The Interpersonal Effects of Anger and Happiness in Negotiations

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Three experiments investigated the interpersonal effects of anger and happiness in negotiations. In the course of a computer-mediated negotiation, participants received information about the emotional state (anger, happiness, or none) of their opponent. Consistent with a strategic-choice perspective, Experiment 1 showed that participants conceded more to an angry opponent than to a happy one. Experiment 2 showed that this effect was caused by *tracking*—participants used the emotion information to infer the other's limit, and they adjusted their demands accordingly. However, this effect was absent when the other made large concessions. Experiment 3 examined the interplay between experienced and communicated emotion and showed that angry communications (unlike happy ones) induced fear and thereby mitigated the effect of the opponent's experienced emotion. These results suggest that negotiators are especially influenced by their opponent's emotions when they are motivated and able to consider them.

Conflict is a ubiquitous feature of social life, pervading social interactions and influencing people's behavior throughout all levels of society. *Negotiation*, defined by Pruitt and Carnevale (1993) as "a discussion between two or more parties with the apparent aim of resolving a divergence of interests" (p. 2), is one of the most common and constructive ways of dealing with conflict. Despite decades of research on negotiation, surprisingly little attention has been given to the role of emotions in negotiation. This is unfortunate, because emotions are inherent to negotiation and social conflict: If two parties have a difference of opinion but neither has an emotional reaction, there will be no negotiation (Davidson & Greenhalgh, 1999). Thus, "as an impetus for and byproduct of social conflict, emotion is potentially central to understanding how individuals think about, behave within, and respond to bargaining situations" (Barry, 1999, p. 94). This article presents three experiments designed to enhance understanding of the role of emotions in negotiation. Specifically, we focus on the social consequences of emotion, that is, the way negotiators respond to their opponent's emotions.

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Emotions in Negotiation

There are probably as many definitions of *emotion* as there are researchers interested in the topic. However, most definitions point to three features of emotion: physiological reactions, action tendencies, and subjective experience (Lazarus, 1991). Emotions differ from moods in that they are discrete (Russell & Barrett, 1999), of relatively short duration (Oatley & Jenkins, 1996), and intentional—that is, directed at an object or event (Frijda, 1993; Russell & Barrett, 1999). In the remainder of this article we use the term *emotion* in the sense intended above, whereas *affect* will be used as a superordinate construct that encompasses both moods and emotions (cf. Barry & Oliver, 1996). In the current research, we chose to examine the effects of two emotions potentially relevant to most, if not all, negotiations, namely anger and happiness.

In conceptualizing the role of emotions in negotiation, it is useful to make a distinction between intrapersonal effects and interpersonal effects (cf. Morris & Keltner, 2000). *Intrapersonal effects* refer to the influence of a negotiator's emotions on his or her own negotiation behavior. *Interpersonal effects* refer to the influence of one negotiator's emotions on the other negotiator's behavior. Previous studies on emotion in negotiation all focused on the intrapersonal effects of emotions and affect. The negotiator's own positive affect has been shown to increase concession making (Baron, 1990), stimulate creative problem solving (Isen, Daubman, & Nowicki, 1987), increase joint gains (Allred, Mallozzi, Matsui, & Raia, 1997; Carnevale & Isen, 1986), increase preferences for cooperation (Baron, Fortin, Frei, Hauver, & Shack, 1990), reduce the use of contentious tactics (Carnevale & Isen, 1986), and increase the use of cooperative negotiation strategies (Forgas, 1998). Negative affect has been shown to decrease initial offers (Baron et al., 1990), decrease joint gains (Allred et al., 1997),

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promote the rejection of ultimatum offers (Pillutla & Murnighan, 1996), increase the use of competitive strategies (Forgas, 1998), and decrease the desire to work together in the future (Allred et al., 1997). Thus, these studies have shown quite consistently that negotiators experiencing positive affect tend to be more cooperative and conciliatory, whereas negotiators who are in a negative affective state tend to be more competitive and reluctant to make concessions.

With regard to the interpersonal effects of emotions in negotiations, research is lacking. Recently, however, several scholars have emphasized the importance of the interpersonal functions of emotions in negotiations (e.g., Adler, Rosen, & Silverstein, 1998; Barry, Fulmer, & Van Kleef, in press; Barry & Oliver, 1996; Davidson & Greenhalgh, 1999; Morris & Keltner, 2000; Thompson, Nadler, & Kim, 1999). It has been argued that emotions have a number of important social functions and consequences (Frijda & Mesquita, 1994; Keltner & Haidt, 1999; Keltner & Kring, 1998; Oatley & Jenkins, 1992). First, emotion displays tend to evoke complementary or reciprocal emotions in others that help individuals to respond to significant social events (Keltner & Haidt, 1999). For example, rage in one person may evoke fear in the other, and happiness in one person may induce happiness or sympathy in the other (Keltner & Kring, 1998).

Second, emotions are communications to both oneself (Schwarz & Clore, 1983) and other people (Oatley & Johnson-Laird, 1987) conveying information about how one feels about things (Ekman, 1993; Scherer, 1986), about one's social intentions (Ekman, Friesen, & Ellsworth, 1972; Fridlund, 1994), and about one's orientation toward other people (Knutson, 1996). Because emotions only arise in response to events that are appraised as relevant to some concern (Frijda & Mesquita, 1994; Lazarus, 1991), they provide important information to observing individuals. In the context of a negotiation, emotions may signal what value one attaches to the different issues and provide critical feedback about one's mood and willingness to agree (Putnam, 1994). For example, an angry opponent conveys the impression of a hard-to-get, tough negotiator who will not settle for a suboptimal outcome. By contrast, happiness detracts from the impression of a tough bargainer (Wall, 1991). Happiness implies that one is satisfied with the distribution of outcomes and suggests that one does not aspire to a larger share of the pie.

Third, emotions can serve as incentives or deterrents for other individuals' social behavior (Klinnert, Campos, Sorce, Emde, & Svejda, 1983). Anger may signal that some standard of socially acceptable behavior is violated (Averill, 1982) and that behavioral adaptation is needed. Thus, in negotiations "anger may be used to indicate that negative consequences (such as an impasse) may ensue if an unreasonable tactic or position is pursued" (Daly, 1991, p. 36). Furthermore, because anger is often followed by aggression (Averill, 1982), it may be used to induce fear and compliance. By contrast, happiness encourages others to pursue their course of action and may therefore not serve the negotiator's strategic interests (Parrott, 1994).

Building on the foregoing discussion, we advance two competing hypotheses. The first is based on the notion of *social contagion* (Levy & Nail, 1993), which can be defined as "the spread of affect, attitude, or behavior from Person A (the 'initiator') to person B ('the recipient') where the recipient does not perceive an intentional influence attempt on the part of the initiator" (Levy & Nail, 1993, p. 266). There are a number of subtypes of social contagion, which occur under different circumstances. Most research has focused on contagion processes in face-to-face settings (e.g., "primitive emotional contagion"; Hatfield, Cacioppo, & Rapson, 1992, 1994), demonstrating people's tendency to unintentionally and automatically "catch" other people's emotions through their facial expressions, vocalizations, postures, or movements (e.g., Friedman & Riggio, 1981; Hess & Blairy, 2001; Hietanen, Surakka, & Linnankoski, 1998; Lundqvist & Dimberg, 1995; Neumann & Strack, 2000; Wild, Erb, & Bartels, 2001). However, research has suggested that social contagion can also occur in computer-mediated interaction (De Dreu, Carnevale, Emans, & Van de Vliert, 1994). For example, Thompson and Nadler (2002) observed that individuals engaging in computer-mediated communication unconsciously imitate not only the linguistic structure of each other's messages but also the social–emotional connotations of the messages. Thus, drawing on social contagion theory and previous findings regarding the intrapersonal effects of emotions, it can be predicted that negotiators who are faced with an angry opponent will themselves become angry and behave competitively, placing high demands and making small concessions. Conversely, negotiators who are confronted with a happy opponent can be expected to become happy and behave more cooperatively, placing low demands and making large concessions.

A competing hypothesis can be derived from the mixed-motive nature of negotiations and the social consequences of emotions. Negotiations involve mixed-motive interdependence (Schelling, 1960). On the one hand, negotiators are motivated to cooperate, because an agreement is usually more profitable than no agreement. On the other hand, however, they are motivated to compete in order to maximize their individual profits. This tension between cooperation and competition becomes manifest in a type of negotiation behavior that is called *mismatching* (Pruitt & Carnevale, 1993). Mismatching involves placing high demands when the opponent appears conciliatory and low demands when the opponent appears tough (Pruitt, 1981). When one's opponent appears soft, this leaves scope for placing high demands oneself without risking impasse. By contrast, the opponent's apparent toughness is likely to be interpreted as endangering agreement, thereby encouraging concession making.

The tendency to mismatch the opponent's negotiation behavior has been found in a considerable number of studies (e.g., Bartos, 1974; Bateman, 1980; Chertkoff & Conley, 1967; De Dreu et al., 1994; Druckman & Bonoma, 1976; Druckman, Zechmeister, & Solomon, 1972; Komorita & Brenner, 1968; Liebert, Smith, Hill, & Keiffer, 1968; Pruitt & Syna, 1985; Smith, Pruitt, & Carnevale, 1982; Yukl, 1974a, 1974b). It has been shown to be especially likely to occur when negotiators lack information about the opponent's outcomes (Liebert et al., 1968; Yukl, 1974b) and limits (Pruitt & Syna, 1985). When individuals lack such information, they use other sources of information to locate the opponent's limits, a behavior that is referred to as *tracking* (see Pruitt, 1981). As the research summarized above has shown, one of these types of information consists of the opponent's demands. However, there are other sources of information on which negotiators can base their strategies, one of which may be the opponent's emotions. An angry negotiator cannot be expected to make any (fur-

ther) concessions. The only way to prevent the negotiation from ending in impasse, then, is by making concessions oneself. By contrast, a happy opponent does not constitute a threat to agreement and is therefore unlikely to elicit any (more) concessions. On the basis of these strategic considerations, it can be predicted that participants with an angry opponent will become more conciliatory, making lower demands and larger concessions than participants with a happy opponent.

Experiment 1

Experiment 1 tested these two competing hypotheses regarding the effects of the opponent's experienced emotion on the focal negotiator's behavior. Participants were led to believe that they negotiated with either an angry or a happy opponent or, in a control condition, were given no information about the opponent's emotional state. The social contagion hypothesis posits that participants with an angry opponent will make higher demands and smaller concessions than participants with a happy opponent. The strategic-choice hypothesis predicts that participants with an angry opponent will make lower demands and larger concessions than participants with a happy opponent. In a more exploratory fashion, we also investigated the effects of the opponent's emotions on participants' impressions of the opponent.

There are a number of ways in which the opposing negotiator's emotions can be manipulated. One is to use scenarios where participants are asked to indicate how they would behave when faced with an angry or a happy opponent. However, with scenarios it is difficult to create experimental realism and to obtain behavioral data. Alternatives are to present pictures of facial expressions showing anger or happiness (e.g., Dimberg & Öhman, 1996; Hess, Philippot, & Blairy, 1998) or to manipulate the vocal expression of emotion (e.g., Banse & Scherer, 1996; Neumann & Strack, 2000; Scherer, 1986). Unfortunately, these methods are difficult to implement in a dynamic context such as a negotiation. Because of the limitations of the existing methods, we chose to manipulate the opposing negotiator's emotion in the context of a computer-mediated negotiation where parties could not see each other and communicated via computers (see, e.g., De Dreu & Van Kleef, in press; De Dreu & Van Lange, 1995; Hilty & Carnevale, 1993; Moore, Kurtzberg, Thompson, & Morris, 1999). In the past decade, computer-mediated communication has become a ubiquitous phenomenon. Negotiations are increasingly being conducted by means of technological media such as the Internet and e-mail (McKersie & Fonstad, 1997), and as organizations respond to the globalization of markets by expanding around the world, face-to-face communications are likely to give way to technologically mediated communications (Moore et al., 1999).

In the present experiments, we led participants to believe that the purpose of the study was to find out how knowledge about one's opponent's intentions affects negotiation processes and outcomes. During the negotiation, participants received information about their opponent's intentions, which contained the manipulation of the opponent's emotion. In this way we were able to create a relatively dynamic setting with high experimental realism, in which we had perfect control over the opponent's emotion. We return to this method, and its advantages and disadvantages, in the General Discussion section.

Method

Participants and Experimental Design

A total of 128 male and female undergraduate students at the University of Amsterdam participated in the study for course credit or monetary compensation (10 Dutch guilders, roughly equivalent to US$4). The one-factor experimental design included the opponent's emotion (anger vs. happiness vs. no emotion) as a between-participants variable and demand level as the main dependent variable. Additional dependent variables were self-reported emotion, perceptions of the opponent, and manipulation checks. Participants were randomly assigned to the experimental conditions, and the experimenters were blind to this assignment.

Procedure

On arrival at the laboratory, participants were welcomed to the experiment and were seated in separate cubicles in front of a computer. To enhance the participants' awareness of the presence of other participants, they were told that the experimenter would give them a sign as soon as everyone had arrived. After 5 min the experimenter told the participants to press a key, whereupon the computer program started. From that point on, all instructions were presented on the computer screen. Participants read that the purpose of the experiment was to study negotiation in a situation where the negotiating parties could not see each other, and they were led to believe that they would engage in a computer-mediated negotiation with another participant (whose behavior was in fact simulated by the computer).

Negotiation task. The negotiation task was an adapted version of the one used by De Dreu and Van Kleef (in press; see also De Dreu & Van Lange, 1995; Hilty & Carnevale, 1993), which captures the main characteristics of real-life negotiation (i.e., multiple issues differing in utility to the negotiator, information about one's own payoffs only, and the typical offer–counteroffer sequence). In the current version, participants learned that they would be assigned the role of either buyer or seller of a consignment of mobile phones and that their objective was to negotiate the price, the warranty period, and the duration of the service contract of the phones. Participants were then presented with a payoff chart (see Table 1) that showed them which outcomes were most favorable to them and were told that their objective was to earn as many points as possible. As can be seen in Table 1, Level 9 on price ($110) yielded 0 points and Level 1 ($150) yielded 400 points (i.e., increments of 50 points per level). For warranty period, Level 9 (9 months) yielded 0 points, and Level 1 (1 month) yielded 120 points (i.e., 15-point increments). Finally, for duration of service contract, Level 9 (9 months) yielded 0 points, and Level 1 (1 month) yielded 240 points (i.e., 30-point increments). The corresponding payoff table for the other party was not shown, and participants were told only that it differed from their own.

To enhance participants' involvement in the negotiation task, they were informed that points would be converted to lottery tickets at the end of the experiment and that the more points earned, the more lottery tickets one would obtain and the greater would be one's chance of winning a prize of 100 Dutch guilders (approximately US$40). To emphasize the mixed-motive nature of the negotiation, participants were told that only those who reached an agreement would participate in the lottery. Thus, on the one hand, there was an incentive to earn as many points as possible, whereas on the other hand, there was an incentive to reach an agreement.

After a short pause during which the computer supposedly assigned buyer and seller roles to the participants, all participants were assigned the role of seller. They were told that the buyer (i.e., the opponent) would make the first offer and that the negotiation would continue until an agreement was reached or until time ran out. Just before the negotiation started, participants learned that an additional goal of the study was to examine the effects of having versus not having information about the opponent's

Table 1
Participants' Payoff Chart (Used in Experiments 1 and 3)

	Price of phones		Warranty period		Service contract	
Level	Price ($)[a]	Payoff	Warranty (in months)	Payoff	Service (in months)	Payoff
1	150	400	1	120	1	240
2	145	350	2	105	2	210
3	140	300	3	90	3	180
4	135	250	4	75	4	150
5	130	200	5	60	5	120
6	125	150	6	45	6	90
7	120	100	7	30	7	60
8	115	50	8	15	8	30
9	110	0	9	0	9	0

[a] Prices in Dutch guilders were converted to U.S. dollars and rounded to the nearest $5.

intentions. They read that the computer had randomly determined that they would receive information about the intentions of the opponent without the opponent knowing it and that the opponent would not receive information about their intentions.

After these instructions, the negotiation started and the buyer (i.e., the computer) made a first offer. Over the negotiation rounds the buyer proposed the following levels of agreement (for price–warranty–service): 8–7–8 (Round 1), 8–7–7 (Round 2), 8–6–7 (Round 3), 7–6–7 (Round 4), 7–6–6 (Round 5), and 6–6–6 (Round 6). Past research has shown that this preprogrammed strategy has face validity and is seen as intermediate in cooperativeness and competitiveness (De Dreu & Van Lange, 1995). A demand by the participant was accepted if it equaled or exceeded the offer the computer was about to make in the next round. Thus, for example, if the participant demanded 7–6–6 in Round 4, this demand was accepted by the computer because its next offer (in Round 5) would have been 7–6–6. If no agreement was reached after the sixth round, the negotiation was interrupted, because up to this point few participants suspect that they are playing against a computer, whereas after the sixth round such suspicion usually develops rapidly (De Dreu & Van Lange, 1995). Further, we wished to obtain measures of participants' emotions and perceptions during the negotiation, and we suspected that reaching agreement would strongly color such perceptions. Finally, from past research in our laboratory we know that participants who reach consensus before the sixth negotiation round usually do not take the task very seriously. Thus, following Tripp and Sondak (1992), participants who reached agreement before Round 6 ($n = 10$) were excluded from the analyses. (Retaining those participants did not change the pattern of results reported below.)

Manipulation of the opponent's emotion. After the first, third, and fifth negotiation round, participants received information about "the intentions of the buyer," which contained the manipulation of the buyer's emotion. Participants had to wait for about a minute and a half while the buyer was supposedly asked to reveal what he or she intended to offer in the next round, and why. After this short wait, participants received the answer supposedly given by the buyer, which was presented in a separate box, in a different font, and which contained some typing errors in order to enhance experimental realism. The buyer's intentions were held constant across conditions and contained the buyer's intended offer for the next round. That is, after Round 1 the buyer wrote "I think I will offer 8–7–7," which would indeed be the buyer's next offer. The buyer's intention also contained an emotional statement that constituted the experimental manipulation. It was stressed that the buyer did not know that his or her "intentions" were revealed to the participant. This was done in order to lead participants to believe that they received information about the real emotions of the opponent, and not faked, inhibited, or exaggerated emotions. Thus, participants were led to believe that the emotion statements they received reflected the emotions as experienced by the opponent at that time, and not emotions that were altered for self-presentational or strategic reasons.

The emotion statements were pretested in a pilot study involving 28 psychology students, none of whom participated in the main study. We tested eight statements reflecting anger and nine statements reflecting happiness using a within-participants design. The order of the 17 statements was randomized for each participant, and for each statement participants were asked to indicate on a 7-point scale how comprehensible they found the statement (1 = *very incomprehensible*, 7 = *very comprehensible*) and to what extent they felt it reflected anger and happiness (1 = *not at all*, 7 = *to a great extent*). We then selected those statements that had the highest scores on the emotion they were supposed to reflect and the lowest scores on the emotion that they were not supposed to reflect, provided that the statements did not differ with respect to comprehensibility. Ultimately, we selected three statements for each emotion. All selected statements were rated higher on the emotion they were supposed to express than on the emotion they were not supposed to express according to paired-sample t tests (all ts > 10, all ps $< .01$). Further, one-sample t tests showed that there was a significant effect of all statements on the rating of the corresponding emotion (all ts > 10, all ps $< .01$). Finally, paired-sample t tests revealed that the statements did not differ with respect to comprehensibility (all ts < 1, *ns*).

After the first negotiation round, participants in the angry opponent condition received the information "this offer makes me really angry," followed by the intention statement "I think I will offer 8–7–7," which was the same for all conditions. In the happy opponent condition, participants read "I am happy with this offer," followed by the same intention statement. In the control condition, participants only received the intention statement. After the third and fifth negotiation rounds participants again received an emotional statement and an intention. Table 2 displays all statements used in the experiment. Note that the intended offer always matched the true offer subsequently made by the opponent.

Dependent measures. The offers made by participants in each round were recorded and transformed into an index revealing the negotiator's total level of demand for each negotiation round (i.e., the number of points demanded in that round, summed across the three negotiation issues of price, warranty, and service; see Table 1). In addition, participants completed a postnegotiation questionnaire that contained manipulation checks and a number of items designed to measure participants' emotions and their impression of the opponent.

To check the adequacy of the manipulation of the opponent's emotion, participants were asked to indicate on a 7-point scale how angry, irritated,

Table 2
Statements Used for the Manipulation of the Opponent's Experienced Emotion

Opponent's emotion	Statement
	After Round 1
Angry	This offer makes me really angry, I think I will offer *x–y–z.*
Happy	I am happy with this offer, I think I will offer *x–y–z.*
Nonemotional	I think I will offer *x–y–z.*
	After Round 3
Angry	This is really getting on my nerves. I am going to offer *x–y–z.*
Happy	This is going pretty well so far. I am going to offer *x–y–z.*
Nonemotional	I am going to offer *x–y–z.*
	After Round 5
Angry	I am going to offer *x–y–z,* because this negotiation pisses me off.
Happy	I am going to offer *x–y–z,* because I feel good about this negotiation.
Nonemotional	I am going to offer *x–y–z.*

Note. Statements were pretested and have been translated from Dutch. Deliberate typing errors have been omitted. In Experiment 2, the opponent's offer was dependent on the concession size condition. *x–y–z* = the opponent's intended offer corresponded with the actual offer in the next round.

happy, and satisfied they thought their opponent had been during the negotiation. The items designed to measure perceived anger and irritation correlated substantially ($r = .75$) and were averaged into a single index of perception of the opponent's anger. Similarly, the items pertaining to happiness and satisfaction were combined into an index of perception of the opponent's happiness ($r = .64$).

Participants' own emotions were measured with items pertaining to anger and happiness: "To what extent did you experience anger [happiness] during the negotiation?" (1 = *not at all*, 5 = *to a great extent*). Finally, we assessed participants' impressions of the opponent: "I have developed a positive impression of the buyer" (1 = *totally disagree*, 5 = *totally agree*).

Results

Manipulation Checks

If the manipulation of the opponent's emotion was successful, we should find an interaction between the opponent's emotion and the participant's rating of their opponent's emotion, such that ratings within each emotion condition are higher for the corresponding emotion than for the other emotion (a within-participants manipulation check) and that ratings between the emotion conditions are higher for the intended emotion than for the other emotion (a between-participants check). To test whether this was the case, we conducted a 3 (opponent's emotion: angry vs. nonemotional vs. happy) × 2 (participant's perception of opponent's emotion: angry vs. happy) analysis of variance (ANOVA), the latter variable being a within-participants factor.

Results showed the predicted interaction between the opponent's emotion and the participants' perception of the opponent's emotion, $F(2, 115) = 65.68$, $p < .01$. From the means in Table 3, it can be seen that participants in the angry opponent condition rated their opponents as significantly more angry than did participants in the happy opponent or nonemotional opponent conditions. Similarly, participants with a happy opponent rated the opponent as happier than did participants with an angry or nonemotional opponent. Further, paired-sample *t* tests revealed that ratings within the different emotion conditions were higher for the intended emotion than for the other emotion: Participants in the angry opponent condition rated the opponent as more angry than happy, $t(37) = 11.98$, $p < .01$, and those in the happy opponent condition rated the opponent as more happy than angry, $t(39) = 3.91$, $p < .01$. In the nonemotional opponent condition, no significant difference was found, $t(39) < 1$, *ns*. Together, these results indicate that the manipulation of the opponent's emotion was successful.

Demand Level

Demand level in Rounds 1–6 was analyzed using ANOVA with the opponent's emotion (anger vs. happiness vs. no emotion) as a

Table 3
Participant's Perception of the Opponent's Emotion and Participant's Self-Reported Emotion as a Function of the Opponent's Experienced Emotion in Experiment 1

	Opponent's emotion		
Emotion	Anger	Happiness	No emotion
	Rating of opponent's emotion		
Anger	5.82_a	2.64_d	3.65_e
Happiness	1.53_c	4.70_b	3.51_e
	Rating of own emotion		
Anger	3.16_a	1.95_b	2.48_b
Happiness	2.13_b	2.55_a	2.05_b

Note. Means not sharing a similar subscript differ at $p < .05$. Ratings of the opponent's emotion were given on a 7-point scale; ratings of own emotion were given on a 5-point scale.

between-participants variable and negotiation round (1–6) as a repeated-measures variable. This analysis revealed a significant main effect of negotiation round, $F(5, 575) = 222.85$, $p < .01$, indicating that level of demand declined from Round 1 ($M = 629$) to Round 6 ($M = 462$). Results also showed a significant effect of the opponent's emotion, $F(2, 115) = 5.66$, $p < .01$, showing that average demands were lower for participants who negotiated with an angry opponent ($M = 490$) compared with participants who dealt with a happy opponent ($M = 553$). Participants with a nonemotional opponent occupied an intermediate position that differed only from the angry opponent condition ($M = 540$).

The main effects of the opponent's emotion and negotiation round were qualified by a significant two-way interaction, $F(10, 575) = 5.99$, $p < .01$. As can be seen from Figure 1, the influence of the opponent's emotion became more apparent as the negotiation progressed. From the second round onward, the different conditions started to diverge, the effect becoming stronger in each round. From the fifth round onward, all three conditions differed significantly at $p < .05$. Participants with an angry opponent conceded most between the first and sixth negotiation rounds (distance traveled: $M = 210$), followed by those with a nonemotional opponent (distance traveled: $M = 173$). Highest demands and smallest concessions were made by participants with a happy opponent (distance traveled: $M = 122$). This pattern of results is consistent with the strategic-choice perspective and inconsistent with the emotional-contagion perspective.

Participants' Emotions and Impression of the Opponent

ANOVA showed that participants' own emotions were affected by their opponents' emotions. Participants who had negotiated with an angry opponent reported more anger than did participants who had negotiated with a happy or nonemotional opponent, $F(2, 115) = 8.01$, $p < .01$. Similarly, participants who had negotiated with a happy opponent reported more happiness than did participants who had negotiated with an angry or nonemotional opponent, $F(2, 115) = 3.36$, $p < .05$ (all means are displayed in Table 3). These data suggest that in the course of the negotiation, social contagion occurred. The opponent's emotion also influenced the participants' impressions of the opponent. Participants developed more positive impressions of happy opponents ($M = 3.55$) than of nonemotional opponents ($M = 2.75$), who in turn were rated more positively than angry opponents ($M = 1.68$), $F(2, 115) = 43.73$, $p < .01$.

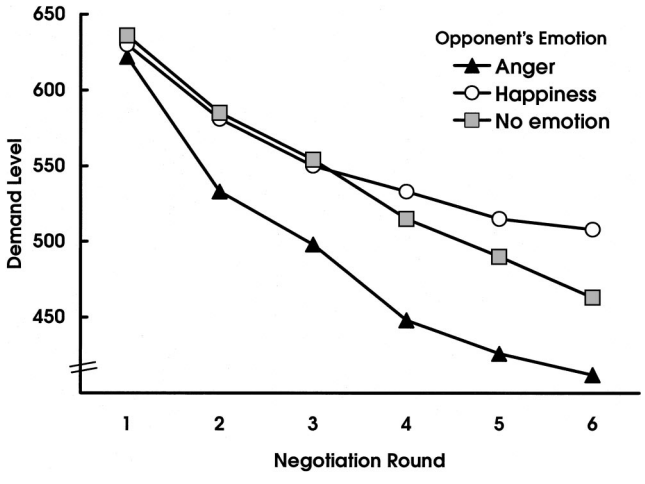

Figure 1. Demand level as a function of the opponent's emotion and negotiation round in Experiment 1.

Discussion

The results of Experiment 1 pertaining to demand level and concession making support the strategic-choice hypothesis. Participants with an angry opponent placed lower demands and made larger concessions than did participants with a happy opponent, and participants with a nonemotional opponent took an intermediate position. Although our data pertaining to self-reported emotions suggest that social contagion occurred (participants with an angry opponent reported more anger, and participants with a happy opponent reported more happiness), the participants' emotions did not influence their negotiation behavior in the way that was predicted on the basis of the social contagion hypothesis. That is, happy participants did not behave more cooperatively than did angry participants.

There are a number of possible explanations why participants' emotions did not influence their negotiation behavior. One is that participants' emotions resulted from their own behavior rather than from the opponent's emotions. With an angry opponent, one decides to make relatively large concessions so as to avoid impasse, but this strategic choice also implies relatively low outcomes for oneself, which may be a source of frustration and irritation. Another possibility is that although social contagion occurred at the level of emotional experience, this did not translate into demands and concessions. We believe that the best way to interpret the current findings is that they do not refute the existence of social contagion processes in negotiation, but rather show that social contagion, if it occurs, can be overruled by strategic considerations. We return to this issue in more detail in the General Discussion.

Experiment 2

Although the results of Experiment 1 favor the strategic-choice hypothesis over the social contagion hypothesis, we felt that more evidence was needed to firmly establish the effects. Therefore, the first objective of Experiment 2 was to replicate the major findings of Experiment 1 by showing that the effect of the opponent's emotion on participant's demands and concessions is not produced by the participant's emotions but rather by strategic considerations that cause participants to mismatch the opponent's anger with low demands and happiness with high demands. Thus, we predicted that although social contagion might occur, participants' emotions would not influence their negotiation behavior.

The second objective of Experiment 2 was to submit the strategic-choice reasoning to an additional test by examining whether the effect of the opponent's emotion would disappear when strategic considerations played a lesser role. If the effects of the opponent's emotion on demands and concessions are indeed caused by a process of strategic decision making on the part of the

focal negotiator, the impact of those emotions should be reduced if there is no need to consider them. For example, when the opponent makes large concessions, there is little need to take his or her emotions into account—settlement rather than impasse appears likely, and one can expect a relatively good deal for oneself. When the opponent makes small concessions, however, it is harder to get one's share. In this case, the strategic information that is provided by the opponent's emotion is a valuable asset and is more likely to be scrutinized and acted on. To test this prediction, we manipulated the opponent's emotion and the opponent's concession size and predicted that negotiators would be less influenced by the opponent's emotions when the opponent made large rather than small concessions.

The third goal of Experiment 2 was to examine more closely the process that underlies the effects of the opponent's emotion on demands and concessions. Although the results of Experiment 1 are consistent with the strategic-choice hypothesis, they do not speak directly to the process that causes the effect of the opponent's emotion. The findings obtained in Experiment 1 suggest that negotiators engage in tracking—that is, they use the opponent's emotion in their attempt to locate the opponent's limits and then adjust their behavior in accordance with the assumed location of those limits (cf. Pruitt, 1981). If the opponent is angry and is thought to have a high limit, negotiators will place less ambitious demands than when the opponent is happy and is thought to have a low limit (e.g., Chertkoff & Baird, 1971; Pruitt & Carnevale, 1993; Yukl, 1974a).

The results of Experiment 1 suggest that participants in our experiment monitored the opponent's emotions, tried to infer the location of the opponent's limits from these emotions, and used this information to form their negotiation strategy. Furthermore, our reasoning regarding the moderating effect of other's concession size suggests that the need to engage in tracking, and thus the attention that is paid to the other's emotion, is greater when the other makes small rather than large concessions. Therefore, we predicted that participants would estimate the other's limit to be higher when the other was angry rather than happy, especially when the other made small rather than large concessions. Finally, we expected the effects of the other's emotions on the participant's demands and concessions to be mediated by the participant's appraisal of the other's limits.

Method

Participants and Experimental Design

Participants were 103 male and female undergraduate students at the University of Amsterdam who received course credit or monetary compensation (10 Dutch guilders, approximately US$4) for participating, and were randomly assigned to the experimental conditions. The 2 × 3 factorial design included the opponent's emotion (anger vs. happiness) and the opponent's concession size (small vs. moderate vs. large) as between-participants variables and demand level as the main dependent variable. Additional dependent variables were participants' estimates of the opponent's limits, impression of the opponent, emotions, and manipulation checks.

Procedure

The procedure was essentially the same as in Experiment 1. To be able to manipulate the opponent's concession size symmetrically, we expanded the original 9-level negotiation task to a 15-level task and made all three issues equally valuable. Thus, the negotiation consisted of three issues, each with 15 possible levels of agreement (see Table 4 for details). As in Experiment 1, participants who reached agreement before Round 6 (n = 10) were excluded from the analyses. (Including these participants in the analyses did not change the pattern of results.)

Manipulation of the opponent's emotion. The manipulation of the opponent's emotion was the same as in Experiment 1, except that the intention statements had to be adjusted to match the opponent's offer in the following round. Thus, after Round 1 the buyer wrote "I think I will offer [14–15–14 or 14–14–13 or 13–14–12]," the intended offer depending on the concession size condition (cf. Table 5). Likewise, after the third round

Table 4
Participants' Payoff Table in Experiment 2

	Price of phones		Warranty period		Service contract	
Level	Price ($)[a]	Payoff	Warranty (in months)	Payoff	Service (in months)	Payoff
1	175	280	1	280	1	280
2	170	260	2	260	2	260
3	165	240	3	240	3	240
4	160	220	4	220	4	220
5	155	200	5	200	5	200
6	150	180	6	180	6	180
7	145	160	7	160	7	160
8	140	140	8	140	8	140
9	135	120	9	120	9	120
10	130	100	10	100	10	100
11	125	80	11	80	11	80
12	120	60	12	60	12	60
13	115	40	13	40	13	40
14	110	20	14	20	14	20
15	105	0	15	0	15	0

[a] Prices in Dutch guilders were converted to U.S. dollars and rounded to the nearest $5.

Table 5
Manipulation of the Opponent's Concession Size (Experiment 2)

	Small		Moderate		Large	
Round	Offer	Concession	Offer	Concession	Offer	Concession
1	15–15–14	−1	14–15–14	−2	14–15–13	−3
2	14–15–14	−1	14–14–13	−2	13–14–12	−3
3	14–14–14	−1	13–13–13	−2	12–12–12	−3
4	14–14–13	−1	12–13–12	−2	11–12–10	−3
5	13–14–13	−1	12–12–11	−2	10–11–9	−3
6	13–14–12	−1	11–12–10	−2	9–10–8	−3

Note. In the small-concessions conditions the opponent conceded one unit per round, in the moderate-concessions conditions the opponent conceded two units per round, and in the large-concessions conditions the opponent conceded three units per round.

the buyer stated "I am going to offer [14–14–13 or 12–13–12 or 11–12–10]," and after the fifth round the buyer wrote "I am going to offer [13–14–12 or 11–12–10 or 9–10–8]." In this way, the intended offer always matched the offer subsequently made by the opponent.

Manipulation of the opponent's concession size. The opponent's concession size was systematically varied using noncontingent preprogrammed concession strategies (see Table 5). In the small-concessions condition, the opponent conceded 1 unit in each round. Thus, in this condition the opponent's opening offer was 15–15–14 (representing a 1-unit concession from the maximum payoff of 15–15–15), and the offer in the sixth and last round was 13–14–12 (i.e., 6 units below 15–15–15). In the moderate-concessions condition the opponent conceded 2 units per round, offering 14–15–14 (minus 2 units) in the first round, and 11–12–10 in the sixth round (minus 12 units). Finally, in the large-concessions condition the opponent conceded 3 units per round, starting with 14–15–13 (minus 3 units), and finishing with 9–10–8 (minus 18 units). Similar preprogrammed concession patterns have been successfully used in prior research (see, e.g., De Dreu & Van Lange, 1995; Hilty & Carnevale, 1993; Smith et al., 1982).

Dependent measures. Participants' estimates of the opponent's limits were measured with three items, one for each issue ("What do you think was the buyer's lowest acceptable level of agreement on [price/warranty/service]?"). Responses could range from 1 (indicating an extremely low limit) to 15 (indicating an extremely high limit; see Table 4). Appraisals of the opponent's limits on the three issues were highly correlated and were therefore averaged into a single index of appraisal of the opponent's limit ($\alpha = .91$).

Impression of the opponent was measured with 11 items pertaining to the opponent's honesty, trustworthiness, morality, competitiveness, hostility, cooperativeness, reasonableness, stubbornness, friendliness, and general mood and impression (e.g., "During the negotiation, the buyer made a hostile impression"; "I have developed a positive impression of the buyer"; 1 = *totally disagree*, 7 = *totally agree*). Negatively framed items were reverse scored, and the items were combined into an impression scale ($\alpha = .92$). Participants' own emotions were measured with 8 items, 3 pertaining to happiness ($\alpha = .81$), and 5 pertaining to anger ($\alpha = .87$).

To check the adequacy of the manipulation of the opponent's emotion, participants were asked to indicate on a 7-point scale how angry, irritated, bad-tempered, happy, satisfied, and pleased they thought their opponent had been during the negotiation. The first three items were combined into a single index of perception of the opponent's anger ($\alpha = .94$), and the latter three were combined into an index of the opponent's happiness ($\alpha = .95$). The concession size manipulation was checked with four items (e.g., "In the course of the negotiation, the buyer made large concessions"; "During the negotiation the buyer stood firm"; 1 = *totally disagree*, 7 = *totally agree*), which were averaged into a single index of perceived concessions ($\alpha = .81$).

Results

Manipulation Checks

Opponent's emotion. The manipulation of the opponent's emotion was checked in the same way as in Experiment 1. Results revealed a significant interaction between the opponent's emotion and the participant's perception of the opponent's emotion, $F(1, 91) = 960.94$, $p < .01$. Participants in the angry opponent condition rated their opponents as significantly more angry ($M = 5.92$) than did participants in the happy opponent condition ($M = 1.69$), and participants with a happy opponent rated the opponent as happier ($M = 5.21$) than did participants with an angry opponent ($M = 1.80$). Paired-sample t tests showed that ratings within the different emotion conditions were indeed higher for the intended emotion than for the other emotion: Participants in the angry opponent condition rated the opponent as more angry than happy ($M = 5.92$ vs. $M = 1.80$), $t(50) = 24.85$, $p < .01$, and participants in the happy opponent condition rated the opponent as more happy than angry ($M = 5.21$ vs. $M = 1.69$), $t(41) = 19.31$, $p < .01$.

Opponent's concession size. ANOVA revealed a significant main effect of the opponent's concession size on the perceived concessions scale, $F(2, 90) = 5.64$, $p < .01$, showing that participants in the large-concessions condition reported larger concessions ($M = 3.63$) than did those in the small-concessions condition ($M = 2.53$). Participants in the moderate-concessions condition occupied an intermediate position ($M = 2.91$), differing from the large-concessions condition ($p < .05$) but not from the small-concessions condition.

Demand Level

Demands in Rounds 1–6 were submitted to a 2 (opponent's emotion: anger vs. happiness) × 3 (opponent's concession size: small vs. moderate vs. large) mixed-model ANOVA, with the opponent's emotion and concession size as between-participants variables and demands in Rounds 1–6 as a repeated-measures variable. First of all, this analysis yielded a main effect of negotiation round, $F(5, 435) = 154.02$, $p < .01$, indicating that partic-

ipants' demands declined over time (the average demands in Rounds 1 and 6 were 762 and 580, respectively).

Secondly, the analysis revealed a significant multivariate main effect of the opponent's emotion on demands in Rounds 1–6, $F(1, 87) = 5.37$, $p < .03$. Replicating the results of Experiment 1, participants with an angry opponent placed lower average demands ($M = 634$) than did participants with a happy opponent ($M = 682$).

Thirdly, we found a significant interaction between the opponent's emotion and negotiation round, $F(5, 435) = 10.47$, $p < .01$. As in Experiment 1, the effect of the opponent's emotion became more apparent as the negotiation progressed, causing participants in the different conditions to diverge more after each consecutive round. Consistent with the strategic-choice hypothesis, participants with an angry opponent conceded significantly more between the first and sixth negotiation rounds (distance traveled: $M = 222$) than did participants who negotiated with a happy opponent (distance traveled: $M = 131$). The interaction between concession size and negotiation round was not significant, $F(10, 435) < 1$, *ns*.

Fourthly, and most important, we obtained a significant three-way interaction between the opponent's emotion, the opponent's concession size, and negotiation round, $F(10, 435) = 2.03$, $p < .03$, indicating that the interactive effect of the opponent's emotion and negotiation round on level of demand was moderated by the opponent's concession size. This three-way interaction is displayed in Figure 2. Simple-effects analysis revealed a highly significant interaction between emotion and negotiation round for participants in the small-concessions condition, $F(5, 435) = 10.33$, $p < .01$. For participants in the moderate-concessions condition, the Emotion × Round interaction was weaker but still significant, $F(5, 445) = 2.22$, $p < .05$, whereas in the large-concessions condition the interaction was truly nonsignificant, $F(5, 435) = 1.49$, *ns*. Thus, as predicted, the effect of the opponent's emotion is reduced when the opponent makes large concessions.

To facilitate mediation analysis (see below) we also analyzed the demand level data by calculating a *distance-traveled index* (demand in Round 1 minus demand in Round 6; for discussions, see De Dreu, Koole, & Oldersma, 1999; Pruitt, 1981). This distance-traveled index yielded results similar to those described above. A main effect of the opponent's emotion showed that participants with an angry opponent conceded more between the first and sixth round ($M = 222$) than did participants with a happy opponent ($M = 131$), $F(1, 87) = 18.48$, $p < .01$, and a marginally significant interaction showed that this effect was moderated by the opponent's concession size, $F(2, 87) = 2.84$, $p < .07$. Simple-effects analyses revealed that participants whose opponents made small concessions were strongly influenced by the opponent's emotions, $F(1, 87) = 18.08$, $p < .01$. The effect of the opponent's emotion was somewhat weaker for participants whose opponents made moderate concessions, $F(1, 87) = 4.05$, $p < .05$, and nonsignificant for those whose opponents made large concessions, $F(1, 87) = 1.21$, *ns*. Cell means pertaining to this interaction are displayed in Table 6.

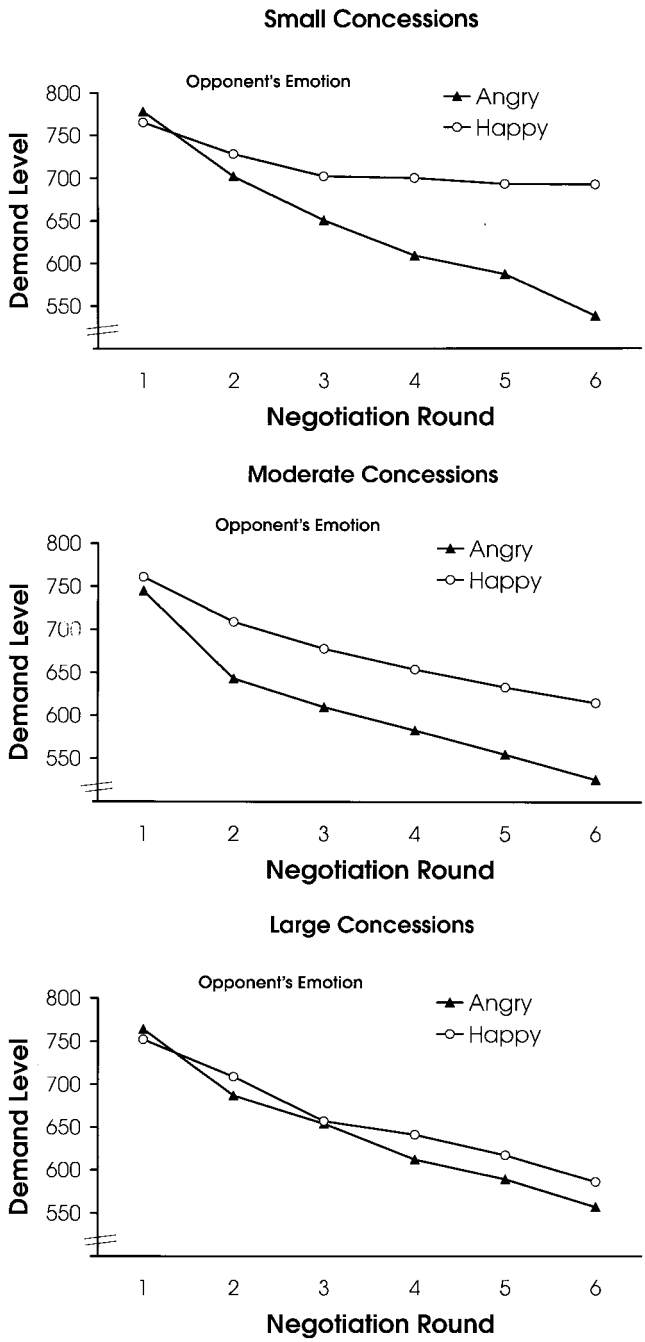

Figure 2. Demand level as a function of the opponent's emotion, the opponent's concession size, and negotiation round in Experiment 2.

Appraisal of the Opponent's Limits

ANOVA revealed a main effect of the opponent's concession size on appraisal of the opponent's limit, showing that participants with an opponent who made large concessions judged the opponent's limit to be lower ($M = 7.03$) than did participants with an opponent who made moderate concessions ($M = 8.21$) or small concessions ($M = 8.23$), $F(2, 87) = 4.70$, $p < .02$. More important, ANOVA showed a significant main effect of the opponent's emotion on appraisal of the opponent's limit, $F(1, 87) = 8.38$, $p <$

Table 6
Appraisal of the Opponent's Limit and Distance Traveled as a Function of the Opponent's Emotion and Concession Size (Experiment 2)

	Opponent's concession size					
	Small		Moderate		Large	
Measure	Anger	Happiness	Anger	Happiness	Anger	Happiness
Appraisal of other's limit	8.98_a	7.17_b	8.38_a	8.06_a	7.50_a	7.38_a
Distance traveled	240_a	73_b	219_a	146_b	208_a	166_a

Note. Means within each of the concession conditions with a different subscript differ at $p < .05$. Appraisal of the opponent's limit ranged from 1 (indicating a low limit) to 15 (indicating a high limit). Distance traveled represents the amount of points conceded between the first and the sixth negotiation round.

.01. As predicted, angry opponents' limits were judged to be higher ($M = 8.27$) than were happy opponents' limits ($M = 7.29$).[1]

The interaction between the opponent's emotion and concession size did not reach statistical significance, $F(2, 87) = 1.35$, *ns*. However, Rosenthal and Rosnow (1984) have argued that an omnibus interaction test is highly conservative and is not informative when the experimental design involves more than two levels for one or more independent variables (as in the current case). We therefore tested the effects of the opponent's emotion within each of the concessions conditions using simple-effects analyses.[2] Consistent with our theorizing, these analyses revealed that participants' estimates of the opponent's limits were only influenced by the opponent's emotion when the opponent made small concessions, $F(1, 89) = 7.74$, $p < .01$, and not when the opponent made moderate, $F(1, 89) = 1.63$, *ns*, or large, $F(1, 89) < 1$, *ns*, concessions. As can be seen in Table 6, participants estimated the opponent's limit to be higher when the opponent was angry rather than happy, but only when the opponent made small rather than moderate or large concessions.

Mediation Analysis

The strategic-choice hypothesis posits that anger induces concessions because it affects negotiators' appraisals of the other's limits. So far, we have shown that anger elicits lower demands and larger concessions than does happiness and that anger and happiness influence participants' estimates of the other's limits in the expected direction. Furthermore, and consistent with the strategic-choice perspective, these effects were especially manifest in the small-concessions condition and absent in the large-concessions condition. Thus, to test whether the opponent's emotion indeed influences participants' concessions through their effect on the participant's appraisal of the opponent's limit, we conducted mediated regression analyses within the small-concessions condition, with the opponent's emotion as the independent variable, the distance-traveled index as the dependent variable, and appraisal of the opponent's limit as the mediator.

To establish mediation, the following conditions should be satisfied (see Baron & Kenny, 1986). First, the independent variable (opponent's emotion) should affect the dependent variable (distance traveled). Second, the independent variable should affect the proposed mediator (appraisal of opponent's limit). Third, the mediator should be correlated with the dependent variable. Fourth, to establish full mediation, the effect of the independent variable on the dependent variable when controlling for the mediator should be nonsignificant. If the effect of the independent variable on the dependent variable at Step 4 continues to be significant but is substantially reduced, partial mediation is indicated.

Consistent with the mediational model, we found a significant regression of the opponent's emotion on distance traveled ($\beta = .57$, $p < .01$) and a significant regression of the opponent's emotion on appraisal of the opponent's limit ($\beta = .40$, $p < .03$). Adding appraisal of the other's limit as a covariate produced a significant regression of appraisal of the other's limit on distance traveled ($\beta = .57$, $p < .01$) and reduced the effect of other's emotion on distance traveled to $\beta = .34$ ($p < .05$). These data indicate that the effect of the opponent's emotion on distance traveled is partially mediated by appraisal of the opponent's limit (cf. Baron & Kenny, 1986). Furthermore, the reduction of the direct path from other's emotion to distance traveled when controlling for appraisal of other's limit was significant ($z = 2.67$, $p < .01$; see Kenny, Kashy, & Bolger, 1998; for an updated version of the formula, see D. A. Kenny's Web site at http://users.rcn.com/dakenny/mediate.htm). Thus, in the small-concessions condition, appraisal of other's limit mediated the effects of other's emotions on participant's demands. In the moderate and large concessions conditions, mediation was neither predicted nor found.

Participants' Emotions and Impression of the Opponent

As in Experiment 1, ANOVA showed a significant effect of the opponent's emotion on participants' emotions. Suggestive of social contagion, participants with a happy opponent felt happier than did those with an angry opponent ($M = 3.26$ vs. $M = 2.73$), $F(1, 87) = 10.84$, $p < .01$, and participants with an angry opponent felt angrier than did those with a happy opponent ($M = 2.30$ vs. $M = 1.62$), $F(1, 87) = 13.93$, $p < .01$.

ANOVA also revealed a main effect of the opponent's emotion on the participant's impression of the opponent, $F(1, 87) =$

[1] In line with this pattern, judgment of the opponent's concession magnitude was not only influenced by the opponent's concession size (see manipulation check), but also by the opponent's emotion. Participants with a happy opponent judged the opponent's concessions to be larger ($M = 3.69$) than did those with an angry opponent ($M = 2.48$), $F(1, 87) = 27.71$, $p < .01$.

[2] We used simple-effects analyses to maintain analytical consistency across experiments. However, a contrast analysis yielded similar results.

175.68, $p < .01$, showing that participants developed more positive impressions of happy opponents than of angry opponents ($M = 5.02$ and $M = 2.80$, respectively). We also found a main effect of the opponent's concession size on impression, $F(2, 87) = 3.88$, $p < .03$, which revealed a similar pattern. Participants in the large-concessions condition developed more positive impressions of the opponent than did those in the small-concessions condition ($M = 4.06$ and $M = 3.51$, respectively), and participants in the moderate-concessions condition took an intermediate position that did not differ significantly from the other conditions ($M = 3.82$). There was no interaction between the opponent's emotion and concession size, $F(2, 87) < 1$, *ns*.

Discussion

The findings of Experiment 2 are consistent with those of Experiment 1 and provide additional support for the strategic-choice hypothesis in three ways. First, the results of Experiment 1 were replicated: Participants with an angry opponent placed lower demands and made smaller concessions than did participants with a happy opponent. Although the data suggest that participants "caught" their opponent's emotions (i.e., social contagion), the resulting emotions did not influence their negotiation behavior.

Second, the emotion effect was shown to be moderated by the opponent's concession size. Participants whose opponents made small concessions were strongly influenced by the opponent's emotion, whereas those whose opponents made large concessions were unaffected. This finding shows that the effect of the opponent's emotion only occurs when it is in the negotiator's strategic interest to act on the other's emotion. If there is no need to take the other's emotion into consideration, the emotion effect is absent.

Third, the effect of the opponent's emotion in the small-concessions condition was mediated by participants' appraisals of the opponent's limits, a finding that is strongly indicative of tracking. In sum, the results of Experiment 2 provide cumulative support for the strategic-choice hypothesis and render the social contagion hypothesis less plausible by showing that it is negotiators' strategic thinking, not their emotional reactions, that is responsible for the effects of the opponent's emotions on demands and concession making. Finally, Experiment 2 replicated the findings concerning participants' impressions of the opponent, showing that participants with a happy opponent developed a more favorable impression of the opponent than did those with an angry opponent.

Experiment 3

So far we have focused on the effects of knowledge of the opponent's experienced emotions on the focal negotiator's behavior. The strong support for the strategic-choice perspective poses the question of whether participants in the first two experiments acted on the other's genuine emotions or on what they suspected to be strategic considerations. Although we took great effort to ensure that participants believed that the opponent did not know that his or her emotion statements would be revealed to the participant, we did not explicitly contrast this condition with a situation in which the opponent knowingly communicated emotion statements toward the recipient. The main objective of Experiment 3 was to explore this issue in more detail.

Besides the methodological issue noted above, studying genuine emotion in conjunction with communicated emotion is of theoretical importance. In real life, negotiators are often confronted with their opponents' communicated emotions, which do not necessarily reflect their true feeling states. In some situations people try to suppress their emotions for self-presentational reasons (see DePaulo, 1992) or because they believe that it is inappropriate to experience (Hochschild, 1983) or express (Ekman & Friesen, 1969b) these emotions. In negotiations, individuals may even strategically alter or feign emotions in an attempt to influence their opponents (e.g., Barry, 1999; Thompson et al., 1999).

The fact that negotiators may suppress, hide, or fake emotions is not to say that the opponent's experienced emotions always remain unknown. In fact, there are a number of ways in which negotiators become aware of the emotions their opponent experiences. First, the opponent's experienced emotion may "leak" from his or her nonverbal (Ekman & Friesen, 1969a) or vocal (Manstead, Wagner, & MacDonald, 1984; Scherer, Feldstein, Bond, & Rosenthal, 1985) expressions. Second, a negotiator may learn about the opponent's experienced emotions from secondary sources of information, such as conversations with a third party, press conferences, newspaper articles, and the like. Third, an experienced negotiator should be able to make an educated guess as to which emotions the opponent is likely to experience given the particularities of the situation. Thus, given that negotiators often have information about both the experienced and the communicated emotions of the opponent, a logical next step is to investigate how experienced and knowingly communicated emotions interact to influence the focal negotiator's behavior.

A key difference between experienced and knowingly communicated emotions is that communicated emotions are directed toward the recipient. Experienced and communicated emotions can therefore be expected to have different effects on behavior. In a strategic setting like negotiation, the opponent's true emotion provides strategically useful information about his or her degree of satisfaction with the present state of affairs. As was shown in Experiments 1 and 2, this kind of information is likely to trigger strategic behavior. In contrast, the opponent's communicated emotion, which is intentionally directed toward the focal negotiator, conveys information about the opponent's social intentions and relational orientation (e.g., Fridlund, 1992; Knutson, 1996). Because the opponent's communicated emotion is addressed to the participant and therefore has direct bearing on him or her, and because communicated anger is often followed by aggression directed toward the target of the communication (Averill, 1982), communicated anger, more so than communicated happiness, is likely to induce some degree of fear in the participant. Indeed, research has documented that displays of anger evoke fear in observers, especially when the anger display is directed toward the observer (Dimberg & Öhman, 1983, 1996). Thus, because the opponent's expressions of anger are knowingly directed at the participant, these expressions can be expected to elicit complementary fear in the participant.

There is good evidence that fear depletes cognitive resources and thereby influences information processing. Fear constrains attention to those features of the environment that are concerned with safety or danger (Mathews & MacLeod, 1994). Also, threat and concomitant stress prompt individuals to offer solutions to problems without considering all the available information (Giora, 1987) and increase cognitive rigidity and black-and-white thinking (Carnevale & Probst, 1998). For instance, De Dreu, Giebels, and Van de Vliert (1998) found that the more threats negotiators exchanged, the less integrative were their agreements (integrative agreements require high levels of creative and flexible thinking). As summarized by Öhman (2000), "mildly threatening stimuli capture attention, independently of its current focus. As attention is then automatically switched to the threat, there is competition for processing resources" (p. 582). In the current context, this means that the opponent's angry communications should induce more fear and anxiety than the opponent's happy communications, thereby reducing the attention given to the opponent's experienced emotion. We therefore predicted that the effect of the opponent's experienced emotion that was observed in Experiments 1 and 2 would be moderated by the opponent's communicated emotion, such that the influence of the opponent's experienced emotion is greater when the opponent communicates happiness than when the opponent communicates anger.

Method

Participants and Experimental Design

Participants were 77 male and female undergraduate students of the University of Amsterdam who participated for course credit or for monetary compensation (10 Dutch guilders, roughly equivalent to US$4). We used a 2 (opponent's experienced emotion: anger vs. happiness)× 2 (opponent's communicated emotion: anger vs. happiness) design. In addition to demand level, dependent variables were the participants' emotions, their impressions of the opponent, their evaluations of the negotiation, and perceived consistency between the opponent's emotions. Participants were randomly assigned to the experimental conditions.

Procedure

The procedure was the same as in Experiment 1, with one major exception. In addition to the opponent's experienced emotion, we also manipulated the opponent's communicated emotion. Participants were told that during the negotiation there would be a number of opportunities to send a message to the opponent and that the opponent would also get the opportunity to send messages. It was made clear to the participants that the opponent knew that his or her messages would be sent to the participant. In the first, third, and fifth negotiation round, participants were given the opportunity to send the opponent a message, which they could select from a list of prewritten messages. Participants could also choose not to send a message.[3]

In the second, fourth, and sixth negotiation round, the opponent's offer was accompanied by a message allegedly selected from the list of prewritten messages. Participants received either three messages reflecting anger or three messages reflecting happiness. In the angry messages condition, the following messages were used (in the second, fourth, and sixth rounds, respectively): "This is a ridiculous offer, it really pisses me off"; "I am starting to get really angry"; and "All this is starting to get really irritating." In the happy messages condition we used the following messages: "This is going pretty well, I can't complain"; "I like the way things are going, I can only be happy with this"; and "I am pretty satisfied with this negotiation." The messages were pretested in a way similar to the emotional statements used in Experiment 1. All messages were rated higher on the emotion they were supposed to express than on the emotion they were not supposed to express (all ts > 14, all ps $< .01$). Further, there was a significant effect of all messages on the rating of the corresponding emotion (all ts > 12, all ps $< .01$), and the messages did not differ with respect to comprehensibility (all ts < 1, *ns*).

As in Experiments 1 and 2, the opponent made the first offer. Participants then responded with a demand and, if they chose to do so, with a message. Then, the opponent's experienced emotion was revealed, and the opponent made a new offer. In the second round, the participant posed a new demand, which was followed by a new offer by the opponent, accompanied by either an angry or a happy message. In the third and fifth round, participants again received information about the opponent's experienced emotion, and in the fourth and sixth round they received an angry or a happy message. The negotiation was interrupted after six rounds, and participants who reached consensus prior to the sixth round were dropped from the analyses ($n = 9$; including these participants in the analyses did not change the pattern of results).

The manipulation check items for the manipulation of the opponent's experienced emotions were the same as those used in the previous experiments, with the explicit instruction that participants should base their judgment purely on the opponent's stated intentions (which contained information about the opponent's experienced emotion). The same manipulation check was also used for the manipulation of the opponent's communicated emotion but with the instruction that judgments should be based purely on the opponent's messages (which included the opponent's communicated emotion). In addition, participants answered two questions designed to check whether they correctly remembered the instructions pertaining to the two types of information they received about their opponent. Recall that participants were told that the opponent knew that his or her messages would be sent to the participant but did not know that his or her intentions would be revealed to the participant. To check participants' recollection of these instructions, they were asked to indicate on a 5-point scale if they thought that the opponent knew that his or her intentions were revealed to the participant and if they thought that the opponent knew that his or her messages would be sent to the participant (for both questions: 1 = *definitely not*, 5 = *definitely*).

After the manipulation checks, participants completed a questionnaire that contained items designed to measure participants' own emotions, participants' impressions of the opponent, and participants' perceptions of the consistency between the opponent's experienced and communicated emotions. Participants' emotions were assessed in the same way as in Experiment 1. However, we added three items measuring participants' fear (e.g., "To what extent did you experience fear during the negotiation?"; 1 = *not at all*, 5 = *to a great extent*), which were combined into a single index of fear ($\alpha = .67$). Participants' impressions of the opponent were assessed by means of six items (e.g., "I have developed a positive impression of the buyer"; 1 = *totally disagree*, 7 = *totally agree*), which were averaged into a single index of impression of the opponent ($\alpha = .89$). Perceived consistency between the opponent's experienced and communicated emotions was measured with three items (e.g., "The buyer's messages were consistent with his or her intentions"; 1 = *definitely not*, 5 = *definitely*), which were combined into a single index of consistency ($\alpha = .92$).

[3] Analysis of participants' messages revealed no significant effects and thus is not discussed any further.

Results

Manipulation Checks

The manipulation of the opponent's experienced emotion was checked in the same way as in the previous experiments. Again, ANOVA revealed a significant two-way interaction between the opponent's experienced emotion and the participant's perception of the opponent's emotion, $F(1, 66) = 264.02$, $p < .01$. As expected, participants in the angry opponent condition rated the opponent as more angry ($M = 6.15$) than did participants in the happy opponent condition ($M = 2.23$), $t(66) = 12.93$, $p < .01$. Similarly, participants in the happy opponent condition rated the opponent as happier ($M = 5.32$) than did participants in the angry opponent condition ($M = 1.43$), $t(66) = 15.60$, $p < .01$. Further, paired-sample t tests showed that participants in the angry opponent condition rated the opponent as more angry than happy ($M = 6.15$ vs. $M = 1.43$), $t(33) = 18.69$, $p < .01$, and participants in the happy opponent condition rated the opponent as more happy than angry ($M = 5.32$ vs. $M = 2.23$), $t(33) = 7.54$, $p < .01$.

Regarding the manipulation of the opponent's communicated emotion, ANOVA revealed an interaction between the opponent's communicated emotion and the participant's perception of the opponent's communicated emotion, $F(1, 66) = 225.33$, $p < .01$. Follow-up t tests indicated that participants who received angry messages perceived the opponent as angrier ($M = 5.60$) than did those who received happy messages ($M = 1.72$), $t(66) = 12.15$, $p < .01$. Similarly, participants who received happy messages rated the opponent as happier ($M = 5.63$) than did those who received angry messages ($M = 1.96$), $t(66) = 14.53$, $p < .01$. Finally, participants who received angry messages rated these messages as more angry than happy ($M = 5.60$ vs. $M = 1.96$), $t(33) = 9.67$, $p < .01$, and participants who received happy messages rated these messages as more happy than angry ($M = 5.63$ vs. $M = 1.72$), $t(33) = 11.73$, $p < .01$.

Additional analyses were performed to check whether participants accurately remembered the instructions pertaining to the two types of information they received about their opponent's emotions. A one-sample t test showed that participants correctly recalled that their opponent did not know that his or her intentions (i.e., experienced emotions) would be revealed to the participant ($M = 1.24$), $t(67) = 34.05$, $p < .01$. Participants also correctly remembered that the opponent did know that his or her messages (i.e., communicated emotions) would be sent to the participant ($M = 4.54$), $t(67) = 14.33$, $p < .01$.

Finally, we analyzed the perceived consistency between the opponent's experienced and communicated emotions. ANOVA yielded a two-way interaction between the opponent's experienced emotion and the opponent's communicated emotion, $F(1, 64) = 88.32$, $p < .01$. Unsurprisingly, participants whose opponents communicated emotions that did not correspond with their experienced emotions reported more inconsistency between the intentions and the messages ($M = 1.26$ and $M = 1.75$) than did those whose opponents communicated emotions that did correspond ($M = 3.56$ and $M = 3.96$). These data provide additional support for the effectiveness of the manipulation of the opponent's experienced and communicated emotions.

Demand Level

Demands in Rounds 1–6 were submitted to a 2 (opponent's experienced emotion: anger vs. happiness) × 2 (opponent's communicated emotion: anger vs. happiness) mixed-model ANOVA with negotiation round as a repeated-measures variable. First, this analysis showed a main effect of negotiation round, $F(5, 325) = 136.60$, $p < .01$, indicating that demands declined over time (Round 1, $M = 630$ to Round 6, $M = 442$). Furthermore, we found the expected interaction between the opponent's experienced and communicated emotions, $F(1, 64) = 4.15$, $p < .05$. Simple-effects analyses indicated that as predicted, the opponent's experienced emotion had no effect when the opponent sent angry messages ($M = 532$ for experienced anger and $M = 522$ for experienced happiness), $F(1, 64) < 1$, *ns*. When the opponent sent happy messages, however, the opponent's experienced emotion did influence demands, $F(1, 64) = 6.50$, $p < .02$. As in Experiments 1 and 2, participants placed lower demands when the opponent experienced anger rather than happiness ($M = 465$ vs. $M = 541$).

Results also revealed an interaction between the opponent's emotion and negotiation round, $F(5, 320) = 2.83$, $p < .02$. Thus, consistent with the results from the first two experiments, the effect of the opponent's experienced emotion increased over time. Although the three-way interaction between the opponent's experienced emotion, communicated emotion, and negotiation round did not reach statistical significance, $F(5, 320) = 1.30$, *ns*, simple-effects analyses yielded results that are fully consistent with those of Experiments 1 and 2 (see Figure 3). As predicted, we obtained a significant interaction between the opponent's experienced emotion and negotiation round for participants who received happy messages, $F(5, 320) = 3.49$, $p < .01$, but not for participants who received angry messages, $F(5, 320) < 1$, *ns*.

Participants' Emotions and Impression of the Opponent

As predicted, ANOVA showed that participants who received angry messages from the opponent reported more fear than did those who received happy messages ($M = 2.91$ vs. $M = 1.51$, respectively), $F(1, 64) = 5.77$, $p < .02$, whereas there was no effect of the opponent's experienced emotion, $F(1, 64) < 1$, *ns*. In contrast to the previous experiments, participants' self-reported anger and happiness were not influenced by the opponent's emotions. However, this is not surprising when we take into consideration that half of the participants in Experiment 3 were confronted with an opponent who experienced anger but communicated happiness, or vice versa. This explanation is supported by a marginally significant interaction between experienced and communicated emotion on participants' self-reported anger and happiness, which shows that participants' own anger and happiness tend to be influenced by the opponent's emotions when the opponent's experienced and communicated emotions are consistent but not when they are inconsistent, $F(1, 64) = 2.63$, $p = .08$.

In line with the results from Experiments 1 and 2, participants' impressions of the opponent were influenced by the opponent's experienced emotion. Participants who negotiated with a happy opponent developed a more positive impression of the opponent

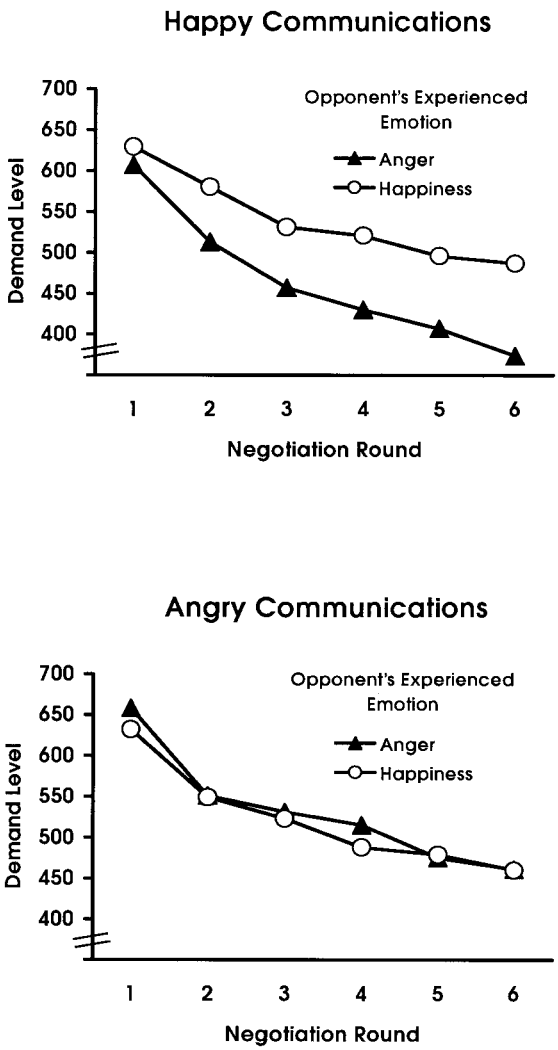

Figure 3. Demand level as a function of the opponent's experienced emotion, the opponent's communicated emotion, and negotiation round in Experiment 3.

($M = 4.69$) than did those who negotiated with an angry opponent ($M = 2.07$), $F(1, 64) = 147.88$, $p < .01$. Impressions of the opponent were also influenced by the opponent's communicated emotions. Participants who received happy messages developed a more favorable impression of the opponent ($M = 3.92$) than did those who received angry messages ($M = 2.84$), $F(1, 64) = 37.59$, $p < .01$. Further, an additive interaction between experienced and communicated emotion showed that the most unfavorable impressions were made by opponents who were angry and also communicated anger ($M = 1.59$), whereas the most favorable impressions were made by opponents who were happy and also communicated happiness ($M = 5.77$), $F(1, 64) = 5.45$, $p < .03$. The other two cells took intermediate positions that differed from both extremes ($M = 2.46$ for experienced anger/communicated happiness, and $M = 3.83$ for experienced happiness/communicated anger).

Mediation Analysis

We predicted that the moderating effect of the opponent's communicated emotion would be due to increased fear in participants who received angry messages. Thus, we should find that communicated emotion moderates the effect of experienced emotion on demands through its effect on fear. According to Hull, Tedlie, and Lehn (1992), if the original predictor (communicated emotion) is interactively related to the dependent variable (demands), then the proposed mediator (fear) will also be interactively related to the dependent variable. The proper control is then formed by taking the "covariate interaction" between the mediator (fear) and the independent variable (experienced emotion). To establish mediation, we should find a main effect of communicated emotion on fear and an interaction between experienced and communicated emotion on demands. Both of these requirements were met (see above). Further, the interaction between experienced and communicated emotion should disappear when controlling for the covariate interaction. To test whether this was the case, we conducted an analysis of covariance in which the interactive effect of experienced emotion and communicated emotion on level of demand was computed after the covariate interaction (Experienced Emotion $\times$ Fear) had been controlled for (see Hull et al., 1992; Stevens, 1996). As expected, when controlling for this interaction, the originally significant interaction between experienced emotion and communicated emotion was reduced to nonsignificance, $F(1, 63) = 1.80$, *ns*, and a significant main effect of experienced emotion emerged, $F(1, 63) = 5.09$, $p < .03$, with means ordered in the same pattern as in Experiments 1 and 2. These results support the conclusion that the moderating effect of communicated emotion is due to increased levels of fear in participants who received angry rather than happy messages.

Discussion

The results of Experiment 3 corroborate our hypotheses. As predicted, participants who received happy messages were strongly influenced by their opponent's experienced emotions, those whose opponents experienced anger placing lower demands than those whose opponents experienced happiness. However, this effect was not obtained for participants who received angry communications. Furthermore, a mediation analysis showed that the moderating effect of the opponent's communicated emotion was caused by increased levels of fear in participants who received angry communications. Although the results pertaining to demands and concessions are consistent with our predictions, it is important to consider an alternative account for these findings. Our data show that participants conceded most to opponents who experienced anger and expressed happiness. The reader might argue that participants in this condition were exposed to inconsistent emotions and that our effects result from individuals' responses to such inconsistencies. Below, we consider two alternative explanations that stem from the notion of inconsistency between emotions, one pertaining to emotional contrast effects, the other to the strategic use of emotion in negotiation.

With regard to contrast effects, research has documented that judgments are relative and that the context in which a stimulus is presented serves as a reference point against which the stimulus is

compared and judged (e.g., Bazerman, 1990; Eiser, 1990). For example, Helson (1947) showed that weights are judged lighter to the extent that the stimulus context consists of heavier weights. Similar contrast effects have been shown in the domain of emotions (Manstead, Wagner, & MacDonald, 1983; Thayer, 1980), and Rafaeli and Sutton (1991) argued that such emotional contrast effects may be effectively used as a tool to elicit compliance. Although at first sight the results of Experiment 3 may seem to reflect a contrast effect, it is important to note that an emotional contrast perspective would imply a symmetrical rather than an asymmetrical effect. That is, if the emotional contrast explanation were viable, we should have observed lower demands both in the experienced anger/communicated happiness and in the experienced happiness/communicated anger conditions. However, our data show that negotiators yielded more to an opponent who felt angry and expressed happiness than to an opponent who felt happy and expressed anger.

A second alternative account stems from negotiators' possible responses to the opponent's perceived emotional deception. In negotiations, permission to mislead is to some degree implied (Carr, 1968; Ekman, 2001), and people regard the strategic use of emotion as more ethically acceptable than other forms of deliberate deception, such as misrepresentation of factual information or the making of false promises (Barry, 1999). Thus, negotiators dealing with an opponent who is known to be happy but expresses anger might discount the other's expressed anger as a strategic ploy and decide not to give in. In fact, the discovery of deception in negotiation has been shown to increase disagreements (Roth & Murnighan, 1983; Schweitzer & Croson, 1999) and to lead negotiators to reject offers that they would have accepted had they not discovered the deceit (Boles, Croson, & Murnighan, 2000), suggesting that a negotiator's response to a happy opponent who expresses anger would consist of higher rather than lower demands. Conversely, the combination of experienced anger and expressed happiness does not make sense from a strategic viewpoint, and as such the expressed happiness may be seen as a validation of the experienced anger, leading negotiators to concede to an angry opponent who expresses happiness.[4]

Although this explanation can account nicely for the fact that negotiators do not make large concessions to an opponent who experiences happiness but expresses anger, it cannot account for the fact that negotiators concede more to an opponent who experiences anger and expresses happiness than to an opponent who experiences anger and also expresses anger. An explanation in terms of fear and information processing can account for this finding: The opponent's expressions of anger elicit fear in the focal negotiator, leading him or her to pay less attention to the other's experienced emotions and consequently to be less influenced by them. This explanation is not only compatible with the results obtained in Experiment 3 but is also consistent with the results of Experiment 2, which show that negotiators are only affected by their opponent's emotions if they are motivated to consider them. In short, we believe that an explanation in terms of fear and information processing can most parsimoniously account for our pattern of results. Nevertheless, future research is needed to develop a better understanding of the combined effects of experienced and expressed emotions on negotiation behavior.

General Discussion

Recently researchers have started to address the role of emotions in negotiation, focusing on the question of how an individual's affect influences his or her own information processing and behavior (i.e., intrapersonal effects) in negotiation. The present research is the first to empirically address the effects of one negotiator's emotions on the other negotiator's behavior (i.e., interpersonal effects). Experiment 1 showed that anger leads to lower demands and larger concessions whereas happiness leads to higher demands and smaller concessions. Experiment 2 demonstrated that this effect is caused by tracking (cf. Pruitt, 1981) and that the effect is mitigated if the opponent undermines the motivation to take his or her emotions into consideration by making large concessions. Finally, Experiment 3 showed that the effect is removed when the opponent sends angry rather than happy messages, because angry messages induce fear in the receiver and distract the receiver's attention from the opponent's experienced emotion. These findings have a number of important theoretical and practical implications, which are discussed below.

Implications and Contributions

In the introduction we used two distinct theoretical perspectives to develop competing hypotheses regarding the interpersonal effects of anger and happiness in negotiations. The social contagion hypothesis posits that negotiators with an angry opponent become angry and, therefore, place high demands, whereas those with a happy opponent become happy and place low demands. In contrast, the strategic-choice hypothesis posits that negotiators mismatch the opponent's emotions, predicting that those with an angry counterpart make lower demands than those with a happy counterpart. Although our results provide support for social contagion (i.e., anger induced anger and happiness induced happiness), this contagion did not affect negotiation behavior. That is, we did not replicate previous research showing that happy negotiators place lower demands and concede more than do angry negotiators (cf. Baron, 1990; Carnevale & Isen, 1986; Forgas, 1998). Rather, we obtained strong support for the strategic-choice hypothesis in all three experiments: Negotiators with an angry opponent made lower demands and larger concessions than did negotiators with a happy opponent.

There are several explanations for the apparent inconsistency between the results for demands and concessions (supporting the strategic-choice perspective) on the one hand and the results for self-reported emotion (supporting the social contagion perspective) on the other hand. For example, one could argue that participants' emotions resulted from self-perception of their own behavior rather than from the opponent's emotions. That is, the anger that was reported by participants with an angry opponent may have originated from frustration because of the relatively large concessions they had made during the negotiation (moving them away from their goal) rather than from the opponent's anger per se. Similarly, participants' happiness may have resulted from their own small concessions (bringing them closer to their goal) rather

[4] We thank an anonymous reviewer for suggesting this possibility.

than from the opponent's happiness. However, multivariate analyses of covariance with the opponent's emotion as the independent variable, the participant's anger and happiness as the dependent variables, and the participant's average demands as a covariate provided no support for such an explanation.[5]

Another explanation is that social contagion did occur but was overruled by strategic considerations. Research has shown that mismatching is especially likely to occur when negotiators lack information about the opponent's outcomes (Liebert et al., 1968; Yukl, 1974b) and limits (Pruitt & Syna, 1985). Because this was the case in our experiments, the tendency to mismatch the opponent's perceived toughness (in the case of anger) or weakness (in the case of happiness) might have been especially strong. Thus, pending further research, it can be cautiously concluded that social contagion may affect self-reported emotions in computer-mediated negotiation settings but that this does not translate into behavior. Instead, it appears as if two distinct processes emerge when negotiators receive information about their adversaries' emotion: The information influences their own emotional state through contagion-like processes, and at the same time, they strategically use the information to track the opponent's limit and to make demands.

Although the specific roles played by contagion and strategic choice must await further research, the present research adds to the knowledge of negotiation, emotion, and computer-mediated communication in a number of ways. It enhances understanding of the negotiation process by showing that one negotiator's emotions influence another negotiator's behavior, thereby underlining once again the importance of motivational factors in negotiation. It also contributes to the literature on mismatching. Early research on mismatching (e.g., Bartos, 1974; Chertkoff & Conley, 1967; Druckman et al., 1972; Komorita & Brenner, 1968; Liebert et al., 1968; Pruitt & Syna, 1985; Smith et al., 1982; Yukl, 1974a, 1974b) specifically focused on the influence of the opponent's demands and concessions on the focal negotiator's demands and concessions and showed that they tend to be inversely related: Negotiators respond with high demands to the opponent's low demands and with low demands to the opponent's high demands. More recent research has shown that it is not the opponent's concessions per se that cause mismatching but rather negotiators' interpretation of the opponent's behavior (De Dreu et al., 1994). The present results are in line with this conclusion and suggest that the emotions that accompany the opponent's demands modify the focal negotiator's interpretation of the opponent's behavior. Indeed, the data of Experiment 2 show that negotiators perceived happy opponents as more conciliatory than angry opponents.

The current findings also extend knowledge of the social effects of emotions by showing that emotions have interpersonal effects on negotiation behavior. Furthermore, they show that privately experienced and knowingly communicated emotions may have quite different effects on people's behavior when they are both presented at the same time, at least in negotiation settings. It appears that in negotiations, experienced emotions have an informational function: They provide background information, which serves as input for negotiators' strategic decision making. Communicated emotions, on the other hand, seem to serve a social function: They are intentionally directed toward the recipient and hence provide information about the status of the interpersonal relation and the sender's social intentions (cf. Fridlund, 1992; Knutson, 1996). Future research might investigate whether this difference between experienced and communicated emotions also pertains in situations where people are not dependent on one another for their outcomes.

The results of Experiment 2 suggest that negotiators only use the opponent's emotions to track his or her limit when the opponent uses a tough strategy. Accordingly, their demands and concessions are affected by the opponent's emotions when the opponent makes small concessions but not when the opponent makes large concessions. This pattern of results suggests that negotiators consider the other's emotions especially when they are motivated to do so, for example because the other's behavior is not very conducive to reaching an agreement that is favorable to oneself. The results of Experiment 3 suggest that when the opponent sends angry messages, fear increases, and less attention is given to the other's experienced emotions. This pattern of results suggests that the other's experienced emotions have an impact especially when negotiators allocate cognitive resources to consider them. Together, these results seem to indicate that the interpersonal effects of other's experienced emotions in negotiation settings occur when the focal negotiator (a) is motivated to consider the other's emotion and (b) has the cognitive resources available to consider them.

The current findings also have interesting implications for theorizing in the domain of computer-mediated communication. More and more interactions occur via computer-mediated media such as the internet or e-mail, and social and organizational decisions are increasingly being made through negotiations conducted via such technological media (Moore et al., 1999). Computer-mediated communication differs from face-to-face communication in a number of ways. For example, it has been argued that interactions via communication media such as e-mail are characterized by a higher frequency of counternormative social behaviors (Kiesler & Sproull, 1992), and individuals engaged in computer-mediated communication are more likely to display emotions that in other settings might be masked in socially appropriate ways (Thompson & Nadler, 2002). The present research contributes to this literature by showing that the emotions that arise in computer-mediated communication can have profound effects on the subsequent interaction and on the decisions that are made.

Finally, the present research has obvious practical implications. Although professional negotiators and lay people alike tend to have strong beliefs about how emotions should be managed in negotiations, these beliefs have never been systematically tested, and the effects of emotions in negotiations are incompletely understood. Our findings point to the impact of anger and happiness on negotiations and have important implications for negotiation and conflict resolution. Moreover, the relevance of the current findings is unlikely to be limited to the negotiation setting and may

[5] In Experiment 1, the effect of the opponent's emotion on participants' happiness was slightly reduced from $F(2, 115) = 3.36$, $p < .04$, to $F(2, 114) = 2.85$, $p = .06$, when average demand was added as a covariate, and the effect on participants' anger was reduced from $F(2, 115) = 8.01$, $p < .01$, to $F(2, 114) = 5.53$, $p < .01$. However, in Experiments 2 and 3 the effect of the opponent's emotion on participants' emotions was unaffected when average demand was included as a covariate.

well generalize to other domains of social interaction such as leadership, politics, personal relationships, and, more generally, persuasion and compliance.

Limitations and Directions for Future Research

There are some limitations to these findings. First and foremost, there was no face-to-face interaction. As discussed in the introduction to Experiment 1, we made an explicit decision to maintain experimental control at the expense of mundane realism, and we chose to use a computer-mediated negotiation paradigm to permit a carefully controlled manipulation of the opponent's emotion. As a result, some caution is needed when generalizing the results. At the very least, our findings pertain to computer-mediated negotiations. Given the pervasiveness of negotiation as a form of social interaction and the increasing popularity of information technologies as communication mediums, the question of how individuals react to each other's emotions in computer-mediated communication is of great theoretical and practical importance (cf. McKersie & Fonstad, 1997; Moore et al., 1999). However, we have no reason to suspect that our findings are restricted to the domain of computer-mediated interaction. Future research could shed more light on this issue by investigating the extent to which the interpersonal effects of emotions and the underlying processes identified in the present research generalize across settings.

A related issue concerns the magnitude of the effects obtained in the present research. One could argue that the fact that participants in our experiments were only provided with information about the opponent's emotional state had the effect of focusing their attention on that information. If so, our results might overestimate the effects of emotions in real negotiations. As Moore et al. (1999) put it, "Although purely written communication media severely limit the opportunities for affective displays, opportunities for mutually reinforcing displays of emotion are not eliminated. Indeed, such displays, where they occur, may take on heightened importance in an impoverished medium like e-mail" (p. 26). This possibility cannot be ruled out on the basis of our data. In fact, the results of Experiments 2 and 3 suggest that attention and information processing play an important role in determining the (magnitude of) the interpersonal effects of emotions in negotiation, suggesting that the effects might be smaller if larger quantities of information have to be attended to and processed. However, we believe that the possible overestimation of the effect stemming from high levels of attention to emotional stimuli in the present experiments might be offset in more naturalistic negotiations by high levels of involvement, which could lead negotiators to be more strongly influenced by others' emotions. Furthermore, it is possible that emotions have stronger effects in face-to-face interaction than they do in computer-mediated interaction, because in the former case the emotional information is conveyed nonverbally as well as verbally.

Another issue is whether the opponent's emotion is justified in the focal negotiator's mind. In the present experiments, the opponent's emotion was not made contingent on the participant's demands, because we wanted to conduct a carefully controlled and unconfounded test of our hypotheses. Thus, in some cases the opponent's anger or happiness may have struck participants as more reasonable than in other cases, depending on participants' own demands. This raises the question of how justification of the other's emotions influences the focal negotiator's behavioral reactions to those emotions. For the same methodological reasons, the opponent's offers and emotions were not contingent on one another. Rather, the opponent's offers were the same in all conditions. Thus, we cannot tell how correspondence (or lack thereof) of the opponent's offers and emotions influenced the focal negotiator's demands. These questions could be addressed in future studies.

Future research could also investigate the influence of individual difference variables relating to emotional expressiveness and attention to emotions. Research by Friedman and Riggio (1981) has suggested that individual differences in nonverbal emotional expressiveness influence the spread of emotions. In a somewhat related vein, Gasper and Clore (2000) showed that individuals high in attention to emotion tend to perceive their affect as relevant and to use it in their judgments, whereas individuals low in attention to emotion tend not to focus on affect and not perceive it as relevant to their judgments. Both emotional expressiveness and attention to emotion are related to the concept of *emotional intelligence*—"the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). We believe that incorporating individual differences in emotional intelligence in future research could enhance understanding of the role of emotion in negotiation and, more generally, in social interaction.

Another avenue for future study concerns the long-term consequences of anger. How does anger influence the relationship between the negotiators? Do the effects of anger persist over time, or do they diminish or even backfire in the long run? The present findings show that angry negotiators are evaluated less favorably than are happy negotiators, suggesting that anger may harm the interpersonal relationship. These findings point to an interesting dilemma facing negotiators who anticipate future interaction. On the one hand, negotiators may be motivated to strategically present happiness in order to make a good impression and to induce or maintain a positive interpersonal relationship. On the other hand, they may choose to use anger to get their opponents to go along with their preferences. Future research could investigate which of these strategies is more beneficial in the long run.

Conclusion

Complementing previous research on mismatching and the social effects of emotions, these three experiments show that anger on the part of the opponent elicits compliance in the focal negotiator, whereas happiness elicits exploitation. Consistent with a strategic-choice perspective, this effect was shown to be caused by tracking. Negotiators concede more to an angry opponent than to a happy one because they believe the former to have a higher limit than the latter, which increases the need to make concessions in order to avoid impasse. This effect disappears when the focal negotiator's ability or motivation to consider the information that is provided by the opponent's emotions is reduced. Together, these experiments show that emotions have pervasive effects on negotiation behavior and outcomes, especially when negotiators are both motivated and able to act on the information available in the opponent's emotions.

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