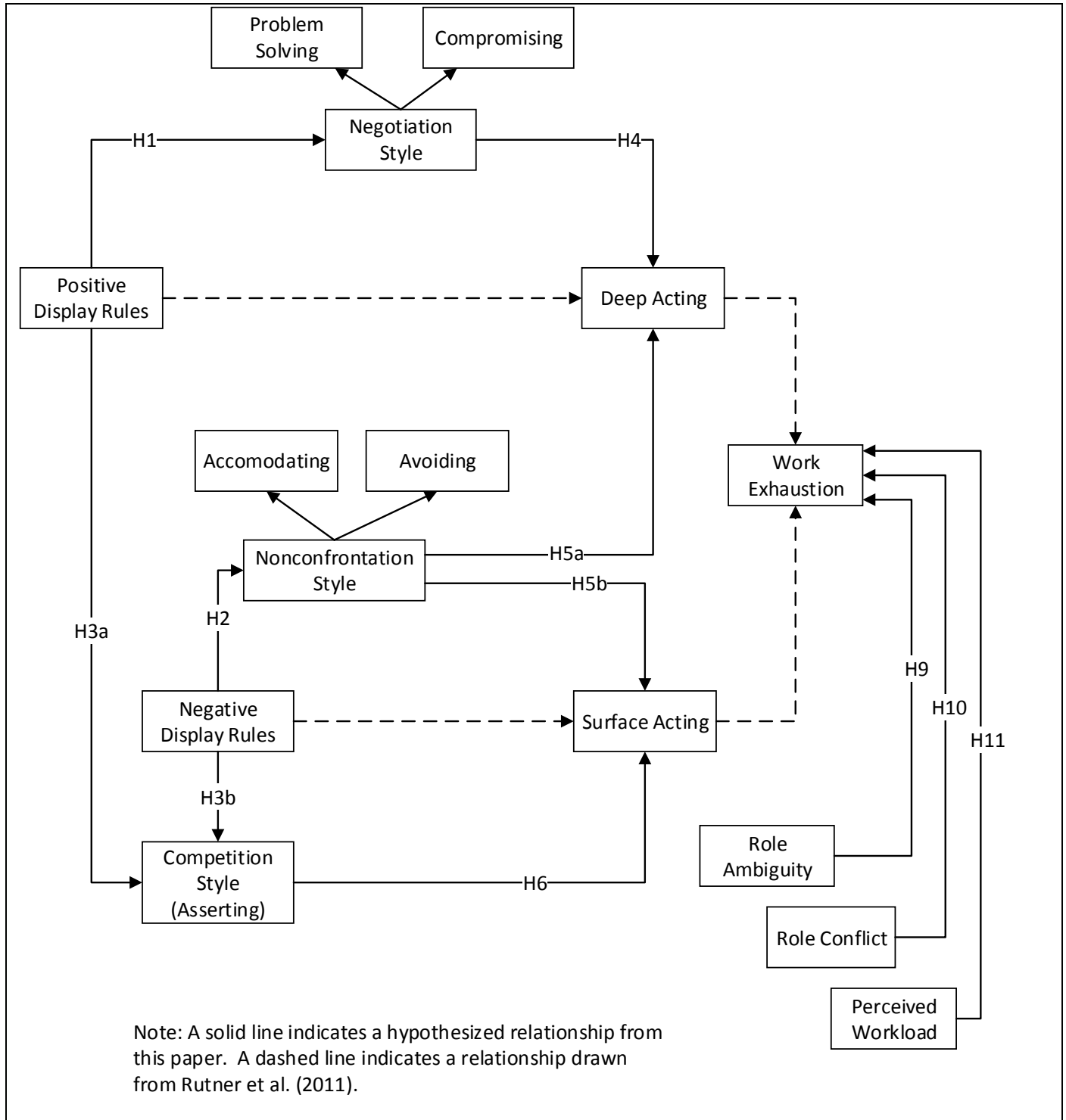

Note: A solid line indicates a hypothesized relationship from this paper. A dashed line indicates a relationship drawn from Rutner et al. (2011).

Figure 3. Theoretical Model and Hypotheses

Table 1: Summary of Measures		
Construct	**Source**	**Modification / rationale**
Positive display rules (PDR)	Diefendorff, Croyle, & Gosserand (2005)	Added explanatory text to common stem explaining meaning of "customer" or "client".
Negative display rules (NDR)	Diefendorff et al. (2005)	Added explanatory text to common stem explaining meaning of "customer" or "client".
Surface acting (SA)	Brotheridge & Lee (2003)	No modifications.
Deep acting (DA)	Brotheridge & Lee (2003)	No modifications.
Conflict-management styles	De Dreu, Evers, Beersma, Kluwer, & Nauta (2001)	The original introduction read "When I have a conflict at work, I do the following:" This introduction was revised to include supplemental text reading "Disagreements sometimes occur in the workplace, consider a disagreement you may have had with customers or clients when answering the following questions. How often did you resolve the conflict in the manner specified?".
Accommodating		No modifications to text of items
Compromising		No modifications to text of items.
Asserting		Modified "I search for gains" to read "I search for gains for myself."
Problem solving		No modifications to text of items.
Avoiding		No modifications to text of items.
Role conflict	Rizzo, House, & Lirtzman (1970)	
Role ambiguity	Rizzo, House, & Lirtzman (1970)	
Perceived workload	Kirmeyer & Dougherty (1988)	
Work exhaustion	Schaufeli, Leither, & Kalimo (1995)	No modifications.

VII. RESULTS

Psychometrics

We used confirmatory factor analysis (CFA) with Amos to assess the reliability and validity of the measurement scales. We entered all of the latent variables into a CFA measurement model and allowed them to freely correlate. We entered manifest variables into the model and loaded them onto the latent variable they purported to measure. Table 3 reports the fit statistics for the CFA model . The χ^2 statistic for the CFA model was significant; however, this result is unsurprising given the sample size and the model's complexity. Alternative fit indices were in recommended limits, which suggests acceptable fit for the measurement model.

Reliability assesses the consistency of subjects' responses to a measurement scale. We assessed scale reliability with Cronbach's α; the measures for all constructs exceeded the recommended cutoff of 0.70 (Kline, 2005) (see Table 4). The PDR construct shows the lowest value for Cronbach's α; however, it was still in acceptable limits.

We assessed convergent and discriminant validity of the measurement scales with confirmatory factor analysis (CFA). Convergent validity assesses the ability of measurement items to capture a single construct. Discriminant validity refers to the ability of measurement items to distinguish between constructs. We assessed unidimensionality, a necessary condition for convergent validity (Anderson & Gerbing, 1988), by testing for significance of the item loadings. All loadings were significant at p<0.01.

Fornell and Larcker (1981) specify three criteria to show adequate convergent validity of a measurement scale. These include: acceptable fit for the measurement model, large and significant item loadings, and the average variance extracted (AVE) exceeding 0.50 for each construct. Based on these criteria, the model shows adequate convergent validity. Fornell and Larcker (1981) also specify that discriminant validity exists if the squared

correlations between a pair of variables are all less than the AVEs for those variables. Table 5 shows AVEs, correlations, and squared correlations for all constructs. All constructs exceeded this standard; thus discriminant validity was demonstrated.

Table 2: Demographics of Survey Respondents		
	Number of responses	**% of responses**
Sex		
Male	174	64.0
Female	97	35.7
No response	1	0.4
Age		
29 and under	63	23.2
30 to 39	106	39.0
40 to 49	61	22.4
50 to 59	37	13.6
60 and above	5	1.8
Education		
High school	15	5.5
Associate degree	26	9.6
Bachelor's degree	189	69.5
Graduate degree	27	9.9
Other	15	5.5
Job description		
Programmer	114	41.9
Analyst	53	19.5
Support	53	19.5
Manager	50	18.4
Unknown	2	0.7
IT tenure		
less than 5 years	60	22.1
5 to 10 years	64	23.5
10 to 15 years	50	18.4
15 to 20 years	37	13.6
20 to 25 years	28	10.3
25 to 30 years	12	4.4
30 to 35 years	12	4.4
35 to 40 years	6	2.2
Organizational tenure		
less than 5 years	120	44.1
5 to 10 years	67	24.6
10 to 15 years	34	12.5
15 to 20 years	20	7.4
20 to 25 years	16	5.9
25 to 30 years	10	3.7
30 to 35 years	3	1.1
35 to 40 years	2	0.7
Salary		
Under $50,000	57	21.0
$50,000 to $74,999	130	47.8
$75,000 to $99,999	57	21.0
$100,000 to $149,999	24	8.8
$150,000 to $199,999	3	1.1
over $200,000	1	0.4

Table 3: Fit Statistics for CFA Measurement Model

Fit index	Recommended (Kline, 2005)	Observed
Chi-squared	non-significant	2,393.2, p < .001
RMSEA	close fit <= .05 reasonable fit <= .08 poor fit >= .10	.053
CFI	> .90	.89
SRMR	< .10	.06

Table 4: Scale Reliability

	Cronbach's α
Work exhaustion	.925
Positive display rules	.754
Negative display rules	.798
Surface acting	.841
Deep acting	.940
Accommodating	.795
Compromising	.821
Asserting	.836
Problem solving	.819
Avoiding	.821
Role conflict	.883
Role ambiguity	.868
Perceived workload	.899

Table 5: AVEs, Correlations, and Squared Correlations

	Mean	SD	ACC	ASST	AV	COMP	DA	NDR	PWL	PDR	PS	RA	RC	SA	WE
ACC	3.04	0.60	**0.62**	0.00	0.15	0.00	0.02	0.01	0.00	0.00	0.01	0.00	0.00	0.04	0.00
ASST	2.53	0.79	0.04	**0.65**	0.02	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.02	0.01	0.02
AV	3.22	0.81	0.39	-0.16	**0.66**	0.00	0.03	0.00	0.02	0.01	0.00	0.00	0.03	0.00	0.00
COMP	3.45	0.71	0.02	0.04	0.04	**0.65**	0.03	0.00	0.00	0.02	0.20	0.00	0.00	0.00	0.00
DA	2.40	0.99	0.12	0.04	0.18	0.17	**0.89**	0.00	0.01	0.06	0.02	0.01	0.00	0.07	0.00
NDR	4.27	1.54	0.07	-0.05	-0.02	0.05	0.06	**0.72**	0.05	0.06	0.00	0.05	0.08	0.19	0.06
PWL	3.64	1.55	-0.06	0.18	-0.13	0.07	0.09	0.22	**0.77**	0.00	0.00	0.15	0.42	0.17	0.44
PDR	4.96	1.36	0.03	-0.10	0.08	0.13	0.24	0.24	-0.06	**0.57**	0.04	0.07	0.02	0.00	0.01
PS	3.81	0.64	0.08	0.09	0.02	0.45	0.15	-0.03	0.04	0.19	**0.65**	0.00	0.00	0.00	0.00
RA	3.36	1.30	0.04	0.04	-0.01	-0.04	-0.09	0.23	0.39	-0.27	-0.06	**0.66**	0.25	0.13	0.23
RC	3.55	1.35	-0.07	0.13	-0.18	0.03	0.05	0.27	0.65	-0.14	0.01	0.50	**0.55**	0.28	0.29
SA	2.71	0.98	0.20	0.09	0.06	0.01	0.27	0.44	0.41	0.03	-0.01	0.35	0.53	**0.76**	0.22
WE	3.33	1.63	0.04	0.14	-0.03	-0.01	0.07	0.25	0.66	-0.12	-0.02	0.47	0.54	0.47	**0.77**

ACC = accommodating; ASST = asserting; AV = avoiding; COMP = compromising; DA = deep acting; NDR = negative display rules; PWL = perceived workload; PDR = positive display rules; PS = problem solving; RA = role ambiguity; RC = role conflict; SA = surface acting; WE = work exhaustion.

AVEs are shown on the diagonal. Correlations are shown on the lower half of the matrix. Squared correlations are shown on the upper half.
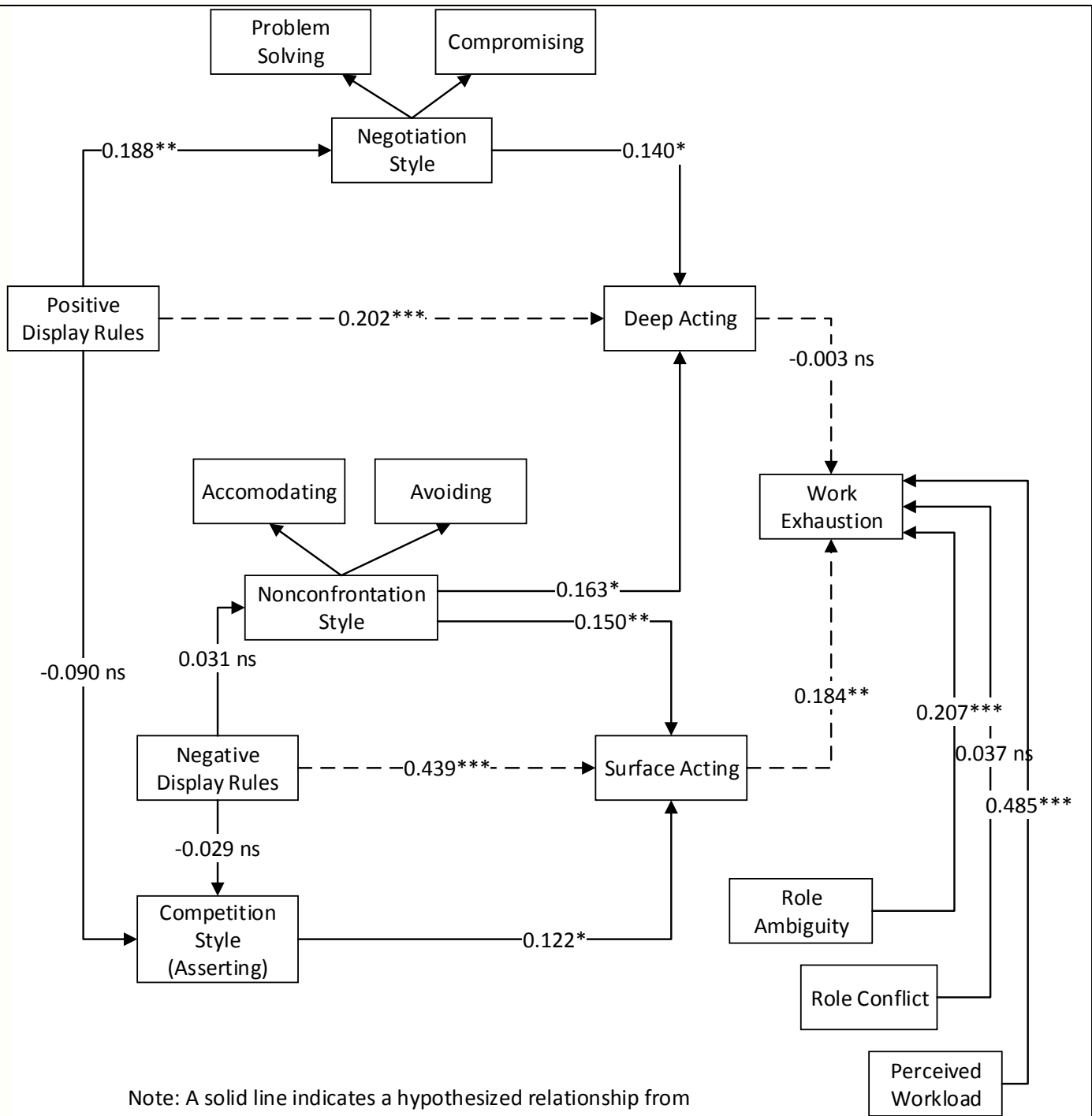
Hypothesis Test Results

We analyzed the hypotheses using partial-least squares (PLS) modeling techniques. We used the SmartPLS software for this analysis (Ringle, Wende, & Will, 2005). PLS is a component-based modeling technique that places minimal demands on sample size and makes no distributional assumptions (Chin, 1998). Table 6 and Figure 4 show the results of this analysis. Six of the nine main hypotheses in this model were supported. Hypotheses drawn from Rutner et al. (2011) were also supported. In addition, two of the three control variables showed a significant relationship with work exhaustion, while the control variable for organization was not significant.

Additionally, we tested two mediation hypotheses: H7: positive display rules → negotiation → deep acting, and H8: negative display rules → nonconfrontation → surface acting. We examined these hypotheses using techniques specified by Baron and Kenny (1986). In this analysis, we first established that the independent variables showed a significant effect on the dependent variables. In this case, perception of positive display rules was significantly related to deep acting (β=0.20, p<0.001) and perception of negative display rules was significantly related to surface acting (β=0.44, p<0.001). Then, we demonstrated that the independent variables showed a significant effect on the proposed mediator. Perception of positive display rules was positively related to negotiation (β=0.19, p<0.01), but perception of negative display rules was not related to nonconfrontation (β=0.03, ns). Thus, H8 was not supported. We continued evaluating the first mediation hypothesis, H7, by examining whether the proposed mediator affected the dependent variable while controlling for the independent variable. In this case, negotiation was significantly related to deep acting (β=0.14, p<0.01). Next, we used the Sobel test to evaluate the significance of the indirect effect of positive display rules on deep acting by way of negotiation (Sobel, 1982). The value of the test statistic was 1.74 with a standard error of 0.015 and a p-value of 0.08. Thus, the indirect effect was not significant and the hypothesis was not supported.

Table 6: Hypothesis Test Results				
Direct effect hypotheses			**Hypothesized direction**	**Path coefficient**
H1	Positive display rules →	negotiation	+	0.188**
H2	Negative display rules →	nonconfrontation	+	0.031 ns
H3a	Positive display rules →	competition	-	-0.090 ns
H3b	Negative display rules →	competition	-	-0.029 ns
H4	Negotiation →	deep acting	+	0.140*
H5a	Nonconfrontation →	deep acting	+	0.163**
H5b	Nonconfrontation →	surface acting	+	0.150**
H6	Asserting →	surface acting	+	0.122*
H9	Role ambiguity →	work exhaustion	+	0.207***
H10	Role conflict →	work exhaustion	+	0.037 ns
H11	Perceived workload →	work exhaustion	+	0.485***
Mediation hypotheses			**Hypothesized direction**	**Path coefficient**
H7	PDR → negotiation → DA			
	Direct effect: PDR → negotiation		+	0.202***
	Direct effect: Negotiation → DA		+	0.140*
	Indirect effect: PDR → DA, through negotiation		+	ns
H8	NDR → Nonconfrontation → SA			
	Direct effect: NDR → nonconfrontation		+	0.031 ns
	Direct effect: Nonconfrontation → DA		+	0.163**
	Indirect effect: NDR → SA, through nonconfrontation		+	ns

Figure 4. Hypothesis Test Results

Note: A solid line indicates a hypothesized relationship from this paper. A dashed line indicates a relationship drawn from Rutner et al. (2011).

Common method bias is a concern when data are collected through a single survey as we did in this study. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) and Williams, Edwards, and Vandenberg 2003) recommend procedures for evaluating the possibility of common method bias. However, these procedures have typically been employed in a covariance based modeling environment. Because we used PLS to analyze the data, we followed the method outlined by Liang, Liu, Lin, and Lin (2007) to apply these procedures in a PLS setting.

In this process, we added a single method factor to the PLS model with reflective paths to each of the manifest variables in the model. Because PLS does not support drawing multiple paths to manifest variables, Liang et al.

(2007) recommend redrawing the model by creating a new latent variable for each existing manifest variable. A reflective path is drawn from the new latent variable to its single manifest variable and paths are then drawn from the construct to the new latent variables. In essence, each construct in the original model becomes a second-order factor that reflects first-order factors which represent each of the constructs' measurement items. Paths are then drawn from the method factor to these new first-order factors.

The possibility of common method variance is then evaluated in two ways. First, the original structural paths from the model are examined for any change in direction or significance of the relationship. We observed no such changes in our model when we included the common method factor. Second, the loadings of each indicator on its substantive factor are compared to its loadings on the method factor. Appendix B reports these loadings; in all cases, the loadings of the manifest variables on their substantive factors were large and significant and they outweighed the loadings on the method factor. Some method factor loadings were significant; however, this result is comparable to those reported in Liang et al. (2007). Appendix B also reports the squared variances of these loadings; these values represent the percent of variance in the indicator explained by its substantive factor and by the method. In all cases, variance explained by the substantive factor was greater than that explained by the method. Thus, we conclude that common method variance was not a concern for this data and model.

VIII. DISCUSSION

The findings from this model offer several unique contributions and support previous findings in the emotional labor literature. We found that conflict-management styles were related to emotional labor strategies as we hypothesized. Additionally, we analyzed several relationships previously examined in the emotional labor literature and found support for them. The findings from this study suggest that emotional labor theory holds true in the population of IT professionals. The findings in the PLS analysis confirm the expected relationships among emotional labor constructs. With respect to emotional labor, IT professionals appear to be comparable to other employee groups that have been studied. Some of the relationships between display rule expectations, conflict-management styles, and emotional labor strategies followed the expected pattern.

With respect to the relationship between display rules and conflict management strategies, positive display expectations predicted the negotiation style, but negative display expectations did not predict the nonconfrontation style. This finding suggests that the factors that influence expectations of positive emotional displays also influence cooperative work behaviors when conflict arises. Employees who are exhorted to be team players may interpret this message as applying to both their emotional demeanor and to their choice of approach when handling conflict. However, communications of negative display rules may simply be seen as a normal component of the professional work environment and not associated with any particular conflict-management style. This finding is consistent with Brotheridge and Grandey's (2002) analysis of display rules across different occupations. They found that levels of positive display rules varied with managers, with human service and customer service workers experiencing the highest levels. But negative display rules remained consistent across different occupations. Thus, negative display rules may simply be part of the expectation of being a responsible professional. We also examined the relationship between display rules (both positive and negative) and the competition conflict-management style. Although these relationships were in the expected direction, they did not rise to the level of significance. This lack of a significant relationship may reflect the fact that emotional display rules are a normal part of the work environment (Brotheridge & Grandey, 2002). Employees enacting the competition style may do so with the knowledge of emotional display expectations, or they may do so with the belief that achieving the desired conflict outcome is more important than maintaining a particular emotional display.

With respect to the influence of conflict-management styles on surface and deep acting, negotiation predicted deep acting, nonconfrontation predicted both deep acting and surface acting, and asserting style predicted surface acting.

Figure 5 represents these relationships when mapped to the dual concern model grid. The similar pattern of relationships between positive display rules, the two negotiation based conflict-management styles, and deep acting is a satisfying result. This finding suggests that IT professionals' perception of display rules is associated with a commitment to working with business colleagues to resolve differences in a mutually beneficial manner. We would expect that these employees recognize the importance of developing professional working relationships with their customers. As human beings, we all encounter times in the workplace when the emotions that we feel are not in agreement with the demeanor we wish to put forth. However, employees who expend the effort to bring their feelings in line with display rules are better positioned to search for more-creative solutions or balance opposing views in conflict situations.

Both of our hypotheses regarding the relationships of the nonconfrontation conflict-management styles to deep acting and surface acting were supported. We found that both deep acting and/or surface acting may result from the use of the avoiding and/or accommodating conflict-management styles. Both accommodating and avoiding are

described as non-confrontational conflict-management styles (Van De Vliert & Euwema, 1994). These styles are characterized as being more passive, with accommodating being a more-agreeable style and avoiding being less agreeable. The use of these more-passive styles may be associated with an overall lack of engagement with issues in the workplace (Tidd & Friedman, 2002). Both deep acting and avoiding conflict are behavioral responses that are influenced not only by an individual's traits and characteristics, but also by situational factors. The use of deep acting and surface acting are not necessarily mutually exclusive (Grandey, 2003); an employee may use both styles in different interactions or may use both strategies in a single interaction. Almost certainly, the relationship between these two behavioral responses is more complicated than the simple causal link included in the current research model. For example, it may be that the desire to avoid conflict provides the motivation necessary for an otherwise passive individual to engage in deep acting. The current study represents only the first steps in gaining a deeper understanding of the interplay between these constructs. If this speculation is valid, then the pattern of relationships between the nonconfrontation conflict-management styles and surface acting also makes sense. It may be that these employees' passivity did not compel them to engage in deep acting nor did it cause them to want to avoid conflict. Thus, when confronted with emotional dissonance, these employees are more likely to engage in surface acting. Likewise, when confronted with a conflict situation, these employees are not driven to avoid the conflict, but lack sufficient desire to actively pursue their own interests, which results in their adopting an accommodating style.
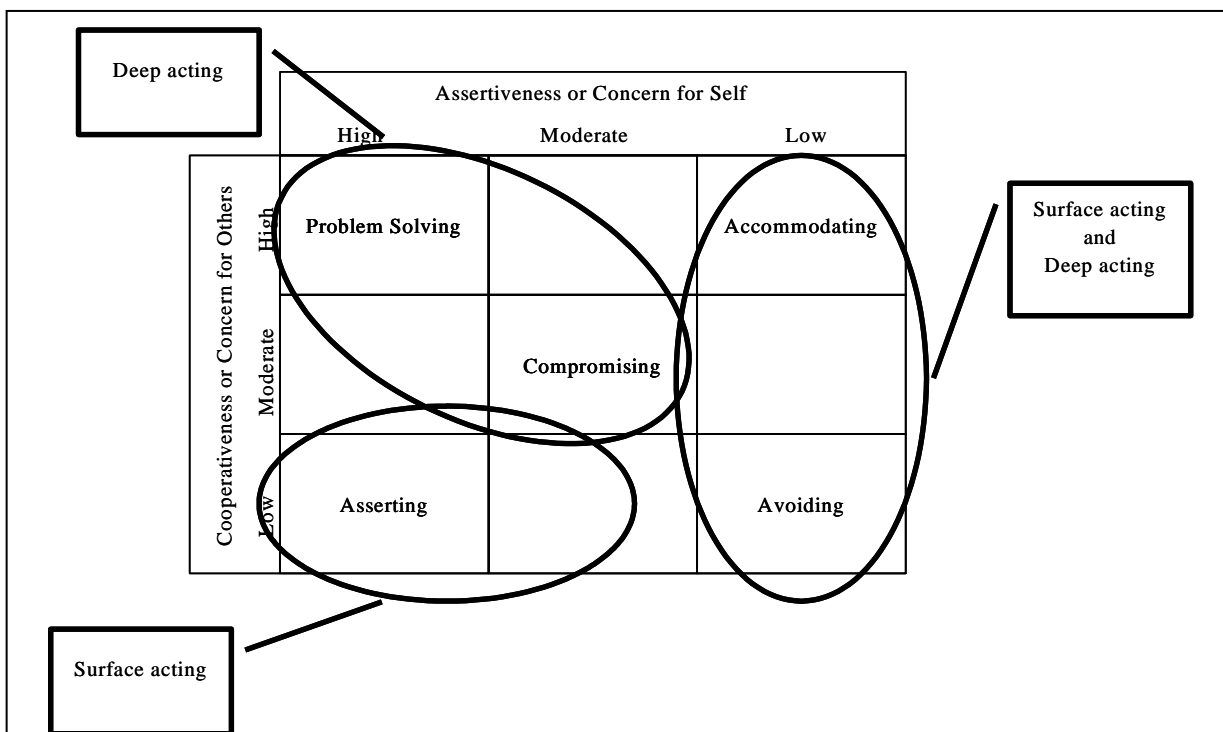
Figure 5. Comparison of Conflict-Management Styles and Emotional Labor Strategies

Our mediation hypotheses proposing that the negotiation and nonconfrontation conflict-management styles would partially mediate the relationship from display rules to emotion management strategies were not supported. In the case of Hypothesis 8, this finding is due to the unsupported direct effect of negative display rules on nonconfrontation behavior, which we have already discussed. However, for Hypothesis 7, the direct effects were significant but the indirect effect of positive display rules on deep acting through negotiation behavior was not significant. We can offer two possible reasons for this finding. First, the direct effect of positive display rules on deep acting was strong and significant. This strength of this relationship may simply outweigh the strength of the indirect relationship. Second, as we discuss above, the relationship between display expectations, conflict-management styles, and emotion management strategies is likely more complex than depicted in this model. Additional study will be necessary to untangle these relationships.

We also hypothesized that employees who employ an asserting style would engage in surface acting, which was supported. We can also speculate that this finding is due to underlying factors that influence both emotion management and conflict management. The asserting style has be characterized as disagreeable, which has been described as a stable behavioral response (Friedman, Tidd, Currall, & Tsai, 2000) that may be consistent across different situations. Disagreeable responses to a situation have been described as withholding help and showing

formality, tension, and antagonism (Van De Vliert & Euwema, 1994). This disagreeable characteristic may be associated with not only the asserting style, but also a lack of emotional display rules.

When examining theoretical models, especially in exploratory research such as is presented in the current paper, it is worthwhile to consider competing alternative models. One such possible model is suggested by a similar study that examined the influence of conflict-management style on interpersonal conflict and employee strain (Dijkstra, De Dreu, Evers, & van Dierendonck 2009)[1]. Interpersonal conflict produces strain in employees; the authors proposed that active conflict management strategies (comparable to problem solving and asserting in the current study) would attenuate the relationship between interpersonal conflict and strain, and that passive conflict management strategies (comparable to accommodating and avoiding in the current study) would amplify the relationship. Dijkstra et al. do not include the compromising conflict management strategy. The authors found no support for the moderating effect of active conflict management strategies, but did find partial support for the moderating effect of passive conflict management strategies.

In the current study, we found that surface acting was significantly related to work exhaustion, while deep acting was not. Positioning selected conflict management strategies to moderate these relationships may yield interesting results. The passive nonconfrontation strategy may work to amplify the impact of concealing felt emotion on work exhaustion, while the more-active strategies—negotiation and asserting—may attenuate that relationship. We examined this possibility in a post hoc test. We used the product-indicator approach (Chin, Marcolin, & Newsted, 2003) in which the interaction effect is included in the existing PLS model as another latent variable whose indicators are created by multiplying the indicators from the predictor and moderator variables. We found that the product indicator created from surface acting and nonconfrontation was significantly related to work exhaustion, which indicates that nonconfrontation strengthens the relationship between surface acting and work exhaustion. The main effect of surface acting on work exhaustion remained significant in the presence of this moderator. No other significant moderating effects were found. Comparable to the findings from Dijkstra et al. (2009), passive approaches to conflict management amplified the effect of surface acting on work exhaustion. These findings suggest that the negative impact of surface acting may be reduced by encouraging employees to take more-active approaches to managing interpersonal conflict.

Future research could examine these findings in more detail and examine the possible mechanisms underlying the findings in the current study. It may be that the emotional reactions to conflict situations can offer some explanation. Individuals who minimize their own interests at the expense of others may experience greater levels of negative affect and lower levels of positive affect. It may be that such employees will experience a higher incidence of the need to control emotional expressions and will exhibit a given emotional labor strategy depending on their desire to enact applicable display rules at the time of the incident. In contrast, one who employs a conflict-management style that allows the pursuit of self-interest may experience lower levels of negative affect and higher levels of positive affect. In this case, the need to engage in either deep or surface acting may occur less often. Thus, the choice of emotional labor strategy may be more strongly guided by one's interest in the concerns of others. Employees who feels greater concern for other's interests may be more concerned about the authenticity of their emotional display and tend towards deep acting. Those employees with a lower concern for other's interests may not take as much care to make a convincing emotional display and tend toward surface acting.

IX. THEORETICAL IMPLICATIONS

Emotional labor researchers have defined and explored the variety of emotional display expectations, how those expectations impact employees, and the ways in which those employees perform emotional labor. Conflict management researchers have examined different kinds of conflict, different ways of dealing with conflict, and numerous antecedents and outcomes of conflict and its management. Conflict has been recognized as an inherently emotional experience (Bodtker & Jameson, 2001; Barki & Hartwick, 2004; Jordan & Troth, 2004). The findings from this study suggest that the two bodies of literature may inform and influence one another. We identified a relationship between the way one manages conflict situations and the way one manages emotional display expectations. This is an intuitively satisfying finding, yet it represents only the first steps in mapping the connections between these two theoretical areas.

For example, work in the conflict management area has found that one's conflict-management style is related to one's degree of work stress (Friedman et al., 2000). Avoiding and accommodating styles were positively associated with work stress while problem-solving and asserting styles were not. Work stress and work exhaustion are not precisely the same constructs, yet it is reasonable to expect them to be positively correlated. The findings of the

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[1] We are grateful to an anonymous reviewer for directing us to this paper and suggesting a comparable analysis.

current study, relating conflict-management style to surface and deep acting and, thus, work exhaustion, may offer some insight into the mechanisms underlying Friedman et al.'s (2000) findings.

Another possible connection between the conflict management and emotional labor areas might lie in influencing the way in which others respond to conflict situations. Emotional display expectations are often concerned with the reactions of others in the workplace. One might argue that a convincing display of affective commitment to a negotiation based conflict management strategy, such as problem solving or compromising, might encourage positive emotion and similar attitudes in others. The use of deep acting has been linked to greater perceptions of authenticity and more positive emotion in others (Hennig-Thurau, Groth, Paul, & Gremler, 2006). Likewise, positive emotion has been linked to the use of negotiation conflict management strategies (Desivilya & Yagil, 2005). It would be interesting to evaluate the efficacy of authentic emotional display and deep acting in influencing other's use of conflict-management styles.

Recent studies have shown the importance of IT professionals building relationships with their customers to improve their performance in the workplace (Markus & Benjamin, 1996; Bassellier & Benbasat, 2004). IT professionals are asked to step into the business environment and are subject to many of the same expectations that apply to their non-IT colleagues. Over time, the IT function has evolved to include providing services and support for a myriad of employees both in and outside organizations; understanding the emotional display expectations of IT professionals is certainly important and relevant. This study makes a theoretical contribution by exploring the emotional labor expectations of IT professionals.

X. MANAGERIAL IMPLICATIONS

A major contribution provided from the findings of this study includes several implications for management. First, management should consider socialization tactics and training to assist IT professionals in recognizing the value of display rules (Rafaeli & Sutton, 1989). Through training, employees could be encouraged to practice deep acting and genuine experience while avoiding surface acting. Furthermore, managers' commitment to exhibit the desired display rules could serve as a dynamic example for employees to follow. Both mentoring and formal employee orientation programs could assist employees in learning to demonstrate the emotional display requirements.

A second implication for management applies to recruiting and selecting IT professionals. When managers are considering potential candidates for a position, they should take into account the emotional display expectations that are required for that particular position and match the candidate with the desired display rules to the position. For example, Clark, Walz, and Wynekoop (2003) found that the highest-performing systems analysts are prone to be extraverts, while the highest performing IT students are prone to be introverted. Extant research in conjunction with the findings from this study suggest that employers who hire primarily on the basis of GPA may miss some potential students who may exhibit a more well-rounded set of desirable job skills. Prior research has emphasized the need for IT professionals to possess "soft skills" such as interpersonal skills, sound communication, teamwork, and listening (Bailey & Stefaniak, 1999; Joseph, Ang, Chang, & Slaughter, 2010; Lee, Trauth, & Farwell, 1995; Longenecker & Simonetti, 1996; Trauth, Farwell, & Lee, 1993). One's emotional labor strategies and conflict-management styles are extremely important when one is faced with these types of interpersonal expectations. During interviews and internships, employers need to emphasize and convey the interpersonal requirements of the job. Recruits who have a realistic understanding of job requirements should be more prepared to cope with interpersonal expectations. This type of disclosure has improved both employee retention and performance (Phillips, 1998).

Finally, managers wishing to encourage employees towards deep acting may do so by promoting the use of problem solving and compromising styles for conflict management. In addition to promoting more-beneficial outcomes of conflict (Barki & Hartwick, 2001; Bell & Blakeney, 1977; Wall & Callister, 1995), this strategy may also result in lower work exhaustion among IT professionals.

XI. LIMITATIONS AND FUTURE DIRECTIONS

This study, as with all empirical research, has some limitations. First, the findings' generalizability is questionable because we used a convenience sample of IT workers employed by several organizations. The respondents were all located in the United States, though they were from a variety of industries and multiple organizations. The relationships of this study may not hold true for IT professionals from other countries. Future research may wish to extend this area of inquiry to IT professionals in other countries where there may be different perceptions of appropriate behavior in the workplace. It would also be interesting to explore whether the findings from this study hold true with IT professionals from other types of organizations. The IT professionals participating in this study were all employed by organizations who used IT to support their primary business function. IT professionals employed by

a firm whose focus is producing an IT product or providing IT services may well be subject to a different set of expectations.

Second, the data is a cross-sectional sample; therefore, it is inappropriate to draw causal inferences between the constructs. Future research using longitudinal data could lend insight into the causal relationships. In addition, we modeled conflict-management styles as conglomerated behaviors based on the recommendations of Munduate et al. (1999) and Van de Vliert and Euwema (1994). However, by doing so, we gave up the opportunity to evaluate the influence that individual conflict-management styles may have had on emotion management strategies. In the interest of explaining the relationships between these constructs, we did evaluate direct relationships between the five distinct conflict management strategies and the emotion management strategies. However, this analysis did not show significant results in an interpretable pattern. We collected data for this study through a retrospective survey; it is possible that respondents considered their conflict management strategies across multiple episodes when answering questions. Thus, we believe that the conglomerated conflict-management styles are more appropriate when assessing these constructs and using this type of research method. Future research may be able to use observational methods or a laboratory experiment to focus more closely on individual conflict episodes and thereby tease apart the distinct relationships among these constructs. Lastly, we collected the data via self-report and is subject to common method bias. However, we used previously validated measurement items in the study to limit the extent of this problem (Spector, 1987). Also, we evaluated the data for common method bias following procedures described by Liang et al. (2007). This analysis indicated that measurement items loaded strongly on their purported constructs and did not share excessive variance attributable to the data-collection method.

In addition to future research that the methodological considerations we mention above suggest, there are also potentially fruitful research endeavors that the study's findings and theory suggest. First, additional linkages between the conflict management and emotional labor theoretical areas should be explored. For example, conflict is often classified into different types including task conflict and relationship or person conflict (Janssen, Van De Vliert, & Veenstra, 1999; Friedman et al., 2000; Jehn & Mannix, 2001). Although these conflict types are related, they are distinct concepts with differential outcomes. Task conflict can be beneficial by encouraging diverse opinions and potential solutions to a problem, while the negative emotions generated by relationship conflict may be counterproductive (Janssen et al., 1999). Future research should explore how the use of deep acting versus surface acting might impact the devolution of beneficial task conflict into detrimental relationship conflict.

Another possible research endeavor emerges from the nature of the conflict management strategies used in this study. Although these styles are linked to dispositional traits, they may also be influenced by environmental factors (Friedman et al., 2000). Future research could investigate whether managerial interventions promoting the importance of display rules along with the use of cooperative conflict management techniques help to reduce work exhaustion and improve work-related productivity.

We based the theoretical arguments we make with respect to conflict-management style's impact on emotional labor strategies on the underlying dimensions of concern for self and concern for others. However, these dimensions were implied by conflict-management style and we did not measure them directly. Is it possible that an underlying personality trait influences both one's conflict-management style and one's use of deep or surface acting as an emotional labor strategy? Future research could explore this possibility.

XII. CONCLUSION

This study evaluates a theoretical model that expands our understanding of the impact of workplace relationships on work exhaustion in IT professionals. This is the first study to examine a comprehensive model of emotional labor in IT professionals; the findings confirm that the performance of emotional labor constructs and relationships in IT professionals is comparable to that found in other groups of employees.

The most unique and important contribution of this study is that it provides an initial step into integrating aspects of conflict management and emotional labor theories. These two theoretical areas both emphasize the emotions that employees experience. The experience of conflict tends to generate negative emotions, while display rules govern appropriate emotional demeanors in the workplace. The findings suggest that both the perception of positive display rules and the use of cooperative conflict-management styles can encourage deep acting, which does not increase employees' work exhaustion. On the other hand, both the perception of negative display rules and the use of the asserting conflict-management style are associated with the use of surface acting and increased work exhaustion. These findings increase our understanding of work exhaustion in IT professionals and offer important suggestions to help alleviate this problem.

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Editor's Note: The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that:

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APPENDIX A: SURVEY ITEMS

Positive display rules (Diefendorff et al., 2005)
Common stem: What is expected of you when you work with other people? In these questions, the terms "customer" and "client" refer to anyone inside or outside the organization that you provide service to.
1. Part of my job is to make the customer feel good
2. My workplace does not expect me to express positive emotions to customers as part of my job (R)
3. This organization would say that part of the product to customers is friendly, cheerful service
4. My organization expects me to try to act excited and enthusiastic in my interactions with customers
Scale range: 7 = strongly agree to 1 = strongly disagree

Negative display rules (Diefendorff et al., 2005)
Common stem: What is expected of you when you work with other people? In these questions, the terms "customer" and "client" refer to anyone inside or outside the organization that you provide service to.
1. I am expected to suppress my bad moods or negative reactions to customers
2. This organization expects me to try to pretend that I am not upset or distressed
3. I am expected to try to pretend I am not angry or feeling contempt while on the job
Scale range: 7 = strongly agree to 1 = strongly disagree

Surface acting (Brotheridge & Lee, 2003)
Common stem: On an average day at work how frequently do you:
1. Resist expressing my true feelings
2. Pretend to have emotions that I don't really have
3. Hide my true feelings about a situation
Scale Range: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

Deep acting (Brotheridge & Lee, 2003)
Common stem: On an average day at work how frequently do you . . .
1. Make an effort to actually feel the emotions that I need to display to others
2. Try to actually experience the emotions that I must show
3. Really try to feel the emotions that I have to show as part of my job
Scale Range: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always

Conflict Management Styles (De Dreu et al., 2001)
Common stem: When I have a conflict at work, I do the following:

Accommodating
1. I give in to the wishes of the other party.
2. I concur with the other party
3. I try to accommodate the other party
4. I adapt to the other parties' goals and interests

Compromising
1. I try to realize a middle-of-the-road solution
2. I emphasize that we have to find a compromise solution
3. I insist we both give in a little
4. I strive whenever possible towards a fifty-fifty compromise

Asserting
1. I push my own point of view
2. I search for gains for myself
3. I fight for a good outcome for myself
4. I do everything to win

Problem solving
1. I examine issues until I find a solution that really satisfies me and the other party
2. I stand for my own and other's goals and interests
3. I examine ideas from both sides to find a mutually optimal solution
4. I work out a solution that serves my own as well as other's interests as good as possible

Avoiding
1. I avoid a confrontation about our differences
2. I avoid differences of opinion as much as possible
3. I try to make differences loom less severe
4. I try to avoid a confrontation with the other
Scale range: 1 = not at all to 5 = very much

Work Exhaustion (Schaufeli et al., 1995)
1. I feel emotionally drained from my work.
2. I feel used up at the end of the work day.
3. I feel fatigued when I get up in the morning and have to face another day on the job.
4. I feel burned out from my work.
5. Working all day is really a strain for me.
Scale Range: 1 = strongly disagree to 7 = strongly agree

Perceived Workload (Kirmeyer & Dougherty, 1988)
1. I feel that the number of requests, problems, or complaints I deal with is more than expected.
2. I feel that the amount of work I do interferes with how well it is done.
3. I feel busy or rushed.
4. I feel pressured.

Scale Range: 1 = strongly disagree to 7 = strongly agree

Role Ambiguity (Rizzo et al., 1970)
1. I feel certain about how much authority I have.
2. Clear, planned goals and objectives exist for my job.
3. I know that I have divided my time properly.
4. I know what my responsibilities are.
5. I know exactly what is expected of me.
6. Explanation is clear of what has to be done.
Scale Range: 1 = Strongly Disagree; 7 = Strongly Agree

Role Conflict (Rizzo et al., 1970)
1. I have to do things that should be done differently.
2. I receive an assignment without the manpower to complete it.
3. I have to "buck" a rule or policy in order to carry out an assignment.
4. I work with two or more groups who operate quite differently.
5. I receive incompatible requests from two or more people.
6. I do things that are apt to be accepted by one person and not accepted by others.
7. I receive an assignment without adequate resources and materials to execute it.
8. I work on unnecessary things.
Scale Range: 1 = Strongly Disagree; 7 = Strongly Agree

APPENDIX B: COMMON METHOD BIAS ANALYSIS

Construct	Indicator	Substantive factor loading (R1)	R1²	Method factor loading (R2)	R2²
Accommodating	acc1	0.723***	0.522	0.086**	0.007
	acc2	0.793***	0.629	0.042	0.002
	acc3	0.814***	0.663	0.004	0.000
	acc4	0.816***	0.667	-0.123**	0.015
Asserting	assert1	0.775***	0.600	0.064*	0.004
	assert2	0.864***	0.747	-0.002	0.000
	assert3	0.876***	0.768	-0.014	0.000
	assert4	0.759***	0.576	-0.049	0.002
Avoiding	avoid1	0.873***	0.762	0.021	0.000
	avoid2	0.820***	0.673	-0.098	0.010
	avoid3	0.659***	0.434	0.090*	0.008
	avoid4	0.871***	0.759	0.005	0.000
Compromising	comp1	0.723***	0.522	0.024	0.001
	comp2	0.844***	0.713	0.011	0.000
	comp3	0.835***	0.697	0.040	0.002
	comp4	0.825***	0.680	-0.073**	0.005
Deep acting	da1	0.915***	0.836	0.066**	0.004
	da2	0.966***	0.933	-0.024*	0.001
	da3	0.953***	0.908	-0.039**	0.002
Negative display rules	ndr1	0.726***	0.528	-0.130***	0.017
	ndr2	0.915***	0.838	0.035	0.001
	ndr3	0.896***	0.803	0.059**	0.003
Positive display rules	pdr1	0.739***	0.547	0.073*	0.005
	pdr3	0.858***	0.735	0.028	0.007
	pdr4	0.880***	0.774	0.031	0.001
Problem solving	probsolv1	0.809***	0.654	0.016	0.000
	probsolv2	0.763***	0.582	0.003	0.000
	probsolv3	0.828***	0.685	0.014	0.000
	probsolv4	0.822***	0.676	-0.032	0.001
Perceived workload	pw1	0.828***	0.686	0.004	0.000
	pw2	0.855***	0.732	0.002	0.000
	pw3	0.950***	0.903	-0.107**	0.011
	pw4	0.807***	0.652	0.104**	0.011
Role ambiguity	ra1	0.720***	0.518	-0.074	0.006
	ra2	0.753***	0.567	0.109*	0.012
	ra3	0.688***	0.473	0.047	0.002
	ra4	0.986***	0.971	-0.142***	0.020
	ra5	0.935***	0.873	-0.052	0.003
	ra6	0.777***	0.604	0.110***	0.012

Construct	Indicator	Substantive factor loading (R1)	R1²	Method factor loading (R2)	R2²
Role conflict	rc1	0.769***	0.591	-0.058	0.003
	rc2	0.695***	0.483	0.124*	0.015
	rc3	0.732***	0.536	0.018	0.000
	rc4	0.869***	0.755	-0.289***	0.083
	rc5	0.791***	0.626	0.015	0.000
	rc6	0.766***	0.587	0.054	0.003
	rc7	0.682***	0.465	0.087	0.008
	rc8	0.546***	0.298	0.161**	0.026
Surface acting	sa1	0.873***	0.762	0.012	0.000
	sa2	0.860***	0.739	-0.061	0.004
	sa3	0.884***	0.781	0.043	0.002
Work exhaustion	we1	0.807***	0.651	0.114***	0.014
	we2	0.795***	0.632	0.069	0.005
	we3	0.949***	0.900	-0.058*	0.003
	we4	0.983***	0.965	-0.094**	0.009
	we5	0.857***	0.734	-0.038	0.001

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