negotiation and conflict management research

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Signaling Dominance in Online Negotiations: The Role of Affective Tone

Liuba Y. Belkin,[1] Terri R. Kurtzberg,[2] and Charles E. Naquin[3]

1 Department of Management, College of Business and Economics, Lehigh University, Bethlehem, PA, U.S.A.
2 Department of Management and Global Business, Rutgers Business School, Rutgers University, New Brunswick, NJ, U.S.A.
3 Department of Management, Kellstadt Graduate School of Business, DePaul University, Chicago, IL, U.S.A.

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Correspondence
Liuba Y. Belkin, Department of Management, College of Business and Economics, Lehigh University, 621 Taylor St, Bethlehem, PA 18015, U.S.A.; e-mail: lyb207@lehigh.edu.

Abstract

The present research looks at how people interpret power in negotiations based not just on control over objective resources but also on behavioral expressions of dominance as signaled through affective language in the limited-cues environment of electronically mediated communication. We further explore whether those interpretations of dominance shape negotiation outcomes. The results of an experiment, along with the linguistic analyses of the e-mail messages themselves, indicate that negative affective expressions (anger) online positively influence perceptions of dominance, while displays of positive affect (happiness) can signal the opposite, especially when coupled with low resource power. Moreover, we find that anger displays in e-mails can influence individual gains positively, while perceptions of dominance mediate the relationship between displays of happiness and individual outcomes. Implications are discussed.

Although power is traditionally thought of in the literature as the control over resources and the ability to enforce one's own will on others (French & Raven, 1959; Pfeffer & Salancik, 1978), it is important to remember that in context, true power is often ambiguous. Moreover, since one's power is understood only in relation to others (Emerson, 1962) and is potentially open to being interpreted differently by different individuals (Anderson & Galinsky, 2006; Caza, Tiedens, & Lee, 2011), other factors besides actual resource asymmetry can contribute to perceptions of one's influence and control. In negotiations, for instance, despite having information about the allocation of available resources, people may continue to search for clues to uncover the opponent's position and subsequently decide which player is the dominant one.

Dominance and dominant behavior have recently been differentiated in the literature from the construct of resource power and are conceptualized in terms of self-serving actions exhibited by individuals to establish or maintain social standing (Fragale, Overbeck, & Neale, 2011). Accordingly, some behaviors in negotiation encounters may alter perceptions of dominance irrespective of actual resource power, which in turn can have consequences to one's performance. Such signaling can be made through a variety of means in a face-to-face context, including one's appearance, postures, gestures, facial expressions, mimicry, tone of voice, and affective displays (Keltner & Haidt, 1999; Tiedens, 2001). For the text-only environment, however, the available cues for signaling are more limited due to the lack (or complete

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absence) of nonverbal communication. The use of words, punctuation, and emoticons are the few options available for electronic partners to signal their position to each other. Thus, in this research, we argue that verbal cues such as affective expressions will contribute to the overall signaling of dominance present in e-negotiations, especially as one's attention to this type of signaling will be amplified in electronically mediated environment since, as opposed to a richer channel for communication, these signals here compete with little else for the attention of the message receiver.

To be more specific, this article seeks to explore the ways in which objective resource asymmetry, coupled with affect-laden language, is interpreted by the other side with respect to each side's *read* on the dominance of the other. Then we explore the subsequent effects of dominance perceptions on negotiated outcomes in the online context. While research has previously established that negative affect (especially anger) and perceptions of power can each cause concessions in negotiations (Sinaceur & Tiedens, 2006; van Kleef & Cote, 2007; van Kleef, De Dreu, & Manstead, 2004), we are extending the literature in two ways: (a) We aim to explicitly show the link between verbal expressions of negative affective displays (anger displays, in particular) on the impressions of dominance and subsequent higher outcomes in the virtual environment (thus, clarifying the mechanism), and (b) we also aim to look at the reverse—whether positive affective displays (happiness) can signal submissiveness and lessen outcomes in an online context. Moreover, we believe the role of the electronic context is of critical importance here, since cues are often magnified in text-only communication, with a slant toward either neutral or negative interpretations due to limited cues and less available feedback (Byron, 2008). Given this negative propensity and the fact that e-mail negotiations are on the rise as substitutes for face-to-face ones (Toy, 2009), it is important to understand how being in the virtual realm drives individual behavior, as switching to another context or simply quitting the e-negotiation may not always be a viable option (Friedman & Belkin, forthcoming).

Signaling and Perceptions of Dominance

When individuals engage in mixed-motive exchanges like negotiations—which, by definition, require some cooperation from each party but also provide an incentive to compete—each side typically tries to gauge the relative power position of the other. However, this is generally not discussed explicitly, but is instead often conveyed through subtle affective or behavioral signals, called *a signaling game*. Signaling phenomena have been observed in the behavior of nonhuman animals (some gazelles, for example, leap high in the air when a predator comes near, seemingly taunting the aggressor with how fit and strong they are, which is termed the *handicapping effect*—see Zahavi, 1975 and Walther, 1969) as well as in humans. Theories adapting the premise of signaling theory have been applied to the fields of economics and cognitive psychology, among others, to explain and rationalize human cooperative behavior under conditions of uncertainty (Connelly, Certo, Ireland, & Reutzel, 2011). Indeed, studies have shown that individuals and organizations often engage in signaling games to convey their worth and power (Deutsch Salamon & Deutsch, 2006; Erdem & Swait, 1998; Spence, 1973, 2002). Thus, it is not only the mere fact of having power, whether through control over resources or social standing or both, but also the display (i.e., signaling) of that power to others that can determine the magnitude of its impact on other people (Caza et al., 2011).

Unlike animals, humans have a large arsenal of tools to signal their position both explicitly and implicitly. One of the subtle but effective ways humans can signal their standing in a given interaction is through affective and behavioral displays. For example, in face-to-face settings, research has shown that having one person express dominance through postural shifts may *decrease* others' dominant expressions, while expressing submissiveness *increases* others' dominant stances (Tiedens & Fragale, 2003). In this case, posture seems to send a strong enough signal so as to consistently alter the behavior of the receiver. Thus, affective displays can help to establish and maintain hierarchies by conveying to the receiver important information about the sender's power position, mental states, and intentions (Tiedens, 2001).

This argument is further articulated and explained by the social function of emotions approach (Keltner & Haidt, 1999, 2001; Keltner & Kring, 1998), which proposes that one's affect provides information to the other side about intentions of the sender and influences the receiver's interpretations of both the situation in general and the sender's social standing in particular. For example, expressed embarrassment might signal submissiveness to the other, contempt may signal one's superiority, while awe is usually elicited only in the presence of others with higher standing (Keltner & Haidt, 2001). Moreover, some studies show that expressing anger (as opposed to sadness or guilt) in various social interactions leads to higher power conferral, as it can make individuals appear more competent, thus positively influencing perceptions of dominance in others (Tiedens, 2001; Tiedens, Ellsworth, & Mesquita, 2000).

Below, we combine theoretical arguments from both signaling theory and the social functions of emotions approach (Keltner & Haidt, 1999, 2001) to theorize that affect-laden messages via electronic text may be yet another signal to be interpreted as a potential display of dominance or submissiveness, depending on the type and valence of affective displays.

Affective Displays as Signals in E-Negotiations

In this article, we define affect as a general state of physical arousal that varies in intensity and can be described as pleasant or unpleasant (Barrett & Bliss-Moreau, 2009; Russell, 2003). While the literature has drawn a variety of distinctions between the concepts of affect, emotion, and mood (focusing on definitional differences in terms of intensity and duration), for our purposes here, we focus on high-arousal negative (anger) and positive (happiness) affective states (Barsade, 2002; Bartel & Saavedra, 2000; Larsen & Diener, 1992; Watson, Clark, & Tellegen, 1988; Watson, Wiese, Vaidya, & Tellegen, 1999) and the language used by negotiators in these affective states.[1]

Research has demonstrated the strong potential influence of affective states on the self, showing that they can alter individual judgments, with positive arousal potentially enhancing one's cognitive flexibility and a broader scope of attention (Fredrickson, 2001; Isen, 2002) and negative arousal potentially leading to less cooperative attitudes but more detail-oriented cognitive processing (Allred, Mallozzi, Matsui, & Raia, 1997; Fredrickson, 2001; Fredrickson & Branigan, 2005; Gasper & Clore, 2002). More recent work has begun exploring the effects of one's affective states on those others on the receiving end of the affective displays, and it is here that we aim to contribute.

Studies in the negotiation field have supported the idea that opponents' negative affective displays may be used by negotiators as indicators of the opponent's power in both face-to-face and electronic contexts (Lelieveld, van Dijk, van Beest, Steinel, & van Kleef, 2011; Pietroni, van Kleef, De Dreu, & Pagliaro, 2008; van Dijk, van Kleef, Steinel, & van Beest, 2008) and can subsequently lead to greater concessions on the receiver's side (Sinaceur & Tiedens, 2006; van Kleef, De Dreu, Pietroni, & Manstead, 2006; van Kleef et al., 2004). In particular, recent research has explored the nuanced effects of negative affect in negotiations. For example, findings have shown that anger directed at an offer (as opposed to a person) may help negotiators obtain larger concessions from opponents (Lelieveld et al., 2011). Similarly, anger directed at an opponent's behavior can lead to greater distributive gains by eliciting larger concessions from the opponent than does person-oriented anger (Steinel, van Kleef, & Harinck, 2008). These findings are consistent with the notion that anger is usually expressed by people with higher power (Keltner & Haidt, 2001), otherwise the signal is likely too costly to the sender (Bangerter, Roulin, & König, 2012).

Too much anger, however, can inspire the other side to look to deception to balance the scales (van Dijk et al., 2008). Other research has shown that overblown anger can inspire a reverse effect whereby

[1]The term affective state has been used in the literature before to denote general affective expressions (Levin, Kurtzberg, Phillips, & Lount, 2010).

the sender is perceived as being in a *weaker* position (Sinaceur, van Kleef, Neale, Adam, & Haag, 2011). In fact, in three experimental studies, Sinaceur et al. (2011) demonstrated that using threats (i.e., stating specific negative consequences for not complying with one's request) is a more efficient way to elicit concessions from opponents in negotiations than communicating anger (i.e., conveying displeasure with the situation or the partner). This is thought to be because the former signals power, that is, people appear in control of their feelings and decisions, while the latter implies weakness, that is, loss of control. However, this may be limited to the context where the receiver is already secure in his or her position of power. Accordingly, this research seems to indicate that the context matters, but if the context is ambiguous, general negative displays may still be an efficient (short-term) tactic.

Taken together, the stream of research above supports the idea that negative affect can send signals related to dominance and can thus change one's perceptions and behaviors in a negotiation, especially under conditions of high uncertainty, such as e-communication (Daft & Lengel, 1986), where it is much harder to judge one's power. In this study, we further explore the role of affect in signaling one's standing in negotiations, but instead of looking at the specific actions (i.e., anger vs. threats) or targets (i.e., person vs. offer) of negative affect, we take a more holistic approach to understanding the interplay between affective expressions (both positive and negative), objective resource power, and perceptions of dominance in the limited-cues, high uncertainty context of e-mail negotiations.

Contrary to previous research on negative affect in electronic environment, although documented effects of *positive* affective displays abound in face-to-face settings (showing increased trust, better integrative agreements, fewer impasses, and the like; e.g., Anderson & Thompson, 2004; Forgas, 1998; Kopelman, Rosette, & Thompson, 2006), such findings (whether beneficial or otherwise) have not been replicated in the online context. Building further on the idea of signaling and the social function of emotions approach, we expect that positive affective displays, such as expressions of happiness, will have opposite effects to those of negative affective displays, such as anger, in the online setting. In particular, we hypothesize that when someone sends an angry message by e-mail, it can be evaluated by a receiver as a signal of stronger position in a negotiation situation, thus indicating to the recipient that there is little room for concessions. Conversely, if someone sends a message in a positive affective tone (such as displaying happiness, joy or awe, which is typically elicited by lower status individuals in the presence of the higher status ones—Fiske, 1991), it may be interpreted by the message recipient as a display of the sender's lower power in a negotiation. Relative to high-power people, research has shown that low-power people more often experience gratefulness and admiration in response to positive events and more guilt in response to negative events (Tiedens et al., 2000).

Furthermore, certain personality and behavioral characteristics have been identified that are linked to each higher or lower power individuals: High power tends to be associated with independence and dominance, while low power tends to be associated with warmth and communality (Lee & Tiedens, 2001). This supports our view that positive affect may be judged as a signal of lower power, while negative affect may signal higher power on the part of the sender. Therefore, individuals sending messages laden with positive affect may come across as trying to please and thus, in a situation of heightened informational ambiguity due to the text-only context of online negotiations, as having lower power. They may even appear desperate and submissive, potentially inspiring the other side to take advantage of the message sender.

Accordingly, we propose that anger expressed in e-mail messages should signal to the recipient a dominant position of the sender—that is, that the angry party holds more power since she or he can afford such seemingly handicapping behavior (Zahavi, 1975) and thus demand more value out of the deal. On the other hand, an e-mail message laden with positive affective displays may backfire and instead signal an opportunity to be taken advantage of, resulting in lesser gain, as individuals who receive such positive messages may feel more empowered due to the perceived weaker position of the other party and stronger perceptions of their own standing in the negotiation. We expect that these perceptions of relative power or weakness (i.e., dominance or submissiveness, respectively) will influence negotiation outcomes such that greater dominance translates into higher gain and vice versa. Therefore, the following hypotheses are proposed:

Hypothesis 1a: Expressing anger online will signal dominance to the receiver.

Hypothesis 1b: Expressing happiness online will signal submissiveness to the receiver.

Hypothesis 2a: Expressing anger in e-mails will result in higher individual gains.

Hypothesis 2b: Expressing happiness in e-mails will result in lower individual gains.

Resource Power and Perceptions of Dominance

Negotiation exchanges often contain a situation in which one party has a different position or resource power than the other, thus leading to the other side's dependence (Greenhalgh, Neslin, & Gilkey, 1985). While we believe that a sender's affective displays in e-mail can trigger interpretations about the sender's dominance and can alter the recipient's perceptions (Hypotheses 1a and 1b) as well as influence online negotiation performance (Hypotheses 2a and 2b), there also may be more concrete cues as to the actual resource power available to the opponent. In this section, we explore the interaction between the *signal* sent by the affective tone of the messages and the more *factual* information that one may have about resource power (or, in the case of a negotiation, information about the quality of the alternatives available to the other side, which defines resource power in this setting).

Using the social function of emotions approach described above (Keltner & Haidt, 1999, 2001; Keltner & Kring, 1998) and specifically the emotions as social information (EASI) model (van Kleef, 2009), we propose in the section below that there is an interplay between the valence of affective displays and the appraisals of one's position in a negotiation. In particular, in the EASI model (van Kleef, 2009), it is suggested that how one reacts to an affective display changes based on whether the sender is in a position of power or not. For instance, research has demonstrated that expressions of anger in negotiations elicited different appraisals of appropriateness and responses (cooperation vs. retaliation) depending on one's power in the negotiation (van Kleef & Cote, 2007).

We suggest here that there is a similar mechanism at play not only for negative but also for positive affective displays in an electronic environment. Building on the appraisal theories of emotions and EASI model specifically, we propose an interaction between affective displays and resource-based power positions on one's perceptions of the other party's dominance and, consequently, on negotiation performance. In particular, power-consistent affective displays should reinforce the impressions that the receivers have of the senders while power-inconsistent affective messages should confuse them. Thus, as anger displays may signal higher power and happiness displays signal low power (Keltner & Haidt, 1999), an angry or very negative message from a high-power individual should reinforce perceptions of the sender's dominant position, potentially increasing his or her individual gains (Overbeck, Neale, & Govan, 2010). Similarly, a happy or very positive message from a low-power individual may reinforce impressions of the weak position of the sender, as it will be consistent with the recipient's expectations; thus, recipients may feel in an even more dominant position (De Dreu & van Kleef, 2004). Research has shown that low-power others tend to initiate positive contact toward higher-ups with the goal of creating a positive impression and achieving a better outcome (Fiske, 1992). Accordingly, low-power senders who express positivity in this way may even inspire empathy and, as a result, benevolence and helping behavior from the higher power receiver (Batson, 1991; Leyens, Dardenne, & Fiske, 1998).

Conversely, communicating a message with an affective tone inconsistent with one's power position may negatively influence the recipient's perceptions about the sender as well as limit the sender's gains (van Kleef & Cote, 2007). An angry tone from a less powerful party may evoke a negative reaction from the high-power recipient, thus potentially provoking the (more powerful) recipient to respond with aggressive behavior and limiting the (less powerful) sender's negotiation outcomes. Similarly, happiness

displays from a powerful sender may signal to the recipient that the sender is not as powerful as originally thought, which may again encourage a more aggressive stance from the (less powerful) receiver.

Therefore, the following hypotheses are proposed:

Hypothesis 3a: One's power position and expressed anger in e-mails will interact such that for people with higher power than their opponents, the more anger is expressed to the opponents, the higher their individual gains (power and signal consistency), while for people with less power than their opponents, the more anger is expressed to the opponents, the lower their individual gains (power and signal inconsistency).

Hypothesis 3b: One's power position and expressed happiness in e-mails will interact such that for people with higher power than their opponents, the more happiness is expressed to the opponents, the lower their individual gains (power and signal inconsistency), while for people with less power than their opponents, the more happiness is expressed to the opponents, the higher the individual gains (power and signal consistency).

Finally, we believe that perceptions of the opponent's relative power (i.e., dominance perceptions), based on actual resource power and interpretations of affective displays, will influence individual performance as well. In particular, building on our arguments above that happy and angry displays in e-mails, coupled with resource power, will signal low- and high-power standing, respectively, we argue that those signals from the negotiation opponent should also influence how one views his or her own standing in a negotiation and should, consequently, influence individual gains. Therefore, we propose a mediating effect of dominance perceptions on performance. Please refer to Figure 1, for a visual depiction of the proposed mediation.

Hypothesis 4: Perceptions of the dominance will mediate the relationship between the interaction of affective displays and power position and individual outcomes in online context.

Method

Participants and Research Design

Participants were 156 undergraduate senior-level students from four different class sections in negotiations taught by one instructor. The students participated in the study as part of a class assignment, and

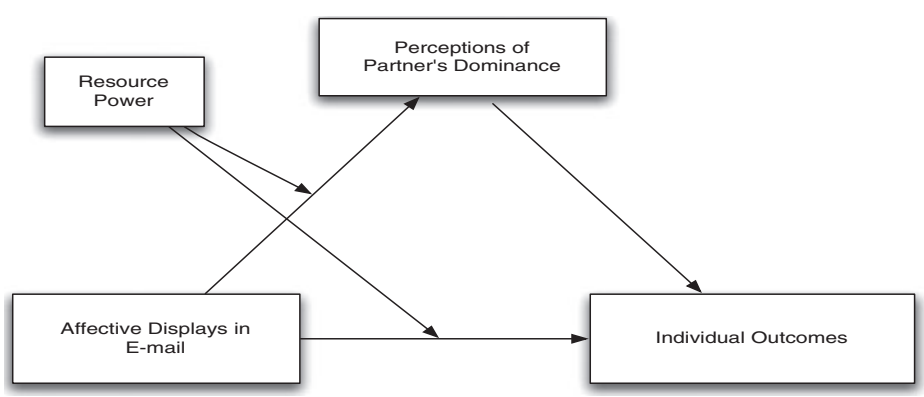

Figure 1. Moderated mediation analysis–*conceptual model.*

each negotiation dyad was composed of two individuals from the same class section. In total, the 156 participants created 78 dyads that interacted with each other exclusively by e-mail. The study design was a 2 × 2 experiment and had two manipulations: (a) angry versus happy affective displays and (b) high versus low resource power. Affective display assignment was a between-dyad manipulation (n = 40 happy dyads and n = 38 angry dyads), while power assignment was a within-dyad manipulation (n = 78 dyads). In particular, in each virtual negotiation dyad, there was only one person who had affective displays instructions (referred to hereafter as an actor), while his or her partner had dummy instructions, thus giving us 78 nonactors (referred to hereafter as partners). In addition, there was an unequal resource power distribution between partners in each dyad (i.e., one individual was assigned to a high resource power position, while the other was assigned to a low resource power position), both counterbalanced by role, as described in detail below.

For the affective displays manipulation, participants were randomly assigned to their roles and dyads. In each dyad, one of the two participants received special instructions telling them to enact a particular affective condition during the online communication with his or her partner. Specifically, individuals assigned to act as angry actors received negative affective display instructions telling them to imagine being "angry at someone or something, or being in an extraordinarily bad mood," examples of which included feelings of frustration, irritation, hostility, and distress, and they were told to distinguish that high-arousal negative affect from low-arousal negative affect, such as sadness or depression. On the other hand, individuals assigned to act as happy actors received positive affective display instructions telling them to imagine being "happy or in an extraordinarily good mood," examples of which included feelings of excitement, elation, inspiration, and enthusiasm, and they were told to distinguish that high-arousal positive affect from low-arousal positive affect, such as calmness or serenity. To help participants to imagine themselves in this situation, actors were told to think about a moment when they actually felt that way, imagine the person or a situation that made them feel that way or imagine a person who usually displays these kinds of feelings. Finally, all actors were told that their affective display instructions needed to remain confidential, and in addition to maintaining the assigned affect throughout the e-negotiation, they had to behave consistently with their role instructions.

Moreover, to make sure that actors' actual performance in the negotiation itself would be driven by their affective display instructions and not the mere fact that they have been chosen for a special role, their partners were given *dummy* special instructions (and were also told that those instructions need to remain confidential). In the dummy instructions, participants were told that those who relax and concentrate on something unrelated to the case usually do better in a negotiation. Then, they were asked to do so before starting the e-mail negotiation.

For the power manipulation, in each experimental dyad, participants were randomly assigned to one of two roles with an unequal power distribution known to both sides (see below for details). We pretested our scenarios on a small set of participants who were unrelated to the study (n = 35) and asked them to identify which role had more power in the given scenario. All 35 participants identified the power asymmetry consistent with intended manipulation.

Procedure

The negotiation case used, New Recruit (by Neale, 1997—revised version by Hooijberg & Levin, 2003), involved two parties (the recruiter and the candidate for a job position in a pharmaceutical company). This is a distributive exercise with an integrative potential, providing an opportunity for individuals to achieve higher individual outcomes if they discover potential tradeoffs and compatible issues. High-power candidates were told that they had other comparable offers, while the low-power recruiter had no other options and needed to hire immediately. High-power recruiters were told that they had other comparable options for whom to hire, while the low-power candidates did not currently have any other

offers on the table. Participants were given one week to complete the exercise, but were told to complete the activity within one continuous 2-hour timeslot. Specifically, participants received an e-mail containing instructions on their role, the e-mail address of their counterpart, a postnegotiation questionnaire, and the specific instructions for the case (either dummy or angry or happy actor assignments). In addition, participants were explicitly told in both written and oral instructions that no other communication (written or verbal) except via e-mail was acceptable for this exercise. Immediately after the completion of the exercise, participants were asked to fill out the postnegotiation questionnaire online. Finally, each participant was instructed to e-mail the negotiation outcomes to the case coordinator along with the full transcript of the dyad's e-mail exchange and completed questionnaires. After completion of this exercise, all participants were fully debriefed in class.

Measures

Postnegotiation Affective States

Subjective impressions of the self and partner's affective tone in the negotiation were collected as a manipulation check to ensure that angry and happy actors did in fact come across as angry and happy, respectively. Participants rated their impressions of their opponent's affect based on the PANAS scale (Watson et al., 1988). Participants were asked to rate the extent to which they thought that their partner felt a particular emotion and the extent to which they themselves felt a particular emotion, each on a 7-point Likert scale, ranging from 1 = *not at all* to 7 = *extremely*. The four discrete affective scales containing the PANAS items were then composed to gauge the presence of high-arousal negative and positive affective states: The four-item Anger: Partner scale (with items: upset, irritable, hostile, and distressed; Cronbach's $\alpha = .85$) and the four-item Happy: Partner (with items: enthusiastic, inspired, active, and excited; Cronbach's $\alpha = .83$), the four-item Anger: Self scale (with items: upset, irritable, hostile, and distressed; Cronbach's $\alpha = .83$) and the four-item Happy: Self (with items: enthusiastic, inspired, active, and excited; Cronbach's $\alpha = .84$).

We also had a number of control variables. Specifically, participants' gender, the class section the students were taking, the amount of time it took participants to complete the negotiation (range was 45 min–2 hr), the individual frequency of e-mail use, the role assignments, and the extent to which participants were able to imagine themselves in the role were used as control variables. All control variables were checked against the dependent variables in order to rule out alternative explanations for the results. The hypothesized results were unchanged with or without these controls.

Perceptions of Partner's Dominance

A three-item measure for dominance was created from items borrowed from the 62-item Organizational Trust Inventory developed by Cummings and Bromiley (1996). In the Organizational Trust Inventory, questions are divided into three broad dimensions—honesty, dependability, and (avoiding) taking excessive advantage. The dominance-related questions we used came from the *taking advantage* dimension. We used this line of questions regarding dominance because it conforms to the popular usage of the word *domination* and has statistical validity in measuring the sense of being at a disadvantage. The three survey items included "I feel that this individual tried to get the upper hand," "I think that this individual took advantage of my problems," and "I feel that this individual takes advantage of people who are vulnerable." Ratings were on 7-point Likert scale with 1 = *strongly disagree* and 7 = *strongly agree* (Cronbach's $\alpha = .79$).

Negotiation Performance

Individual and joint outcomes were coded using a payoff table provided as a supplement for the New Recruit case, with a maximum possible individual outcome of 13,200 and a minimum of −8,400 points; the range of individual outcomes achieved in this study was from 12,400 to −3,400 points. For joint out-

comes, the possible range was from 13,200 to 0; the range achieved in this study was from 13,200 to 6,000. All but one negotiation dyad were able to reach an agreement in this case, and the dyad that had an impasse (which included an angry actor and his or her partner) received their BATNA payoff. Thus, all 78 dyads were included in the final analysis.

Affective Displays in E-mails—Linguistic Analysis and Word Count

We explored the use of positive and negative affective language in e-mails to see how it influenced individual perceptions of dominance and individual performance. More specifically, for the analysis of e-mail transcripts, we used the Linguistic Inquiry and Word Count (LIWC 2001) software (Updated Dictionary Version by Pennebaker, Francis, & Booth, 2007), which has proven validity and reliability for analyzing written text (Ireland & Pennebaker, 2010; Ireland et al., 2011; Tausczik & Pennebaker, 2010). LIWC is a text analysis tool that counts words into psychologically meaningful categories, among which are the categories of positive and negative affect, which we used for the purposes of this research. For example, the negative word banks include words such as hate, disgust, and ridiculous, while the positive word banks include words such as encouraging, impressed, and hopeful. Using LIWC, we analyzed the e-mail transcripts of negotiators in terms of the frequency of positive and negative affective language use to gain insights into how people communicated their happiness and anger, respectively, by e-mail. We examined individual affective style by segmenting transcripts by individual negotiator, producing two aggregate files for each individual, one for positive and one for negative language. We also controlled for both self and partner affective displays in each emotional category to see the extent to which self and partner emotions could influence individual perceptions and performance.

Results

Manipulation Check—Affective States

Our analysis found that the affective manipulation had the intended effect. An ANOVA of the PANAS reports showed that happy receivers (those partnered with happy actors) perceived their partners to be significantly happier ($M = 4.30$, $SD = 1.20$) than angry receivers (those partnered with angry actors) perceived theirs ($M = 3.51$, $SD = 1.07$; $F[3, 148] = 2.99$, $p = .003$, $\eta^2 = .06$). Angry receivers, on the other hand, perceived their partners as more angry ($M = 2.90$, $SD = 1.48$) than happy receivers perceived theirs ($M = 2.01$; $SD = 1.06$; $F[3, 150] = 4.64$, $p = .004$, $\eta^2 = .09$). This pattern was evident even when controlling for the power manipulation in an analysis of covariance (ANCOVA). Therefore, our affective manipulation check for both experimental conditions was confirmed.

Manipulation Check—Resource Power

In a postexercise survey, the participants were asked whether they felt they had more or less resource power than their opponents to check whether our power manipulation had worked. A 3-item scale called Resource Power, had the following questions: "I think this individual had more powerful position in this negotiation," "I feel that I was dependent on this individual to benefit in this situation," "I felt that this individual was less powerful than me" (reverse coded). Ratings were on 7-point Likert scale with 1 = *strongly disagree* and 7 = *strongly agree* (Cronbach's $\alpha = .70$). The ANOVA showed that people assigned to a less powerful position (across both roles and affect manipulations) thought that they had less resource power than their opponents and vice versa: less powerful roles' assessment of their more powerful partners, $M = 4.49$; $SD = 1.24$, vs. more powerful roles' assessment of their less powerful partners, $M = 3.33$; $SD = 1.25$ ($F[1, 148] = 32.15$, $p < .001$), thus confirming our power manipulation check.

Perceptions of Partner's Dominance

Our dominance perceptions scale measured the degree of dominance the individuals attributed to their negotiation partner, such that higher scores on that scale indicated perceptions of partners' having a more dominant position. Happy and angry receivers were the main subjects of interest in this research, thus, we tested Hypotheses 1a and 1b looking at their perceptions as a result of the actor's affective displays in the negotiation exchange. Since the nature of our dyadic data violates the assumption of independency (i.e., the dependent variable is nonindependent), we employed the Actor-Partner Interdependency Model (APIM) analysis suggested by Kashy and Kenny, (2000), using repeated measures and factorial ANOVA to test for within- and between-subjects effects. Accordingly, we employed the multilevel APIM analysis with the compound symmetry structure, using dyad as a subject unit and the repeated variable of individual (actor or partner) unit. We tested whether receivers' own and actors' affectivity perceptions during negotiation exchange influenced perceptions of the actor's dominance. We found that for participants paired with angry actors, higher perceptions of actors' anger ($b = .32$; $SE = 0.11$; $t[77.44] = 3.01$; $p < .05$; Wald $Z = 4.03$; $p < .001$) were associated with higher perceptions of their dominance as well, regardless of the power manipulation assignment. Similarly, we found that the happier the happy actors were perceived, the less dominance was attributed to them ($b = -.36$; $SE = 0.12$; $t[35.48] = -2.99$; $p < .01$; Wald $Z = 2.68$; $p < .01$ for happy actors), regardless of the power manipulation assignment. These findings indicate that affective displays can, in fact, supersede actual power position, supporting Hypotheses 1a and 1b that displaying negative affect online will signal greater dominance, while displaying positive affect will signal lesser dominance to the partner.

General Analyses

First, although not directly hypothesized, we explored and found a main effect for resource power on outcomes. An ANOVA showed that people with less resource power obtained significantly lower individual outcomes than people with more resource power, regardless of the emotional manipulation condition ($M = 3{,}836$; $SD = 2{,}506$ vs. $M = 5{,}540$; $SD = 2{,}536$, respectively, $F[1, 148] = 17.13$; $p < .001$).

Our affect manipulation did not show any main effects on either perceptions of dominance or outcomes. Therefore, we decided to analyze the e-mail transcripts between individuals to gain insight into how expressed affect could impact actor–partner perceptions and outcomes. Thus, we tested Hypotheses 2a through 4 using the LIWC coding of the actual language participants expressed in their e-mails during negotiations. In particular, we ran multiple linear regression analyses to check for main effects of anger and happiness displays first. We then looked for an interaction effect of individual resource power and constructed the moderated mediation model to account for the direct and indirect effects of perceptions of dominance on the relationship between affective displays and individual outcomes. We also controlled for the assigned affective manipulation condition in our analyses. Please refer to Table 1, for the correlations and descriptive statics of the variables.

Affective Displays and Individual Outcomes

The results of the multiple linear regression analysis showed that, after controlling for power assignments, anger and happiness displays in e-mails explained an additional 4.8% of the variance in individual outcomes. However, only the anger displays were significant ($R^2 = .14$; $\beta = 0.191$, $t[2] = 2.49$, $p < .01$; $F[2, 149] = 11.98$—anger displays, and $t[2] = -0.18$; *ns*; $F[2, 149] = 8.52$—happiness displays), demonstrating that the more anger that was expressed in e-mails, the higher the individual gains were. Thus, Hypothesis 2a was supported, while Hypothesis 2b was not (see Table 2, Model 1).

Nevertheless, we saw intriguing patterns when comparing happiness displays on individual outcomes according to the power manipulation. In particular, controlling for the affective manipulation

Table 1
Correlations and Descriptive Statistics

	Mean	*SD*	1	2	3	4
Power assignment	1.50	0.50				
Anger_LIWC	0.04	0.1	.025			
Happiness_LIWC	5.35	1.76	−.023	−.10		
Perceptions_of_partner_dominance	3.59	1.34	−.209*	−.099	.092	
Individual outcomes	4,688	2654.34	.322**	.198*	−.019	−.228**

Note. $n = 156$. LIWC, Linguistic Inquiry and Word Count.
$^{\dagger}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 2
Regression Results Main Effects and Interaction for Dependent Variable: Individual Outcomes

	Model 1		Model 2	
Variables	Beta	*SE*	Beta	*SE*
Power assignment	0.318***	406.13	0.781**	1326.07
Anger_LIWC	0.191**	2223.85	0.26	7147.19
Happiness_LIWC	−0.014	115.02	0.440*	349.22
Power and anger interaction			0.153	4454.33
Power and happiness interaction			−0.670*	233.846
R^2	.140		.167	
Adjusted R^2	.123		.138	
R^2 change	.037***		.026***	
F change	3.11***		2.28***	

Note. LIWC, Linguistic Inquiry and Word Count.
$^{\dagger}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

assignments, we found a significant interaction effect of resource power and happiness expressed in e-mails such that people who were assigned to a more powerful position and displayed more happiness (power and signal inconsistency) received significantly lower individual gains than those who displayed less happiness, while having more resource power (power and signal consistency). On the other hand, people with less assigned power who displayed happiness in e-mails (power and signal consistency) received significantly higher individual gains than those who displayed less positivity while having less power (power and signal inconsistency; $R^2 = .14$; $\beta = -0.771$, $t[3] = -2.33$, $p < .05$; $F[3, 149] = 7.67$ Please refer to Figure 2). When the interaction variable was added to the model, it explained an additional 11% of the variance in individual outcomes, and both happiness displays and the interaction variable of assigned power and happiness became significant, thus supporting Hypothesis 3b. There was no interaction effect of anger displays and assigned power, so Hypothesis 3a was not supported (see Table 2, Model 2), showing that displays of anger helped people to get higher individual outcomes irrespective of their resource power position.

Moderated Mediation Analysis

To test Hypothesis 4, we used the least squares path analysis with the bootstrapping technique to estimate the direct effects of our mediator (perceptions of partner's dominance) along with indirect effects of a moderated mediation (Preacher, Rucker, & Hayes, 2007). Moderated mediation using the PROCESS

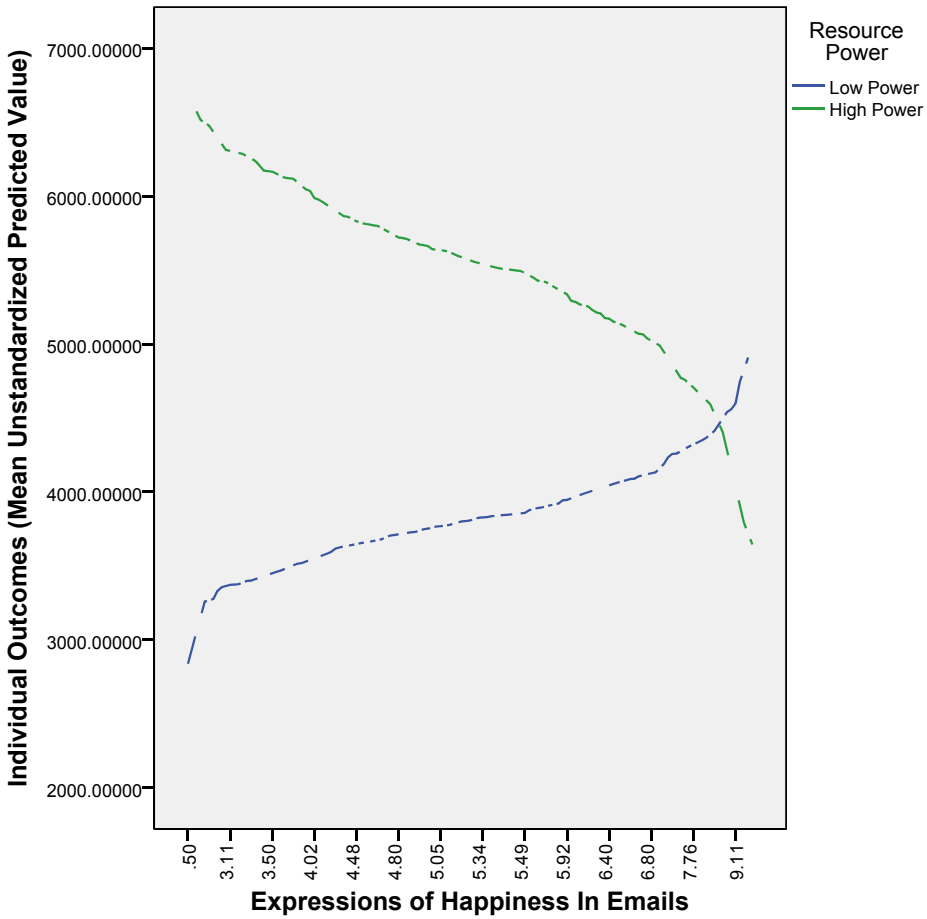

Figure 2. Power assignments and happiness expressions interaction on individual gains.

technique estimates the extent to which an indirect effect of an independent variable influences the dependent variable through a mediator that depends on a certain moderator (Hayes, 2012). PROCESS also allowed us to use asymmetric bias-corrected bootstrap confidence intervals to check for the conditional indirect effects using a 5,000 times iteration bootstrap technique.

Evidence of moderation of the indirect effect by the assigned power position was found in a statistically significant interaction between displays of happiness in e-mails and negotiators' assigned power position in the model of perceived partner's dominance: $a3 = .17$, $p < .001$ (please, refer to Table 3, Model 1). Since the first stage of the mediation model was only partially moderated ($R^2 = .05$; $F[3, 141] = 2.61$, $p < .05$), it is concluded that the overall indirect effect is conditional upon perceptions of partner's dominance. In particular, as can be seen in Figure 3, the indirect effect of happiness on individual outcomes through perceptions of dominance is consistently negative for high resource power negotiators. A 95% bootstrap confidence interval for the conditional indirect effect is entirely below zero for individuals with high resource power (95% BCI [−175.59; −1.75]). Among those with low resource power on the other hand, the indirect effect, while positive by a point estimate, is not different from zero as evidenced by a bootstrap confidence interval that straddles zero (95% BCI [−65.68; 72.64]). Thus, perceptions of dominance mediate the effect of happiness displays on individual outcomes for those with

Table 3
PROCESS Model—Moderated Mediation Effects of Power and Happiness Displays on Perceived Partner's Dominance and Individual Outcomes

	Model 1		Model 2	
Variables	Beta	*SE*	Beta	*SE*
Happiness_LIWC	−69.07†	125.87	−81.63†	122.03
Power assignment	1700.34***	413.97	1502.75**	418.78
Power and happiness interaction	−546.87**	251.74	−447.36*	246.67
Perceptions of partner's dominance			−316.21**	155.41
R^2	.17		.16	
F change	7.11***		6.87***	

Note. LIWC, Linguistic Inquiry and Word Count.
†$p < .10$. *$p < .05$.**$p < .01$. ***$p < .001$.

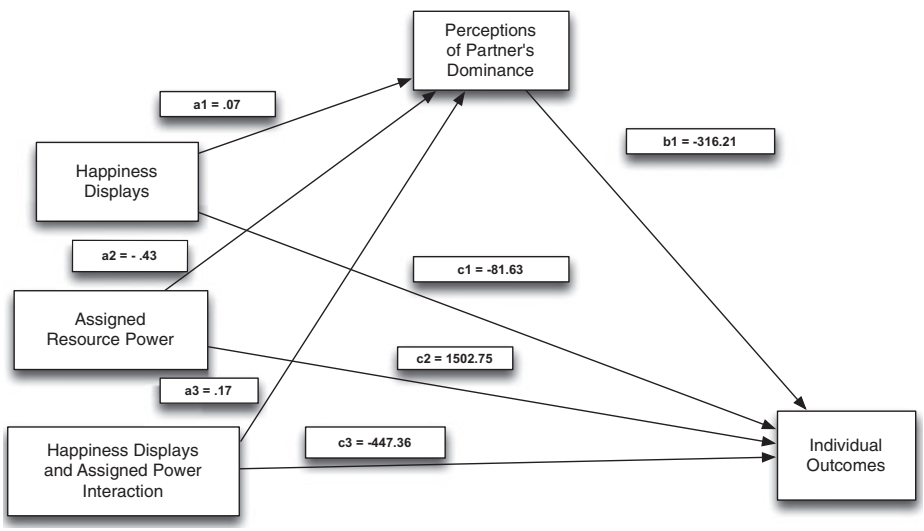

Figure 3. Moderated mediation path analysis model.

high resource power, but not for those with low resource power ($R^2 = .16$; $F[4, 140] = 6.87$ $p < .001$; see Table 3, Model 2). There is no direct effect of happiness displays on individual outcomes though, holding individual resource power constant (−81.63; $t[4] = -0.67$; *ns*).

These results suggest different processes at play linking the affective displays of happiness in the online context to individual resource power, as it appears its influence on individual outcomes in e-negotiations can vary based on the perceptions of the partner's dominance. In particular, we saw evidence indicating that expressions of happiness dependent on the power position of individuals influenced negotiation gains through one's perceptions of the partner's dominance for those in high-power position, but not for those with low power, thus partially supporting Hypothesis 4 (refer to Figure 3). There was no support for the moderated mediation effect with respect to negative emotional displayed in Hypothesis 4, as there was no interaction found for anger displays and resource power.[2]

[2]We also recalculated individual gains as a percentage of the dyad's final outcome and reran our analyses with this as the dependent variable to better control for the varying level of joint gain earned by different dyads. The results with this new DV remained unchanged.

Discussion

In this article we looked at the effects of individual affective displays and resource power in an online context upon perceptions of dominance and individual negotiated outcomes. In particular, we saw that communicating negative affect (i.e., anger) in this context can signal more dominance to one's opponent, while communicating positive affect (i.e., happiness) can signal less dominance, irrespective of the actual resource power of the message sender. Moreover, we saw that expressing anger in this context helped to achieve higher individual gains. However, displaying happiness had an interesting interaction effect with resource power: It was detrimental to one's performance if the message sender also had more resource power but was beneficial if the message sender held less resource power than the opponent. This seems to be due to the inconsistency of the signal of less dominance in the happy negotiator who in fact had greater resource power, which in turn negatively influenced this negotiator's individual gains.

Our study leads to several conclusions. For one, we followed the lead of recent research by arguing for a conceptual distinction between perceptions of dominance and actual resource power (e.g., Fragale et al., 2011) and thus exploring more subtle ways through which individuals signal and infer power. Our research suggests that perceptions of dominance can be signaled to others through affective displays in the online context. We also found that these interpretations could supersede actual resource power in a negotiation as well as confound senders who send affective messages inconsistent with their objective resource power levels.

Additionally, our work suggests that displaying happiness in the virtual environment may not be uniformly beneficial to the sender. Although previous research in negotiations and positive psychology have well established the benefits of displaying happiness (Carnevale & Isen, 1986; Kopelman et al., 2006), our work suggests that, in some situations, happiness may sometimes signal an opportunity to be taken advantage of. In e-communication, while displaying happiness from a low-power position may help in a negotiation (possibly through eliciting empathy), happiness from a high-power position can potentially be confusing to the recipient, who may respond with more aggression.

However, this is not to conclude that being nice in the online context is a bad idea altogether. In fact, some research shows that ambiguous messages in the online environment are often interpreted in a more negative light (Byron, 2008; Goleman, 2007; Kurtzberg, Belkin, & Naquin, 2006; Kurtzberg, Naquin, & Belkin, 2005, 2009) and being pleasant can help people to foster relationships (Belkin & Kurtzberg, forthcoming; Sarbaugh-Thompson & Feldman, 1998). Instead, what we take away from our findings is that one needs to be careful with affective displays (whether genuine or strategic), since the ramifications of those expressions may depend at least in part on the expectations of the other side.

The methods used in our experiment allowed us to observe interacting dyads using their own affect-laden language. We were also able to measure both their postnegotiation perceptions of each other and to quantify their actual negotiation performance. This is one of the first studies to analyze electronic negotiation exchanges between negotiation partners instead of using a one-sided negotiation (i.e., person–computer interaction) or to rely solely on perceptual data. Moreover, the ability to use the coded linguistic data for our analyses of affective displays instead of just perceptual ratings on Likert scales provided further insights into the electronic communication dynamics in the negotiations context. Additionally, the multilevel actor–partner interdependence model (and path analyses) allowed us to look at the impact that both the actor and partner effects have upon individual perceptions of dominance in a dyadic relationship and subsequent outcomes. We believe the robust nature of our methods and analyses lends additional confidence in the obtained findings as well as may provide some support for emerging attempts in the fields of psychology and negotiation to further tease out some of the nuances in actor–partner interactions in a dyadic context (Krasikova & LeBreton, 2012; Overbeck et al., 2010).

Lastly, and leading into the limitations of our findings, it is important to comment on the negative affect results. While our findings are consistent with previous work showing that there may be a short-term benefit to displaying anger in a negotiation, we cannot conclude that this tactic will remain beneficial in situations where there are future interactions to be held. It is possible that retaliation or disengagement may arise if the partners continued to interact (that is, either aggressive behavior or a refusal to do business again with this individual, if given a choice, by the receiver of the angry messages). Thus, more research is needed to see whether this tactic could be used to strategic advantage in anything but a limited-time interaction.

There are other clear limitations to our findings as well. For example, our results on the effects of happiness and anger displays in e-mails may be particularly negotiation specific and may not necessarily generalize to a broader set of communication exchanges. We realize that the competitive environment of a mixed-motive situation may encourage people to take advantage of others in positive affective states, while in other contexts this might not necessarily be the case. On the other hand, research shows that people do tend to take advantage of nice guys at work in other contexts as well (Judge, Livingston, & Hurst, 2012).

The classroom nature of our exercise may have also inspired participants to react differently to the affective tone of the messages than they might do in a real professional setting. Perhaps people are even more sensitive when there are real consequences to the negotiation, or perhaps they are more likely to try and give the other side the benefit of the doubt when confused by their actions. Moreover, some research has (e.g., van Kleef et al., 2004) indicated that powerful individuals tend to pay less attention to information from those with low power; thus, in real life, the reactions of those with more resource power to those with less power (and vice versa) could be different.

Since we also did not include a control condition with no affective displays whatsoever, we do not know exactly how much behavior was inspired by the fact that each group had some sort of manipulation in it. However, given the random assignment of our participants and the fact that negotiators in the happy condition reacted significantly differently than did the anger condition negotiators, we can have some confidence that these differences were indeed driving the reactions and behaviors that we observed.

In addition, we believe that more research, possibly employing different methods and samples, is needed to further establish the reliability of our findings and provide a more fine-tuned picture of how and under what conditions affective displays may have an impact on individual perceptions and performance in the online context. For example, our affective manipulation by itself did not directly influence perceptions and outcomes. Our conclusion from this was to take it as preliminary evidence that affective displays should probably be operationalized as more of a continuum than a finite category, but further studies employing different affective manipulation techniques (using both continuous and categorical variables) may be necessary to better understand these dynamics.

In addition, it is worthy of note that we saw relatively low anger scores reported, even for those in the anger condition. One possible explanation for this effect could be that it was hard for study participants to display explicit negativity and anger in e-mails and still remain professional and business-like. As some research suggests, people may display their negativity in the online context through what is not said as opposed to what is, such as by omitting greetings and "thank you's" in their e-mails, or by being abrupt in their correspondence, instead of using explicitly negative language (Belkin & Kurtzberg, forthcoming). Another explanation for this effect could be that in the face-to-face context, people routinely underestimate the prevalence and the extent of others' negative feelings, even with close peers (Jordan et al., 2011). Since in the online context it is even harder to recognize someone's affective states due to the limited-cues environment, the low anger scores reported for angry actors (as perceived by their partners) could be in part a result of this phenomenon.

We also did not compare the online context to a face-to-face one in this research. Thus, we cannot know whether these effects are specific to the online text-only medium or if they would work in a similar fashion in the face-to-face context. Similarly, on the basis of our design, we cannot tease out the effects

of strategically employed affective displays versus genuine ones. For instance, it remains an empirical question whether when positive affective displays are used as an impression management tactic in an e-mail context it would make a difference in how the receiver interprets the message. Similarly, might it come across differently to the other side if the party were *truly* angry as opposed to just posing as an angry message sender? However, it appears that the virtual context is one where the strategic use of affect, along with deception, is an easier act to pull off than it is in face-to-face exchanges due to the absence of nonverbal cues (Friedman & Belkin, forthcoming; Naquin, Kurtzberg, & Belkin, 2010). Nevertheless, we believe future research might investigate the effects and differences of strategically employed versus genuine affective displays in e-mails.

Another avenue for future research can look beyond just happiness and anger displays to a wider array of affective expressions and their effects on individual perceptions and various aspects of negotiation performance. Recent research has shown that anger has different effects on individual perceptions and performance than do envy, guilt, or fear, while happiness effects differ from those of regret or compassion in face-to-face dyadic and group negotiation settings (for a review see Cropanzano, Becker, & Feldman, in press). Moreover, future research can also look at the linguistic signals of dominance in e-mails and see whether there are any specific indicators beyond just affective displays (such as threats—Sinaceur et al., 2011) that could signal dominance or submissiveness to online partners.

We also did not focus on the impact of affective displays on joint outcomes in this study (and we did not see any effects when we analyzed the available data, possibly due to a small number of available dyads). Future data collections, perhaps with greater numbers of negotiating dyads or even using teams, can potentially focus on a dyad-level dynamics and performance, and explore these types of effects on integrative outcomes, in addition to individual ones. For instance, might concessions to a seemingly dominant other limit the amount of joint gain that an entire negotiating dyad or team was able to create? Might negotiators who approach the situation with a pie-expanding mindset react differently to the expressed affect than would those with a more individual-claiming mindset?

Taken as a whole, the results of our study offer another step in understanding the effects of linguistic affective displays on individual perceptions of dominance and the subsequent effects on negotiated outcomes in the electronic context. Our exploration of natural language in both positive and negative affective directions broaden the study of these topics thus far and give some insight into the way that affective cues are interpreted by the receiver in this context. Given the lack of richness in electronic exchanges, coupled with the way both business and personal lives are increasingly virtual, these subtle but real effects are important to understand. Thus, knowing the dynamics of those interactions and anticipating the implications of displaying affect in mixed-motive electronic contexts is useful for scholars and practitioners in the fields of organizational behavior, conflict management, and negotiations. The findings presented in this research take a step toward this goal.

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Liuba Y. Belkin is Assistant Professor in the Department of Management, College of Business and Economics, Lehigh University. She received her Ph.D. at Rutgers University. Professor Belkin conducts her research in the fields of organizational behavior and negotiation with interests in emotions and affect, communication media, trust and ethical decision-making. Her work has been published in *Journal of Applied Psychology*, *Organizational Behavior and Human Decision Processes*, *Social Justice Research*, and *Journal of International Business Studies*, among others.

Terri R. Kurtzberg is Associate Professor of Management and Global Business at Rutgers Business School, Newark and New Brunswick. Her areas of expertise include virtual teams, e-mail communications, negotiation strategies and tactics, and organizational creativity. Her published work appears in journals such as *Organizational Behavior and Human Decision Processes*, *Journal of Applied Psychology*, *Group Dynamics*, and *Social Justice Research*. She has also co-authored a book on negotiating job packages and has another forthcoming on virtual teams. Dr. Kurtzberg teaches in the areas of negotiations and organizational behavior and is the recipient of multiple teaching and research awards.

Charles E. Naquin is Associate Professor of Management at DePaul University's Kellstadt Graduate School of Business. His current research examines the influence of technology upon individual behavior and decision making. Dr. Naquin received his Ph.D. in organizational behavior from Northwestern University and has published widely in both academic and popular press outlets.