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## Response modes in negotiation

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**Abstract** Negotiators may respond to each other's offers and demands in different ways. Whereas many negotiation experiments present participants with numerical information about offers and counteroffers (e.g., "I propose 6–8–2"; *numerical* response mode), real life negotiations often involve affective and evaluative statements (e.g., "I didn't like your last offer, but I would be happy to explore alternatives"; *affective* response mode). The present research explores the differential consequences of responding in affective as opposed to numerical terms. Specifically, we predicted and found that affective responses increase the impact of social and contextual cues on negotiation behavior. Three studies demonstrate that the impact of other's toughness (Experiment 1), other's respectability (Experiment 2), and other's appearance (Experiment 3) on a negotiator's demands and concessions is greater when the other provides affective rather than numerical feedback.

**Keywords** Negotiation · Affect · Information processing · Social cues

### 1 Just the facts please: the impact of social cues on demands and concessions in negotiation as a function of partner's numerical vs. affective responses

In day-to-day interaction, in business, and in international relations, negotiation provides an important means to escape social conflict. Negotiation—the joint decision-making between parties with perceived divergent interests (Pruitt 1998)—requires communication. Individuals communicate proposals and evaluations of their partner's proposals until a mutually satisfactory agreement is reached. Most negotiations contain at least some form of explicit and verbal communication, involving, for example, persuasive arguments bolstering one's

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own position, commitments to certain positions, information about one's needs and desires, and intentions to cooperate and to reach mutually beneficial agreements (for discussions, see [De Dreu and Carnevale 2003](#); [Pruitt 1998](#)).

The most basic form of communication in negotiation is about the offers and counter-offers made and received. When no (reactions to) offers are communicated there cannot be a negotiation. In social psychology, in behavioral decision research, and in experimental economics, this basic form of communication is often numerical, and this numerical information may or may not be accompanied by ancillary affective statements or comments. For example, in face-to-face negotiation tasks with free communication between participants, offer proposals easily exceed 30% of the statements being made, and persuasive arguments intended to bolster one's own position easily exceed 50% of the statements being made (e.g., [De Dreu et al. 1998](#)). Offer proposals are often stated in numerical terms ("I propose 1–9–5"), whereas persuasive arguments often contain affective expressions and evaluative statements (e.g., "I feel really bad about this, but your last offer is quite disappointing"). Furthermore, in real-life negotiations outside the laboratory the affective and evaluative framing of offers and responses is much higher, for one because these negotiations are conducted without issue charts and commonly accepted metrics. Thus, individuals often respond to each other's proposals with statements such as, "I like this," "you need to do much better than that," or "come on, you must be kidding!" These evaluative and emotion-laden statements clearly communicate one's happiness or annoyance vis-à-vis the other's offer, yet they contain no numerical information whatsoever.

In the last two decades negotiation scholars have started to examine the impact of negotiators' affective states. For example, research has documented that a negotiator's positive affect increases concession making ([Baron 1990](#)), stimulates creative problem solving ([Isen et al. 1987](#)), increases joint gains ([Carnevale and Isen 1986](#)), increases preferences for cooperation ([Baron et al. 1990](#)), reduces the use of contentious tactics ([Carnevale and Isen 1986](#)), and increases the use of cooperative negotiation strategies ([Forgas 1998](#)). Conversely, negative affect has been shown to decrease joint gains ([Allred et al. 1997](#)), promote the rejection of ultimatum offers ([Pillutla and Murnighan 1996](#)), increase the use of competitive strategies ([Forgas 1998](#)), and decrease the desire to engage in future negotiations ([Allred et al. 1997](#)). More recently, research has started to address the interpersonal effects of discrete emotions in negotiations, exploring how negotiators respond to other's emotional states. This research has shown, for example, that negotiators tend to take a more cooperative stance when their opponent expresses anger rather than happiness or no emotion ([Van Kleef et al. 2004a, b](#)), especially when they have a weak negotiation position ([Friedman et al. 2004](#); [Sinaceur and Tiedens 2006](#); [Van Kleef et al. 2006](#)).

Interestingly, the recent work on interpersonal effects of emotions in negotiation has relied on communicated emotions, and tends to combine affective responses (e.g., "your last offer really pissed me off," or "your last offer really made me happy") with some numerical offer or counter-offer. [Van Kleef et al. \(2004a, b\)](#), for example, used affective statements to manipulate other's emotion, and combined this with numerical offer statements to indicate the concession the counterpart made. Their results, and those of others, support the idea that emotions communicated this way influence the recipient's cognitions, motivations, and behavioral choices in predictable ways.

What is unclear from these works is, however, what the precise functions and consequences are of communicating affective vs. numerical information. As mentioned, negotiators do both, and oftentimes mix the two forms in particular proportions. However, they do so unknowingly and automatically, and because we have little understanding of the possible effects of such affective vs. numerical response modes, they may inadvertently harm their own case.

Thus, in the current study we take a different approach to the interpersonal effects of affect in negotiation. To bring experimental research on negotiation on a par with common practice outside our laboratories, we investigated the consequences of responding in affective rather than numerical terms to one's counterpart's demands and concessions. The central argument of the present work, which is developed below, is that negotiators will be more susceptible to social and contextual cues about their counterpart when the other responds to their offers in affective rather than numerical terms. Social and contextual cues refer to specific attributes of the negotiator, or the task, and include his or her reputation, status, physical appearance, as well as his or her offer behavior. To test this idea, we investigated the effects of several social cues in negotiation under conditions of numerical vs. affective feedback.

### 1.1 Response modes and information processing in negotiation

The response mode often used in negotiation and bargaining research is predominantly numerical (for overviews see e.g., Bazerman et al. 2000; De Dreu and Carnevale 2003; Pruitt and Carnevale 1993). In a two-person bargaining situation each participant communicates to the other how much he or she wants to give and/or receive in strict and unequivocal numerical terms. An example of a numerical response in the context of a negotiation about a car would be, "I disagree with your offer and suggest to settle on 2 weeks delivery, payment in 5 monthly terms, and a price of US\$22,000." An example of a numerical response in the context of a labor-management dispute would be, "Your proposal sounds very interesting to us, but let's try to be more precise. We argue a better proposal would be a salary increase of 2.5% per annum, a health insurance coverage of 38%, and 25 days vacation per year."

The responses given above are easy to understand and there is little doubt about what the counterpart wants. What the partner wants is far less certain when the response mode shifts from numerical to affective, in which case no numerical information is presented but offers and counter-offers are evaluated in affective, emotion-laden terms. In the car negotiation, the example would read something like, "I cannot accept this; although I'm quite happy with your offer of 2 weeks delivery, I felt irritated when I received your proposal regarding payment terms and price." Likewise, the labor-management example would read something like, "We are quite satisfied with the salary increase you proposed, but some of our team members were truly upset about the health insurance coverage and vacation days you offered."

What we thus label as an affective response mode relates to Rackham's (in Lewicki et al. 1999) concept of "feelings commentary." He shows that skilled negotiators, more than naïve negotiators, often respond to their counterpart with statements like "I feel some doubts ... So part of me feels happy and part of me feels suspicious..." (p. 351). We argue that using a purely affective response mode may have consequences for the way recipients deal with social information about their negotiation partner. The affective response mode is more ambiguous and less unequivocal with regard to the negotiator's needs and desires than is the numerical response format. In the affective mode examples given above it is clear that at least on some issues the counterpart is unhappy, but it isn't exactly clear what he or she wants. Furthermore, with affect-laden statements the question arises whether the counterpart's anger and annoyances are genuine or whether they are faked and part of some strategic ploy. Affective responses may therefore be more likely than numerical responses to motivate negotiators to consider social cues about the counterpart in order to increase understanding of the counterpart's intentions and future behavior (Chow-Chua 1997; Yurtsever 2001).

A relevant distinction in this context is that between an experiential and a rational information processing system (Epstein 1994), or a natural-intuitive processing mode and an extensional-logical processing mode (Tversky and Kahneman 1983). The idea is that people

may adopt a rational, analytic, reason-oriented and deliberative processing mode or, in contrast, a holistic, intuitive, natural, pleasure-pain oriented, and automatic way of processing information (De Dreu and Carnevale 2003; De Dreu et al. 2000). The processing mode individuals use may be influenced by the type of task or situation they face (Hammond et al. 1987). Among the factors triggering the intuitive mode are verbal rather than numerical information display formats, global rather than specific information, and ambiguous rather than well-defined data (Payne et al. 1993). This research suggests that affective responses in negotiation may be more likely to trigger intuitive processing on the part of the focal negotiator, whereas numerical responses may be more likely to trigger analytical, rational processing.

The notion that affective responses trigger a greater need for sense-making and an intuitive rather than an analytical information processing style suggests that individuals with a counterpart who responds affectively to their demands and concessions may be more influenced by social and contextual cues suggestive of the counterpart's intentions and future behavior than individuals whose counterparts respond in purely numerical terms (Mittal 1988; Slovic et al. 2002). Among other things, individuals who use an intuitive processing mode are more prone to broad generalization and stereotypical thinking, are faster in responding and deciding, are more strongly influenced by images, metaphors and narratives, and are more sensitive to global contextual characteristics than are individuals using an analytical processing mode (e.g., De Dreu and Carnevale 2003; Epstein 1994; Slovic et al. 2002).

Based on the research discussed above, we hypothesize that negotiators who receive affective responses from their counterparts will be more strongly influenced by social and contextual cues suggestive of the other's intentions and future behavior than will negotiators who receive numerical responses. This general idea was tested in three experiments, by varying (1) affective vs. numerical response mode, and (2) information about the counterpart's characteristics (toughness in Experiment 1, respectability in Experiment 2, and social status in Experiment 3).

It is important to note that directly comparing affective and numerical responses is similar to comparing apples and oranges. As mentioned above, negotiators often mingle these apples and oranges when communicating with their counterpart. Our goal is not to understand specific mixtures, or to provide a direct comparison of response modes. Instead, our goal is to better understand what the information processing consequences are of using a particular response mode. This goal is reflected in our prediction that specific social cues should have a (stronger) effect within affective response modes than within a numerical response mode. Thus, in each of the experiments reported below we predicted an interaction between response mode and the counterpart's characteristics, expecting the effects of the counterpart's characteristics to be stronger in the affective response mode condition than in the numerical response mode condition.

Because our goal was to understand the relative (in)sensitivity of negotiators to social cues when their counterpart solely relies on a (numerical) affective response mode, we opted for a research methodology that allowed optimal control. Specifically, we employed scenario-studies in which participants are asked to familiarize themselves with a specific situation and to respond how they would react to that situation (e.g., Van Kleef et al. 2006). Although using experimental scenarios implies a sacrifice of contextual richness and a gain in experimental control (see Druckman 2005), it more than any other methodology allows one to decompose constructs that usually come together and are difficult to study in isolation. Because we felt that affective and numerical response modes are important to distinguish and to study in isolation, but that in contextually rich settings this would be difficult if not impossible to achieve, we decided to rely on scenario methodology to test our primary hypotheses. To verify that our method produced results that are likely to emerge with other methods as well,

we crossed the manipulation of response mode with manipulations of other independent variables (like opponent's toughness in Exp. 1) that have well-established effects in previous research using different methods. When we replicate traditional toughness effects using our scenario methods, we can have some confidence that the effects for response mode may also generalize across methods (for further discussion, see [De Dreu and Carnevale 2005](#)).

## 2 Experiment 1

In Experiment 1 we manipulated response mode (affective vs. numerical) and the counterpart's toughness (tough vs. soft). In negotiation, parties are motivated to cooperate because an agreement is usually more profitable than no agreement, but they are also motivated to compete to maximize their individual profits (e.g., [Schelling 1960](#)). This tension between cooperation and competition becomes manifest in a type of negotiation behavior that is called mismatching—placing high demands when the counterpart appears conciliatory and low demands when the counterpart appears tough ([Pruitt 1981](#); [Smith et al. 1982](#)). When one's counterpart appears soft, this leaves scope for placing high demands oneself without risking impasse. By contrast, the counterpart's apparent toughness is likely to be interpreted as endangering agreement, thereby encouraging concession making (e.g., [Druckman and Bonoma 1976](#); [Druckman et al. 1972](#); [Liebert et al. 1968](#); [Yukl 1974](#); [Van Kleef et al. 2004a](#)).

Mismatching is especially likely to occur when negotiators lack information about the partner's outcomes ([Liebert et al. 1968](#); [Yukl 1974](#)) and limits ([Pruitt and Syna 1985](#)). When individuals lack such information, they use other sources of information to locate the partner's limits, behavior that is referred to as tracking (see [Pruitt 1981](#)). As the research summarized above indicates, one of these types of information consists of the partner's demands, and we should therefore expect higher demands when the counterpart is perceived as soft rather than tough (*Hypothesis 1*). Based on the aforementioned research demonstrating that affective rather than numerical responses trigger an intuitive and experiential information processing style, we expected the tendency for tracking to be stronger under affective response mode conditions than under numerical response mode conditions. Specifically, we predicted that negotiators would place lower demands and make larger concessions to a tough opponent than to a soft one, especially when the other provided affective rather than numerical responses (*Hypothesis 2*).

### 2.1 Method

#### 2.1.1 Participants and experimental design

A total of 192 male and female undergraduate students at the University of Bicocca—Milan participated in partial fulfilment of a course requirement. Participants were randomly assigned to the experimental conditions, and the experimenters were blind to this assignment. We used a 2 (counterpart's response mode: numerical vs. affective) by 2 (counterpart's toughness: tough vs. soft) between-participants design. The main dependent variables were participants' demands and concessions.

#### 2.1.2 Procedure

At the beginning of their classes, participants were given one of four paper-and-pencil scenarios. They were asked to read the scenario carefully, to answer the questions without consulting

**Table 1** Participant's payoff chart used in experiments 1–3

Monitor's quality		Warranty period		Hard disk's quality	
Options	Points	Options	Points	Options	Points
Type A	1	36 months	5	Type A	2
Type B	3	32 months	10	Type B	5
Type C	5	28 months	15	Type C	8
Type D	7	24 months	20	Type D	11
Type E	9	20 months	25	Type E	14
Type F	11	16 months	30	Type F	17
Type G	13	12 months	35	Type G	20

others, and to proceed through the booklet in the order in which materials were presented. To prevent participants from knowing the partner's offer in advance, each negotiation round was printed on a separate sheet, and the experimenter instructed (and monitored) participants not to proceed to the next page before having completed the previous one.

*Negotiation task.* The negotiation task described in the scenario was an adapted version of the one used by Van Kleef and colleagues (Van Kleef et al., 2004b, 2006). It captures the main characteristics of real-life negotiation (i.e., multiple issues differing in utility to the negotiators, information about one's own payoff only, and the typical offer-counteroffer sequence). In the current version, the scenario invited participants to imagine themselves in the role of an undergraduate student who worked part-time as a shop assistant for a store selling assembled personal computers. It was explained that the commercial strategy of the company was to sell Personal Computers (PCs) at a fixed price (899 euro, approximately US\$1100). Shop assistants (the participants) were therefore instructed to negotiate with customers about the main characteristics of the assembled PC, with the explicit goal to try and sell the fixed-price PCs with the cheapest possible parts. The negotiable issues included the quality of the monitor, the warranty-assistance period, and the quality of the hard disk. Participants were presented with a payoff chart that showed which outcomes were most favorable to them (see Table 1). As can be seen in Table 1, for each issue there were seven alternatives corresponding to 7 different levels of demand. On each issue, Level 1 is the most unfavorable, and Level seven is the most favorable to the participant. Thus, Level 1 on monitor quality (Type A) is most unfavorable to the participant and Level 7 (Type G monitor) is the most favorable. As is common in these types of negotiation tasks participants were not provided with any hints regarding their customer's preferences and priority.

After participants had received instructions regarding the payoff structure of the negotiation, they read that a customer was interested in purchasing a PC. In all four conditions, the customer placed the same initial demand: Type A monitor, 36 months warranty, and Type A hard disk. Immediately after the customer's first demand, participants were asked to complete a comprehension check in which they were asked to calculate, using their payoff chart in Table 1, the number of points they would receive if they accepted the customer's initial demand. Participants then read that they made the following counter-proposal, which was the same in all conditions: Type G monitor, 12 months warranty, Type G hard disk. Subsequently, participants were told that the customer wanted a better offer. The way in which the customer responded to the participant depended on the experimental condition (see below).



Following this first negotiation round and their counterpart's reaction to the participant's pre-written proposal, participants were invited to write down a counter-proposal (i.e., their offer in response to the customer's second proposal), and to calculate the points they would obtain if it were accepted. Then, participants were again asked to imagine that the customer requested a better (and final) offer, the precise reaction of the customer again being dependent on the experimental condition (see below). Subsequently, participants were asked to write down their final proposal, and to calculate once again the points they would receive if it were accepted.

*Manipulation of response mode and partner's toughness.* In the numerical response mode condition the customer responded to the participant's offers in numerical format, that is, by phrasing demands in terms of specific locations (levels) on the participants' payoff matrix. In the tough partner condition, the partner made the following sequence of offers: 1-2-1 (monitor A; 32 months; hard disk B) in response to the participant's first proposal, and 2-3-3 (monitor B; 28 months; hard disk C) in response to the participant's second proposal. In contrast, the soft partner made the following proposals: 1-4-4 (monitor A; 24 months; hard disk D), and 2-5-5 (monitor B; 20 months; hard disk E).

The affective response mode condition was modeled after Rackham (in Lewicki et al. 1999). The customer responded to the participant's offers in an affective way, that is, the customer indicated his agreement by means of affectively laden words. In the tough partner condition, the customer stated that he was "angry about the monitor proposal," "rather content with the warranty proposal," and "rather content with the hard disk proposal" in response to the participant's first offer, and that he was "angry about the monitor proposal," "quite happy with the warranty proposal," and "quite happy with the hard disk proposal" in response to the participant's second offer. In contrast, the soft partner responded with "angry about the monitor proposal," "content with the warranty proposal," and "content with the hard disk proposal" in response to the participant's first offer, and with "angry about the monitor proposal," "happy with the warranty proposal," and "happy with the hard disk proposal" in response to the participant's second offer. (Note that the statements presented here are translations of the original Italian statements that were used in the study.)

*Dependent measures.* The two main dependent variables were derived from the proposals participants wrote down. The first was the average *concession* across the two negotiation rounds. Concessions could range from 1 to 7, with lower scores (smaller concessions) being more favorable to the participant. The second dependent measure was the average point value participants demanded. Demands could range from 2.66 to 22.66 (see Table 1). Although both indices are positively correlated, they tap into slightly different aspects of negotiation behavior (i.e., negotiators may make concessions without changing their demand level; see De Dreu and Van Lange 1995; Pruitt 1981). Both demands ( $r = 0.68$ ) and concessions ( $r = 0.67$ ) in the first and second rounds were strongly correlated, so we averaged demands and concessions across the two negotiation rounds. (As an aside, it should be noted that because we used a three-issue task with different weights per issue, we explored whether demands and concessions varied across issues, and whether this interacted with our experimental manipulations. In all three experiments, we did find larger concessions and smaller demands on issues of lower priority than on issues of higher priority [cf., De Dreu and Van Lange 1995]. However, no interactions were found with the experimental manipulations. For ease of interpretation, we decided to collapse across issues and report overall effects only.)

We included one item to check the manipulation of the opponent's toughness (ranging from 1 = *very tough* to 7 = *very soft*).



## 2.2 Results

### 2.2.1 Preliminary analyses

Three participants made mistakes on one or more comprehension checks (i.e., they did not correctly calculate the number of points they would earn if a specific proposal were accepted by the customer); they were excluded from further analyses. The analyses reported below thus are based on 189 participants. (Retaining the excluded participants did not lead to different conclusions.)

Analysis of variance with response mode and opponent's toughness as between-participants factors revealed a main effect of the opponent's toughness on participants' impressions of the opponent's toughness,  $F(1, 185) = 7.89, p < 0.01$ . In the soft opponent condition the counterpart was perceived as softer ( $M = 6.25, SD = 1.53$ ) than in the tough opponent condition ( $M = 5.63, SD = 1.45$ ). There was no effect of response mode, and no interaction. It can therefore be concluded that the manipulation of the counterpart's toughness was successful.

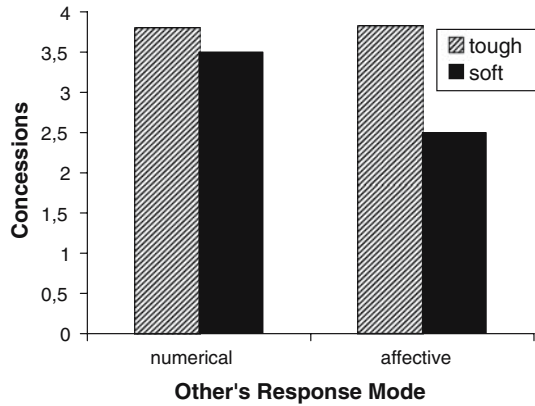
### 2.2.2 Concessions

First of all, ANOVA yielded a main effect of response mode on average concessions, indicating that participants made more concessions when their partner responded in a numerical ( $M = 3.65, SD = 0.89$ ) rather than affective ( $M = 3.17, SD = 1.02$ ) format,  $F(1, 185) = 15.95, p < 0.001$ . As indicated earlier, this main effect is hard to interpret, and it is not the focus of this research. Second, and in line with Hypothesis 1, we found a significant main effect of partner's toughness, indicating that participants made less concessions to a soft partner ( $M = 3.00, SD = 0.85$ ) than to a tough partner ( $M = 3.81, SD = 0.95$ ),  $F(1, 185) = 43.16, p < 0.001$  (i.e., they engaged in mismatching). Third, and most important, there was a significant interaction between response mode and toughness,  $F(1, 185) = 17.51, p < 0.001$  (see Fig. 1). As predicted in Hypothesis 2, simple-effects analyses showed that participants in the affective response mode condition made more concessions when the other was tough ( $M = 3.82, SD = 0.92$ ) than when the other was soft ( $M = 2.50, SD = 0.60$ ),  $F(1, 185) = 59.10, p < 0.001$ . In contrast, participants who received numerical responses did not make larger concessions to a tough partner than to a soft one ( $M = 3.80, SD = 0.98$  and  $M = 3.50, SD = 0.77$ , respectively),  $F(1, 185) = 2.78, ns$ .

### 2.2.3 Demands

ANOVA revealed an effect of opponent's toughness ( $M = 13.96, SD = 3.24$  for tough opponent;  $M = 17.02, SD = 3.01$  for soft opponent),  $F(1, 185) = 53.98, p < 0.001$ , an effect of response mode ( $M = 14.55, SD = 2.88$  for numerical response;  $M = 16.39, SD = 3.76$  for affective response),  $F(1, 185) = 20.64, p < 0.001$ , and an interaction between both factors,  $F(1, 185) = 25.42, p < 0.001$ . In line with the concession data reported above, participants in the affective response mode condition claimed fewer points when they were negotiating with a tough opponent ( $M = 13.86, SD = 3.32$ ) than when they were dealing with a soft opponent ( $M = 18.97, SD = 2.05$ ),  $F(1, 185) = 78.44, p < 0.001$ , whereas participants in the numerical response mode condition were not affected by the opponent's toughness ( $M = 14.07, SD = 3.19$  and  $M = 15.02, SD = 2.49$ , respectively),  $F(1, 185) = 2.60, ns$ .

**Fig. 1** Concessions as a function of other's response mode and other's toughness (Experiment 1)



### 2.3 Discussion

The results of Experiment 1 support our hypotheses. Consistent with Hypothesis 1, the results showed that participants made higher demands and smaller concessions to a soft partner than to a tough one. This finding is consistent with previous research demonstrating that negotiators tend to “mismatch” their partner’s perceived toughness (see e.g., Pruitt 1981; Van Kleef et al. 2004a; Yukl 1974). This finding is nice because it suggests that our scenario methodology can produce similar, and not-so-obvious effects obtained in previous work using contextually richer research paradigms.

In line with Hypothesis 2, we found that mismatching was much stronger in the affective response mode condition than in the numerical response mode condition. In fact, negotiators who received numerical responses from their partner did not respond differentially to the other’s toughness or softness.

### 3 Experiment 2

The findings of Experiment 1 are in line with the central proposition of the present research, which states that negotiators will be more susceptible to social cues about their partner when the partner’s responses are phrased in affective rather than numerical terms. However, although the results of Experiment 1 support this idea, we felt that more support was needed to strongly establish the effect. The main objective of Experiment 2 was to examine whether the findings obtained in Experiment 1 generalize to other social cues. To do this, we provided participants with information regarding the partner’s reputation (highly respected vs. not respected), and examined whether participants would use this information to a greater extent in the affective response mode condition than in the numerical response mode condition.

In the context of sales negotiations the respectability of a customer is considered important because respectable negotiators tend to elicit positive affect and sympathy in others and thereby stimulate them to adopt a cooperative negotiation stance (Forgas 1998; Carnevale and Isen 1986). Furthermore, a partner’s respectability can also elicit cooperative tendencies because of the desire to engage in future negotiation interactions (Ben-Yoav and Pruitt 1984; De Gilder and Wilke 1990). Thus, negotiators tend to have greater trust in others who appear respectable, to like them better, and to adopt a more cooperative negotiation approach (Fisher and Ury 1981). We therefore predicted that participants would make higher demands

to a partner with an unrespectable reputation than to a partner with a respectable reputation (*Hypothesis 3*). More important, however, and based on our idea that negotiators are more susceptible to social cues when they receive affective rather than numerical responses, we expected negotiators' tendency to adapt their demands to the partner's respectability to depend on the partner's response mode. Specifically, we predicted that negotiators would make lower demands and larger concessions to partners with a respectable rather than an unrespectable reputation, especially when the partner provided affective rather than numerical responses (*Hypothesis 4*).

### 3.1 Method

#### 3.1.1 Participants and experimental design

A total of 53 male and female undergraduate industrial design students at the University of Venice participated in the study for course credits. Participants were randomly assigned to the experimental conditions, and the experimenters were blind to this assignment. The two-factor experimental design included the partner's response mode (numerical vs. affective) and the partner's reputation (respectable vs. unrespectable) as between-participants variables. As in Experiment 1, the main dependent variables were concessions and demands.

#### 3.1.2 Procedure

The procedure was the same as in Experiment 1. The manipulation of response mode was identical to the one that was used in the "tough" conditions of Experiment 1.

*Manipulation of partner's respectability.* In the scenario, before the interaction with the customer started, participants were asked to imagine that the shop manager had given them some confidential information about the customer they were going to serve. In the high-respectability condition the store manager claimed that the other was a very important, highly respected and welcome customer. In the low-respectability condition the manager claimed that the customer was a nuisance who tended to waste company time.

*Dependent measures.* Besides the participants' demands and concessions, we introduced a semantic differential item to check participants' perceptions of the opponent's competitiveness (ranging from 1 = *cooperative* to 5 = *competitive*) and a similar semantic differential item to measure their favorability of evaluations of the opponent (1 = *unfavorable*, 5 = *favorable*). We introduced these to check for the effectiveness of our manipulation, and also to see whether our experimental manipulations inadvertently influenced perceived competitiveness.

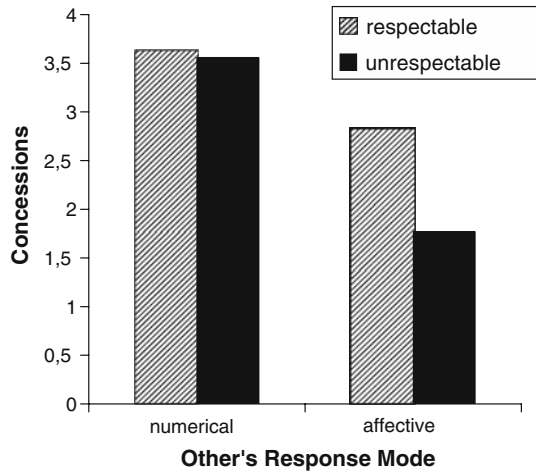
### 3.2 Results

#### 3.2.1 Preliminary analyses

One participant responded incorrectly to one comprehension check and was excluded from further analyses. All analyses are thus based on 52 participants. (Retaining the excluded participant did not lead to different conclusions.)

ANOVA revealed a main effect of the opponent's respectability on participants' evaluations of the opponent,  $F(1, 48) = 6.18$ ,  $p < 0.05$ —respected opponents were rated more favorably ( $M = 3.52$ ,  $SD = 0.79$ ) than were not-respected opponents ( $M = 2.85$ ,  $SD = 0.92$ ). There was no main effect of response mode, and no interaction. There were also no effects of response mode and respectability on participants' impressions of the other's

**Fig. 2** Concessions as a function of other's response mode and other's respectability (Experiment 2)



competitiveness (all  $F$ s < 1, *ns*), meaning that (as in Experiment 1) response mode in itself has no effect on perceived toughness.

### 3.2.2 Concessions

Concession tendencies were analyzed using ANOVA with response mode (numerical vs. affective) and partner's respectability (low vs. high) as between-participant variables. As in Experiment 1, this yielded a main effect of response mode, indicating that participants made larger concessions when their partner gave numerical ( $M = 3.60$ ,  $SD = 0.43$ ) rather than affective ( $M = 2.21$ ,  $SD = 0.68$ ) responses,  $F(1, 48) = 105.13$ ,  $p < 0.001$ . Second, and in line with Hypothesis 3, a main effect of partner's respectability showed that participants made smaller concessions when the customer was low ( $M = 2.59$ ,  $SD = 0.10$ ) rather than high on respectability ( $M = 3.28$ ,  $SD = 0.59$ ),  $F(1, 48) = 19.68$ ,  $p < 0.001$ . Third, and most important, the above main effects were qualified by a significant interaction between partner's respectability and response mode,  $F(1, 48) = 14.94$ ,  $p < 0.01$  (see Fig. 2). As predicted in Hypothesis 4, simple-effects analysis showed that participants in the affective response mode condition were strongly influenced by their counterpart's respectability, making more concessions when the counterpart was high ( $M = 2.82$ ,  $SD = 0.55$ ) rather than low ( $M = 1.77$ ,  $SD = 0.33$ ) on respectability,  $F(1, 48) = 31.95$ ,  $p < 0.001$ . In contrast, participants in the numerical response mode condition were not affected by their counterpart's respectability ( $M = 3.63$ ,  $SD = 0.34$  and  $M = 3.56$ ,  $SD = 0.53$ , respectively),  $F(1, 48) < 1$ , *ns*.

### 3.2.3 Demands

ANOVA showed an effect of other's respectability ( $M = 18.48$  and  $SD = 3.04$  for not-respected opponent;  $M = 16.34$  and  $SD = 2.33$  for respected opponent),  $F(1, 48) = 17.70$ ,  $p < 0.001$ , an effect of response mode ( $M = 15.14$  and  $SD = 1.58$  for numerical response;  $M = 19.90$  and  $SD = 1.73$  for affective response),  $F(1, 48) = 127.94$ ,  $p < 0.001$ , and an interaction between the two factors,  $F(1, 48) = 4.74$ ,  $p < 0.05$ . Participants in the affective response mode condition demanded less when negotiating with a respected opponent

( $M = 18.41$ ,  $SD = 1.60$ ) than when dealing with a not-respected opponent ( $M = 20.97$ ,  $SD = 0.77$ ),  $F(1, 48) = 19.73$ ,  $p < 0.001$ ; participants in the numerical response mode condition made similar demands in the high respectability ( $M = 14.75$ ,  $SD = 1.33$ ) and low respectability conditions ( $M = 15.56$ ,  $SD = 1.78$ ),  $F(1, 48) = 2.13$ , *ns*.

### 3.3 Discussion

The results of Experiment 2 show that participants made larger concessions to and demanded less from a customer who was seen as respectable and valued, but only when he or she used an affective rather than numerical response mode. In Experiment 1 we similarly found that participants made more concessions to and demanded less from a tough counterpart than from a soft one, but only when the counterpart provided affective rather than numerical responses. Together, these two studies support our general idea that, compared to a numerical response mode, an affective response mode renders negotiators more susceptible to social and contextual cues that are present before, or become available during the negotiation. The objective of Experiment 3 was to further replicate and extend these findings by focusing on yet another social cue: the counterpart's physical appearance.

## 4 Experiment 3

The two social cues examined thus far—toughness and respectability—are both quite relevant in negotiations. Past research has repeatedly demonstrated the impact of concession size, and it is rather obvious to expect people to be more cooperative and pleasant with someone they value as a customer than with someone they don't (although it may be less obvious to predict and observe this to happen only under affective response mode conditions). To examine whether less directly relevant social cues may similarly take on heightened importance when negotiators receive affective rather than numerical responses, we manipulated the counterpart's physical appearance. According to *expectation states theory* people tend to ascribe power and status to others on the basis of appearance symbols such as clothing and physical height (e.g., Balkwell 1995; Fisek et al. 1995; Ridgeway 1991). A robust finding in negotiations is that people with low power and status tend to yield to high status individuals (e.g., De Dreu and Van Kleef 2004; Watson 1994). We therefore predicted that participants would make smaller concessions to, and demand more from a partner with an untidy rather than a nice appearance (*Hypothesis 5*). Furthermore, and analogs to the predictions in the previous experiments, we hypothesized that this effect would be stronger in the affective response mode condition than in the numerical response mode condition (*Hypothesis 6*).

### 4.1 Method

#### 4.1.1 Participants and design

A total of 62 male and female undergraduate sociology students at the University of Bicocca—Milan participated in the study in partial fulfilment of a course requirement. They were randomly assigned to the experimental conditions using a double-blind procedure. The two-factor experimental design included response mode (numerical vs. affective) and partner's appearance (elegant vs. untidy) as between-participants variables. As in the previous experiments, the key dependent variables were participants' concessions and demands.

### 4.1.2 Procedure

The procedure, the negotiation task, the manipulation of response mode, and the dependent variables were the same as in the previous experiments.

*Manipulation of partner's appearance.* The partner's appearance was manipulated by varying the description of the customer. In the neat appearance condition participants read that the customer was elegantly dressed and charming. In the untidy appearance condition participants read that the customer's clothes were sloppy and untidy.

## 4.2 Results

### 4.2.1 Preliminary analyses

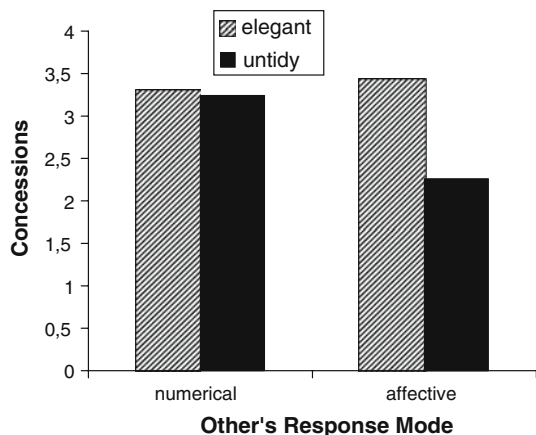
Two participants responded incorrectly to one or more of the comprehension checks and were excluded from further analyses. The analyses reported below thus are based on 60 participants. (Retaining the excluded participants did not lead to different conclusions.)

ANOVA showed that neat partners were evaluated more favorably ( $M = 3.07$ ,  $SD = 0.82$ ) than were untidy ones ( $M = 2.36$ ,  $SD = 0.95$ ),  $F(1, 56) = 8.66$ ,  $p < 0.01$ . There was no main effect of response mode, and no interaction. There were also no effects of response mode or partner's appearance on participants' impressions of their opponent's competitiveness.

### 4.2.2 Concessions

In line with Hypothesis 5, ANOVA yielded a significant main effect of the partner's appearance, showing that participants made smaller concessions when the partner's appearance was untidy ( $M = 2.73$ ,  $SD = 0.78$ ) rather than neat ( $M = 3.36$ ,  $SD = 1.06$ ),  $F(1, 56) = 6.83$ ,  $p < 0.05$ . This effect was qualified by a significant interaction between partner's appearance and response mode,  $F(1, 56) = 5.51$ ,  $p < 0.05$  (see Fig. 3). As predicted in Hypothesis 6, simple-effects analyses showed that participants in the affective response mode condition made larger concessions when the counterpart had a neat ( $M = 3.42$ ,  $SD = 1.27$ ) rather than untidy ( $M = 2.26$ ,  $SD = 0.42$ ) appearance,  $F(1, 56) = 12.08$ ,  $p < 0.01$ , whereas participants in the numerical response mode condition were impervious to their partner's physical appearance (neat:  $M = 3.30$ ,  $SD = 0.87$ ; untidy:  $M = 3.24$ ,  $SD = 0.78$ ),  $F(1, 56) < 1$ , *ns*.

**Fig. 3** Concessions as a function of other's response mode and other's appearance (Experiment 3)



### 4.2.3 Demands

ANOVA revealed a main effect of opponent's appearance ( $M = 15.92$  and  $SD = 3.62$  for neat opponent;  $M = 17.72$  and  $SD = 2.85$  for untidy opponent),  $F(1, 56) = 48.83$ ,  $p < 0.05$ , a main effect of response mode ( $M = 15.89$  and  $SD = 2.72$  for numerical response;  $M = 17.81$  and  $SD = 3.7$  for affective response),  $F(1, 56) = 5.07$ ,  $p < 0.05$ , and an interaction,  $F(1, 56) = 6.98$ ,  $p < 0.05$ . Participants in the affective response mode condition demanded less from a neat partner ( $M = 15.75$ ;  $SD = 4.51$ ) than from an untidy one ( $M = 19.60$ ,  $SD = 1.27$ ),  $F(1, 56) = 11.50$ ,  $p < 0.001$ ; participants in the numerical response mode condition were not affected by their partner's appearance ( $M = 16.06$ ;  $SD = 2.81$  and  $M = 15.71$ ;  $SD = 2.72$ , respectively),  $F(1, 56) < 1$ , *ns*. Together, these findings support our idea that compared to negotiators who receive numerical responses from their counterpart, negotiators who receive affective responses tend to be more susceptible to social cues about the counterpart—even if these cues are not directly relevant to the negotiation.

## 5 General discussion

Most of the negotiations people engage in do not include payoff charts and the exchange of clear-cut and unequivocal numerical information. Rather, people communicate with one another in evaluative and affective terms. Instead of making numerical offers and counteroffers, people tell each other that they are pleased with a proposal, that they are annoyed about the progress made on a particular issue, or that they fear an impasse on some important matter. Despite the omnipresence of affective response modes in negotiation and related forms of social decision-making, experimental work in this area often employs a numerical response mode, studying people's reactions to numerical offers and counteroffers. In the present study we addressed this disconnect between everyday negotiation practice and the typical negotiation experiment by investigating the differential consequences of receiving numerical vs. affective responses.

As predicted, the results of three experiments showed that negotiators with a counterpart who provided affective responses were more susceptible to contextual cues that were available prior to the negotiation (the partner's value as a customer, his physical appearance), or that became available during the negotiation (the partner's concession size), than were those whose partners provided numerical responses. In Experiment 1 we found that negotiators made larger concessions and smaller demands to tough negotiation partners than to soft negotiation partners, but only when the partner employed an affective rather than numerical response mode. Experiment 2 showed that negotiators made larger concessions and smaller demands to respectable counterparts than to unrespectable ones, but only when the other responded to their offers in affective rather than numerical terms. Finally, Experiment 3 demonstrated that negotiators made larger concessions and smaller demands to partners with a nice appearance than to partners with an untidy appearance, but again only when the partner provided affective rather than numerical feedback.

Rackham (in Lewicki et al. 1999) reviewed evidence suggesting that the most successful negotiators (as compared to mediocre bargainers) tend to make more use of expressions of sentiments and affective impressions. In other words, successful negotiators more often use an affective response mode. Unfortunately, many laboratory experiments on bargaining and negotiation employ a numerical response mode, which inadvertently leads participants to pay a disproportionate amount of attention to the partner's numerical responses and distracts



their attention away from social cues that may convey important information about the partner's intentions and future behavior. Indeed, the present study indicates that negotiators who receive affective rather than numerical feedback to their offers are more likely to incorporate social characteristics of the counterpart into their negotiation strategy. In the present experiments this resulted in participants making smaller concessions to counterparts who employed a soft negotiation tactic, had an unfavorable reputation, or had an untidy appearance, but only when the counterpart responded to their offers in affective rather than numerical terms. It would appear, then, that forcing participants to communicate their offers, demands, needs, and desires in purely numerical terms can result in a form of social myopia that severely compromises the ecological validity of the results and conclusions of many negotiation experiments.

These findings are consistent with our theorizing. As indicated in the Introduction, the affective response mode is more ambiguous and may therefore trigger a greater need for sense-making in recipients (Yurtsever 2001). This sense-making process may in turn lead to greater attention to and better processing of social and contextual information (Epstein 1994; Tversky and Kahneman 1983), resulting in stronger effects of these cues on negotiators' demands and concessions. Specifically, the affective response mode may trigger a more intuitive-experiential processing style (Payne et al. 1993). Given that individuals using an intuitive processing mode tend to be more strongly influenced by global context characteristics than individuals using an analytical processing mode (e.g., Epstein 1994; Slovic et al. 2002), the experiential system may make people more sensitive to social cues about others in their social environment. Our findings provide support for this line of thought in a negotiation setting. Future research is needed to investigate to what extent these findings generalize to other settings.

An interesting difference between numerical and affective response modes not discussed thus far is that numerical responses tend to focus on the offerer's position, and may anchor recipients on the other's side of the bargaining zone, whereas affective responses tend to focus on the recipient's position, and may anchor recipients on their own side of the bargaining zone. To some extent, this differential focus may contribute to the tendency for recipients to engage in sense-making and to rely on social cues more when affective rather than numerical response mode is used. Although we maintain that the differential focus is inherent in numerical vs. affective response modes, and thus may be difficult to control experimentally, future research may attempt to disentangle focus from intuitive vs. rational information processing as explanations for the greater effect of social cues under affective response mode conditions.

Whereas numerical responses involve, one way or the other, verbal or written communication, affective responses may be verbal or written, or non-verbal (e.g., through facial expressions). An interesting avenue for future research would be to examine the effects of communicated affective responses, through either verbal statements (as in the present study) or through non-verbal, facial expressions. This touches on a more general issue in the study of interpersonal effects of emotion in negotiation, which thus far has relied heavily (though not exclusively) on the verbal communication of emotions (e.g., Friedman et al. 2004; Kopelman et al. 2006; Sinaceur and Tiedens 2006; Van Kleef et al., 2004a, b, 2006). It may be that the strategic use of other's emotion statements, as documented in much of this past work (see Van Kleef et al. this issue, for a thorough discussion) is less prominent when other's emotions are communicated non-verbally. Social and emotional contagion effects, in which emotions may be processed outside of conscious awareness to a greater extent than is the case with strategic processing effects, may have greater impact under purely non-verbal rather than verbal communications of emotions.

Another issue that warrants future research concerns the effects of mixtures of affective and numerical responses. As mentioned at the outset, we believe that in most negotiations—whether in the laboratory or in the field—parties mix numerical statements with affect-laden comments. In the present study we contrasted purely numerical responses with purely affective responses, and this enabled us to get a first look at the consequences of presenting numerical and affective information in and by itself. Our studies strongly suggest that the affective response mode makes the recipient more sensitive to social and contextual cues. Future research could continue this quest and examine in a controlled manner how such sensitivity changes when affective and numerical responses are mixed. How much numerical information should one provide, for example, to reduce other's sensitivity to one's social status, dress, and behavioral strategy?

Future research could also investigate whether the current findings generalize from naïve and relatively unexperienced negotiators to more seasoned and trained negotiators. Seasoned negotiators may have learned to respond with counter-offers to numerical statements uttered by their counterpart, and to ask for clarification in reaction to other's affective responses (e.g., “if you're dissatisfied and unhappy about my last offer, please tell me what you would like to see”). Although certainly possible, it remains an empirical question that requires new research. For example, it cannot be excluded that, in line with current findings, such requests for clarification and subsequent counter-offers still are influenced by social and contextual cues more than when (seasoned) negotiators are confronted with a numerical response mode. Indeed, seasoned negotiators tend to display many of the biases that naïve negotiators fall prey to, including anchoring and insufficient adjustment (Northcraft and Neale 1987) and egocentric self-enhancement (De Dreu, Nauta & Van de Vliert 1995).

A final issue that merits discussion concerns our experimental approach. We opted for the use of vignettes to maintain optimal experimental control and to enable ourselves to decompose a variable that in real-life negotiations may be hard to disentangle. Some readers may wonder, however, whether our results have anything to say about motivation, cognition, and behavior in settings other than hypothetical vignettes. We believe they do, for three reasons. First, in Experiments 1 and 2 we replicated work on toughness and on status using role-play simulations and behavioral measures. Second, in all three experiments we used situations that were common to our research participants, and they generally (albeit informally) reported they had been in similar situations, or could very well imagine themselves in such settings. Third, in previous studies on emotion in negotiation, researchers have documented similar effects regardless of whether they studied face-to-face, computer-simulated, or imagined interaction (e.g., Sinaceur and Tiedens 2006; Van Kleef et al. 2004a, b; Van Kleef et al. 2006). For these reasons we do not believe that our choice of method influenced our findings. Nevertheless it would be interesting to investigate the effects of numerical and affective response modes on negotiation behavior in different settings in future research.

Before closing we wish to return to the fact that we used a three-issue task with different weights per issue. Although no differential effects of experimental manipulations on concession making were found (see Method section of Experiment 1), we did find a tendency for negotiators to make larger concessions and smaller demands on issues of lower priority than on issues of higher priority (cf., De Dreu and Van Lange 1995). This raises several interesting issues. First, had we studied face-to-face interactions in which actual concessions were exchanged and the task allowed for integrative agreements, we would not have found effects of response mode and/or social cues on the extent to which parties reach and integrative agreement. However, this may be partly related to the fact that we did not systemically vary hedonic tone (positive vs. negative) across issues. In a recent study, Pietroni et al. (2006) examined how others' emotional expressions may reduce negotiators' fixed-pie bias and

promote integrative behavior. In a two-issue computer-simulated negotiation, participants negotiated with a counterpart emitting one of the following emotional response patterns: (1) anger on both issues, (2) anger on participant's high priority issue and happiness on participant's low-priority issue, (3) happiness on high priority issue and anger on low-priority issue, or (4) happiness on both issues. The third pattern reduced fixed-pie perceptions and increased integrative behavior, while the second pattern amplified bias and reduced integrative behavior. These findings indicate that emotions provide strategic information that helps coordinate social interaction. They also indicate that the specific matching of emotion statements in affective response modes may have interesting implications for concession making and, perhaps, the way social context cues come into play.

In closing, the present research allows us to conclude that when counterparts respond in affective terms, negotiators are relatively sensitive to social and contextual cues that may help to interpret ambiguity and to make sense of their situation. This work thus suggests that affect in negotiation does something more than we knew thus far—that one's affective state influences one's own goals and behavior, and provides one's counterpart with strategic information. Affective statements in negotiation also add ambiguity, require additional sense-making, and may complicate negotiations because they may direct parties to focus on more or less irrelevant cues such as social status and dress. If we think this is undesirable, we better stick to just the facts.

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