Chapter 3

The Impact of Conflict Issues on Fixed-pie Perceptions, Problem Solving and Integrative Outcomes in Negotiation

A growing body of evidence suggests that in negotiations, it is not only the nature of parties' preferences that matters, but also the particular content domain within which the negotiations are rooted (Goldstein & Weber, 1995; Larrick & Blount, 1997; Milter, Darling, & Mumpower, 1996). For example, Goldstein and Weber (1995) argue that expertise in a content domain influences how people interpret and evaluate decisions. In the area of negotiations, Milter, et al. (1996) showed that the content of a negotiation affected the likelihood of logrolling and concession patterns. Thus, the conflict issue -- what the conflict is about -- is an important predictor of negotiation processes. However, many scholars still tend to assume that negotiators are invariant about the conflict issue and assume behavior to be independent of the content of the negotiation (for a discussion, see Roth, 1994). In this paper, we propose a framework for thinking about how conflict issues can be conceptualized, and develop a set of hypotheses regarding how conflict issues are likely to affect the perceptions, motivations, behavioral interactions and outcomes in negotiation. In doing so, this research integrates negotiation

2 This chapter is adapted from Harinck, De Dreu & Van Vianen (2000). A Dutch version of Experiment 1 was published as Harinck, De Dreu and Van Vianen (1999).
research and research on group decision making and reconciles, as will be argued, apparent differences in research findings.

**Conflict Issues**

Negotiation is a discussion between two (or more) parties in order to solve (perceived) differences (Pruitt & Carnevale, 1993). Those differences can be rooted in interests (scarce resources), intellective issues (what is the right answer?), or evaluative issues (what is good or bad?) (Coombs, 1987; De Dreu, Harinck, & Van Vianen, 1999; Kaplan, 1987; Kaplan & Miller, 1987; Kelley & Thibaut, 1969; Laughlin, 1980; Laughlin & Ellis, 1986; Levine & Thompson, 1996). A negotiation about interests arises when interdependent individuals or groups hold conflicting positions that are rooted in conflicting personal interests such as the attainment of money, time, personal benefits or other scarce resources. A negotiation about an intellective issue arises when interdependent individuals or groups hold incompatible positions that are rooted in different interpretations of an objectively verifiable issue. An example is a discussion whether a jail sentence is more effective against recidivism than a monetary fine. Issues like these can be objectively verified, for example by studying the recidivism statistics. Intellective negotiations are sometimes referred to as ‘cognitive conflicts’ (Brehmer, 1976; Brehmer & Garpebring, 1974; Hammond, et al., 1968). A negotiation about an evaluative issue arises when interdependent individuals or groups hold incompatible positions that are rooted in different ideas about an issue that has no single demonstrably correct answer, such as norms and values. An example is a discussion whether a jail sentence is more just than a monetary fine. Evaluative negotiations are sometimes referred to as ‘value conflicts’ (Druckman, Broome, & Korper, 1988; Druckman, Rozelle, & Zechmeister, 1977; Druckman & Zechmeister, 1973).

In the following sections we present three studies that considered the influence of conflict issue on negotiation at three distinct but interrelated levels. Study 1 examines the impact of conflict issue on negotiators’ fixed-pie perceptions and their cooperative motivation. Past research has demonstrated
that fixed-pie perceptions and cooperative motivation are critical for subsequent interaction processes and negotiation outcomes (e.g. De Dreu, Weingart & Kwon, 2000b; Thompson & Hrebec, 1996). Study 2 builds on the first study to test predictions about the effect of conflict issue on negotiation behavior and outcomes. Study 3 replicates the laboratory findings of Study 2 in a field setting.

**Study 1: Perceptions and Motivations as a Function of the Conflict Issue**

Critical in negotiation is a full and accurate understanding of the structure of the negotiation. Understanding the payoff structure allows negotiators to develop an effective strategy for reaching their goals, and also allows them to develop integrative solutions that satisfy not only their own, but also their opposing negotiator’s preferences. Unfortunately, however, negotiators often have incomplete information about the other party’s attitudes, judgments, preferences and priorities (Pruitt, 1981). That is, they often lack knowledge about the real or objective preferences of the other party. As a result, negotiators construe the structure of the negotiation by making inferences about other’s preferences and priorities (Pruitt, 1972). Such construal processes have important consequences for subsequent strategies and tactics, and thus for negotiator effectiveness and outcomes.

**False Consensus and Fixed-Pie Perception**

Powerful cues used in the construal process are the negotiator’s own attitudes, judgments, preferences and priorities. According to the false consensus effect, individuals entering a negotiation would assume that the other party tends to agree with them (Gilovich, 1990; Marks & Miller, 1987; Miller & Marks, 1982; Ross, Greene, & House, 1977; Sherman, Chassin, Presson, & Agostinelli, 1984). In their classic study, Ross et al. (1977) asked whether people were willing to walk around for 30 minutes wearing a sandwich board with the text: ‘Repent’. The people who agreed to do so estimated that 64% of a reference group
would also agree to this request. People who refused estimated that only 23% would agree to this request. A meta-analysis by Mullen, Atkins, Champion, Edwards, Hardy, and Story (1985) showed that the false consensus effect is highly reliable and applies to personal traits, personal preferences and expectations, personal problems, personal activities, political preferences, factual information and real behavioral choices. The false consensus effect is usually attributed to the fact that (assumed) similarity between one's own and another person's ideas validates the correctness of one's own ideas. This enhances perceived social support, reduces uncertainty and increases the perceived acceptability of one's ideas and identity (Marks & Miller, 1987).

According to the false consensus effect negotiators assume the other party tends to agree with them, and therefore perceive little conflict and opposition. This conclusion is, however, in sharp contrast with research on the fixed-pie perception—the belief that one's preferences in a negotiation situation are diametrically opposed to those of the interdependent other party (Bazerman & Neale, 1983; Thompson & Hastie, 1990). Negotiation studies have shown that individuals entering a negotiation tend to have fixed-pie perceptions and, consequently, fail to search for integrative, win-win solutions (Pinkley, Griffith & Northcraft, 1995; Thompson & Hastie, 1990; Thompson & Hrebec, 1996). The fixed-pie perception is usually explained by assuming that a win-lose dichotomy is part of the human cognitive architecture or that fixed-pie perceptions are the product of the western, individualistic culture (Thompson & Hrebec, 1996).

Whether negotiators construe the structure of the negotiation on the basis of the false consensus effect or on the basis of the fixed-pie perception is likely to depend on the conflict issue involved. Negotiators are more likely to have a fixed-pie perception and to assume that the other party has opposite preferences in negotiations about interests than in negotiations about intellectual or evaluative issues. According to the false consensus effect, individuals in negotiations about interests overestimate the extent to which the other party values a scarce resource they desire themselves as well. Because there only is a limited amount of scarce resources, the individual's
tendency to overestimate how much own and other's interests are similar produces a fixed-pie perception: The more one party wants to have, the less is left for the other party. Indeed, research concerned with fixed-pie perceptions always considered negotiations about interests and scarce resources (e.g., Pinkley, et al., 1995; Thompson, 1990; Thompson & Hrebec, 1996).

In negotiations about intellectual and evaluative issues people are less likely to have a fixed-pie perception. Assuming once again that negotiators are prone to a false consensus bias, they will overestimate the extent to which the other party values a desirable position. Contrary to interests, however, valuing the same position is not problematic for intellectual and evaluative issues as one position can be taken by more than one party. In fact, assuming or discovering that the other party values the same position as oneself can be pleasant because it validates the correctness of one's own ideas (Festinger, 1950). Research indeed has shown that assumed consensus is especially strong in the case of factual information and political preferences (Mullen et al., 1985).

Consider, as an example, a negotiation study by McCarthy (1977). Participants with divergent prediction policies had to negotiate a common prediction policy. Some participants were led to believe that the other negotiator did not match their own ideas about the policy, others were led to believe that other party's ideas about the policy were similar to their own, and a control group did not get information about the other negotiator's preferred policy. Results showed that fixed-pie perceptions were equally low in the 'similar' and the control condition, and in both conditions fixed-pie perceptions were much lower than in the 'dissimilar' condition. Thus, without information about the other party's preferences regarding an information issue, people assumed the other's preferences to be similar to their own. Accordingly, we expect that parties in a negotiation about interests have stronger fixed-pie perceptions and expect stronger opposition than parties in an intellectual or evaluative negotiation (Hypothesis 1).

The McCarthy (1977) study involved, strictly speaking, an intellective issue. We hypothesize that individuals in a negotiation about intellective
issues have a stronger fixed-pie perception than individuals in a negotiation involving evaluative issues. Festinger (1950, p.184) noted that: “the less 'physical reality' there is to validate the opinion or belief, the greater will be the importance of the social referent.” Contrary to intellective issues, evaluative issues lack objective correctness and social referents become vital to validate one’s position. The importance of social referents is associated with a stronger motivation to think that other people share one’s own ideas as this helps one in reaching and maintaining an image of oneself as a moral person with correct and appropriate ideas (Fiske & Taylor, 1991; Sherman et al., 1984). Accordingly, one would expect stronger tendencies to assume others to agree with oneself in the case of evaluative rather than intellective issues.

Indeed, Wagner and Gerard (1983) showed that individuals expect less agreement in the case of intellective issues ('the development of the Space Shuttle absorbed one quarter of federal science funds'), rather than evaluative issues ('Free enterprise must be protected above all'). Likewise, Sherman et al. (1984) showed that people had stronger false consensus biases for issues that are variably evaluated than for issues that are universally evaluated. The former resemble evaluative issues because these are issues for which people’s opinions may vary, such as capital punishment or euthanasia. The latter resemble intellective issues because these are issues that are generally regarded as 'good', 'bad' or 'neutral' (for example 'Being brave' is generally regarded as good). All in all, we expect that parties have stronger fixed-pie perceptions when the negotiation is concerned with intellective rather than evaluative issues (Hypothesis 2).

When negotiators lack full insight in others’ attitudes, judgments, preferences and priorities, they are likely to have inaccurate understanding of the other party’s preferences prior to their interaction. The accuracy of one’s assumptions and perceptions is likely to improve as interaction evolves and negotiators exchange information (Thompson & Hastie, 1990). Thus, we expect that negotiators are more accurate in their perceptions after negotiations have commenced than prior to the start of negotiations (Hypothesis 3).
Cooperative Motivation
Construal processes resulting in assumptions about the degree of conflict and opposition are likely to influence the motivation to cooperate with the other negotiator. Based on the well established finding that people are attracted to similar others (e.g., Berscheid, 1985; Byrne, 1971), we expect negative correlations between fixed-pie perceptions and cooperative motivation (Hypothesis 4). As fixed-pie perceptions are predicted to be lowest in negotiations involving evaluative issues and to be highest in negotiations about interests, we predict that cooperative motivation is higher in evaluative negotiations than in negotiations about interests or intellective issues (Hypothesis 5a). Further, we predict that cooperative motivation is lower in negotiations about interests than in negotiations about intellective issues (Hypothesis 5b).

Method

Design and Participants
The design involved conflict issue (interests vs. intellective issue vs. evaluative issue) as a between-participants factor. Main dependent variables were fixed-pie perception and cooperative motivation. Participants were 36 male and 42 female undergraduate students at the University of Amsterdam. About one half of the sample participated for course credit, the other participated for money (fl. 12.50; equivalent to $6.25). Participants were randomly assigned to dyads (N = 39) and dyads were allocated to experimental conditions on a random basis (N = 13 dyads per condition).

Negotiation Task and Manipulation of Conflict Issue
The negotiation task was based on tasks used in prior negotiation research (De Dreu, Giebels & Van de Vliert, 1998; Pruitt & Lewis, 1975; Thompson & Hastie, 1990). Participants worked in dyads. One dyad member was (randomly) assigned the role of a lawyer and the other one was assigned the role of a district attorney. Their task was to reach agreement on penalties for
four different criminal cases. Each participant received the same information about the penalties and the criminal cases. The possible penalties were: (1) long jail penalty of six months, (2) short jail penalty of two weeks, (3) community service, (4) a fl 1500 fine (equivalent to $750) or (5) a fl 600 fine (equivalent to $300). Two cases were about theft (CD-player, clothes), one case was about the disturbance of domestic peace, and one case was about an illegal immigrant. Each case was described in five sentences on average, containing background information about the offender and information about the criminal case itself. Cases were real-life, although they were slightly altered and stripped from all information that could endanger the anonymity of the offenders. We used masculine names to refer to the offenders in all cases.

Lawyers were instructed to aim for monetary fines for their clients, while district attorneys were instructed to aim for jail penalties. In a negotiation about interests, lawyers were instructed to aim for monetary fines because it would help their career and chances to get promoted. District attorneys were told to aim for jail penalties because obtaining jail penalties would help their career and chances to get promoted. Thus, the participants' preferences for a particular sentence were rooted in their self-interest of getting promoted.

To create a negotiation about an intellective issue, we manipulated how the participants thought about the effectiveness of jail penalties or monetary fines. Lawyers were told to pursue a monetary fine because this sentence was most effective in reducing recidivism among offenders. Similarly, district attorneys were told to aim for jail penalties because this was most effective in reducing recidivism. The effectiveness of a sentence, defined as the reduction of subsequent recidivism, has a correct solution because it is possible to measure objectively how effective sentences are in diminishing recidivism. On the other hand, participants usually are uninformed about the true effectiveness of the different penalties on recidivism rates, enabling us to manipulate the assumed (in)effectiveness of jail penalties and monetary fines.

In the negotiation about an evaluative issue, we manipulated how participants thought about the justness of the different penalties, as there is no
objective universal measure of justness (Gergen & Gergen, 1986; Levine & Thompson, 1996; Maier, 1963; Raiffa, 1982). Lawyers in the evaluative negotiation condition were told that they had to pursue a monetary fine because they believed this was most just. Similarly, district attorneys were told that they had to pursue a jail penalty because they believed this kind of sentence was most just.

Taken together, in all conditions the lawyer and the district attorney had to decide upon penalties for the criminal cases. In the negotiation about interests, the preferences for penalties were rooted in self-interest in terms of personal career and promotion. In the intellectual negotiation the preferences for penalties were rooted in different information about the effectiveness of penalties. Effectiveness is an intellectual issue because it can be measured objectively. In the evaluative negotiation the preferences for penalties were rooted in different ideas about the justness of penalties. Justness is an evaluative issue because it is a matter of personal taste (for full instructions, see Appendix A).

After reading these instructions, the participants were presented a chart in which their preferences for the penalties per criminal case were printed (see Appendix B). Participants only saw their own preferences, and were not informed about the other party’s preferences. In the interests condition, the verbal labels that were used to match preferences for the penalties were based upon the assumed usefulness of the sentences for the lawyer's and district attorney’s own career: very good, good, rather good, good nor bad, rather bad, bad and very bad. In the intellectual condition the preferences for the sentences were based on the assumed effectiveness. Thus, the following labels were used: very effective, effective, rather effective, effective nor ineffective, rather ineffective, ineffective and very ineffective. In the evaluative condition preferences for the sentences were based on the assumed justness, using the labels: very just, just, rather just, just nor unjust, rather unjust, unjust, and very unjust.

The preferences for the penalties were manipulated in such a way that the negotiation task contained one fixed-sum case, one win-lose case and two
integrative cases. In the fixed-sum case, the preferences were completely opposed in such a way that gains for one party equaled losses for the other party. In the win-lose case the preferences of the parties were completely opposed, and there was no possibility for a compromise. In the two integrative cases the parties had opposed preferences but the cases differed in importance to the lawyer and the district attorney (see Appendix B)\(^3\). Thus, the task had integrative potential, i.e. participants could earn higher joint outcomes if they traded off losses on a less important case for gains on a more important case. Pay-off structure and criminal case were kept constant, as this is common in this type of research (cf. Ben-Yoav & Pruitt, 1984; O' Connor & Carnevale, 1997; Pinkley, et al., 1995; Pruitt & Lewis, 1975; Thompson & Hastie, 1990) and because we had no reason to suspect effects. This confound was not believed to be a issue\(^4\). Participants were not informed about the integrative nature of the task, nor were they allowed to show their charts to each other. The conflicting preferences and the amount of conflict involved had to be discovered by communication.

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\(^3\) Research suggests that negotiation parties in these tasks anchor on the issue that is listed most to the left in the case chart (Ritov, 1996). Since this may interfere with fixed-pie perceptions, we manipulated the listing of cases from left to right according to a Latin Square design. The order in which the criminal cases were presented had no influence on our dependent variables, and therefore it is no discussed any further.

\(^4\) As in past negotiation research, the cases in our study were confounded with pay-off structure (e.g., CD-player was always the fixed-sum case). However, the two variable-sum cases yielded identical error scores in each of the three questionnaires although the criminal cases were clearly different. In addition, participants in the evaluative negotiation had less strong fixed-pie perception than participants in the negotiation about interests and the intellective negotiation on each criminal case, although the characteristics of the criminal cases that were used for the fixed-sum, win-lose and variable-sum cases varied widely. Thus, we feel this confound does not pose a threat to the validity of our results.
Procedure
As the participants entered the laboratory, they were divided in dyads. Each dyad was assigned a table. In case multiple dyads were run, tables were placed at some distance from each other. In the Preparation Phase, the participants were given a folder containing instructions about their role and the task, the manipulation of conflict issue and their own preference chart. The participants answered two questions about the preference chart, to ensure that they understood the chart correctly. The answers were checked by the experimenter, and corrected when necessary. Subsequently, the participants were given ten minutes to think about and write down arguments for their own position. The lawyer had to write down arguments favoring monetary fines and the district attorney had to write down arguments favoring jail penalties. Participants then completed a brief questionnaire to measure fixed-pie perceptions (see Results and Discussion section, for more detail).

In the subsequent Reading Phase, the dyad was asked to exchange their written arguments in order to be "better prepared" for the upcoming meeting. This was a first interaction, in which they were not allowed to speak to each other, and only read each other’s arguments. A second questionnaire to measure fixed-pie perceptions once again was administered when participants finished reading the other party’s arguments. In the final Discussion Phase, the experimenter told the dyad they had fifteen minutes to discuss their positions and to reach agreements. In this phase, the parties could freely interact and ask each other whatever they wanted. The dyad was given a sheet of paper on which they could report their agreements. After fifteen minutes of discussion (or earlier, when all cases were settled upon) the dyad had to stop the task and the experimenter handed out a third questionnaire, measuring fixed-pie perceptions as well as manipulation checks (see Results and Discussion section for more detail). Upon completion of this last questionnaire participants were paid, debriefed, and thanked for participation.
Results and Discussion

Treatment of the Data
Participants negotiated in dyads. Within each dyad, individual data are interdependent, and therefore the individual data of the participants in each dyad were averaged and analyzed at the dyadic level (cf. Kenny & LaVoie, 1985).

Manipulation Checks
The Discussion Phase questionnaire included several items to check the adequacy of the conflict issue manipulation. First of all, participants answered three items about their reason to aim for a penalty: (a) because monetary/jail penalties are good for my career, (b) because monetary/jail penalties are most effective, and (c) because monetary/jail penalties are most just (always 1 = not at all, to 5 = very much). Answers were submitted to a 3 (reason to aim for penalty: career vs. effectiveness vs. justness) by 3 (conflict issue: interest vs. intellective vs. evaluative) MANOVA with the last factor between-dyads. There was a main effect for reason, $F(2, 66) = 8.57, p < .001$, qualified by a Conflict Issue x Reason interaction, $F(4, 66) = 19.58, p < .001$. Simple main effects (see Table 4) showed that dyads in the negotiation about interests wanted to give the penalties because it favored their career rather than because they thought it most effective or just. Dyads in the intellective negotiation wanted to give the penalties because of the effectiveness of the penalties rather than because it was good for their career or it was considered to be most just. Dyads in the evaluative negotiation wanted to give their penalties because of the justness of the penalties rather than because it would be good for their career. Although means were in the expected direction, there was no significant difference between their scores on the effectiveness and the justness of the penalties.

Second, we checked whether effectiveness and justness met the criteria of intellective and evaluative issues. We used the following questions: (a) 'To
what extent is the assessment of the career-promoting effect of the penalties a matter of personal taste or a matter of science', (b) 'To what extent is the assessment of the effectiveness of the penalties a matter of personal taste or a matter of science' and (c) 'To what extent is the assessment of the justness of the penalties a matter of personal taste or a matter of science' (always 1 = purely personal, to 5 = purely scientific). The career-promoting effect was included to examine its position on this dimension. We compared, within-participants, the ratings on the personal taste--scientific dimension for effectiveness and justness. The main effect of conflict issue, $F(2, 64) = 8.60$, $p < .001$, showed that the assessment of the effectiveness of penalties was seen as more scientific ($M = 3.47$) than the assessment of justness ($M = 2.70$), $t(35) = 5.20$, $p < .001$. The assessment of the career-promoting effect of the penalty had an intermediate position on this personal taste--scientific dimension ($M = 3.21$); It differed from the assessment of justness, $t(34) = 2.39$, $p < .023$, but not from the assessment of the effectiveness.

**Table 4.** Means (standard deviations) and test statistics of the manipulation checks of conflict issue; Study 1

<table>
<thead>
<tr>
<th>Conflict Issue</th>
<th>Reason to Aim for Penalty</th>
<th>Career</th>
<th>Effectiveness</th>
<th>Justness</th>
<th>Test Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interests</td>
<td></td>
<td>3.83&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.62&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.79&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$F(2, 66) = 9.25$, $p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.99)</td>
<td>(.53)</td>
<td>(.89)</td>
<td></td>
</tr>
<tr>
<td>Intellective</td>
<td></td>
<td>1.85&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.07&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.46&lt;sup&gt;c&lt;/sup&gt;</td>
<td>$F(2, 66) = 31.01$, $p &lt; .001$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.88)</td>
<td>(.67)</td>
<td>(.72)</td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td></td>
<td>2.13&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.09&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.36&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$F(2, 66) = 8.21$, $p &lt; .001$</td>
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<tr>
<td></td>
<td></td>
<td>(.98)</td>
<td>(.70)</td>
<td>(.45)</td>
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</tbody>
</table>

**Note.** Different superscripts are given to row means that differ significantly at $p < .025$, according to a pairwise t-test.
Fixed-Pie Perceptions

Fixed-pie perceptions were measured in two steps. First, in every phase of the negotiation (Preparation, Reading, Discussion) participants had to predict their opponents' preferences for the penalties for each criminal case. They were provided with a fill-in-the-blank measure adapted from Thompson and Hastie (1990). This measure provided the participants with a blank chart and the instruction to predict their opponent's preferences for the penalties for each criminal case. So, lawyers always filled out a chart for a district attorney and vice versa. For example, the instruction for a lawyer in the negotiation about interests was: "Below you see (the case chart of) the four cases and the penalties. Please indicate for every case how the district attorney thinks about the possible penalties. Choose from: a) very good, b) good, c) rather good, d) average, e) rather bad, f) bad and g) very bad. You can use these words as often as you like, and you can put them in any order you want". These labels were the same as the labels they read in their own case chart during the instruction. In the intellective negotiation, participants had the same instruction but they had to choose from the following labels: a) very effective, b) effective c) rather effective, d) effective nor ineffective, e) rather ineffective, f) ineffective and g) very ineffective. These labels were the same as the labels they read in their own case chart during the instruction. In the evaluative negotiation, participants received the same instructions as participants in the other two conditions but they had to choose from the following labels: a) very just, b) just, c) rather just d) just nor unjust, e) rather unjust, f) unjust and g) very unjust. These labels were the same as the labels they read in their own case chart during the instruction.

The second step, made by the researchers after the study was completed, was to compare the fill-out-the-blank charts with the opponent's real charts. First, the labels participants inserted and the labels in the original case charts were translated into seven-point scales. In the interests condition the scale ranged from 1 (very good) to 7 (very bad). In the intellective issue condition the scale ranged from 1 (very effective) to 7 (very ineffective). In the evaluative issue
condition the scale ranged from 1 (very just) to 7 (very unjust). Then the absolute differences were calculated between one party’s estimates in the fill-out-the-blank measure and the true labels in their opponent’s original case chart. These differences indicate error in the perception of the other party’s preferences. The error scores were averaged over the four penalties for each criminal case to create a score for the amount of fixed-pie perception. If a participant’s perceived preferences of the other party equalled the other party’s actual preferences, this resulted in an error score of zero. The highest possible mean dyadic error score (= the largest possible difference between the parties’ objective preferences and assumed preferences) was 46.

The lawyer and the district attorney had conflicting preferences for the penalties. Thus, when participants expected their other party to have conflicting preferences, they would be very accurate and consequently would have low error scores. When participants expected the other party to have the same preferences as themselves, they would be very inaccurate with concomitant high error scores. Put otherwise, lower error scores indicate participants had stronger fixed-pie perceptions.

Mean overall dyadic error scores were analyzed in a 3 (conflict issue: interests vs. intellective vs. evaluative) by 3 (phase: preparation vs. reading vs. discussion) MANOVA with conflict issue as a between-dyad factor and phase as within-dyad factor. There was an effect of conflict issue, $F(2, 32) = 5.83, p < .007$. Consistent with Hypothesis 1, negotiators in the negotiation about interests ($M = 13.55$) had stronger fixed-pie perceptions than negotiators in the evaluative negotiation ($M = 19.76$), $t(20) = -2.99, p < .010$. However, the

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5 Some of the individual participants’ missing values were replaced by the main scores of their fellow participants with the same role in the same negotiation condition, to avoid losing too many data on the dyadic level due to missing values on the individual level. Missing values were only replaced by mean scores if the number of missing values did not exceed 10% of the total number of estimates about the other party, i.e. seven missing values (participants gave three times 25 estimates about the preferences about the other party). This procedure resulted in the replacement of one to five missing values by mean scores in four individual data sets.
difference between the negotiation about interests and the intellective negotiation ($M = 14.64$) was not significant. Consistent with Hypothesis 2 negotiators in the intellective negotiation had stronger fixed-pie perceptions than negotiators in the evaluative negotiation, $t(20) = -2.25, p < .036$.

Results also revealed the predicted effect for negotiation phase (Hypothesis 3), $F(2,64) = 19.20, p < .001$. As can be seen in Figure 4, dyads had lower fixed-pie perceptions (i.e. were less accurate about each other’s preferences) in the preparation phase ($M = 19.21$) than in the reading phase ($M = 13.55$), $t(35) = 5.85, p < .001$. Interestingly, in the discussion phase ($M = 15.04$) dyads had lower fixed-pie perceptions (i.e. were less accurate about each other’s preferences) than in the earlier reading phase, $t(34) = -2.13, p < .040$, although they were still more accurate than in the preparation phase, $t(34) = 3.76, p < .001$.

![Figure 4](image.png)

**Figure 4.** Mean overall dyadic error scores in the Preparation Phase, Reading Phase, and Argumentation Phase as a function of the conflict issue ($N = 39$ dyads). Lower error scores indicate that participants perceived more conflict.
Taken together, results show negotiators have stronger fixed-pie perceptions in a negotiation about interests and a negotiation about intellective issues than in negotiations about evaluative issues. Regardless of the conflict issue, they tended to become more accurate in their perceptions of the other party’s preferences over time, when interaction evolved.

**Cooperative Motivation**

The reading phase questionnaire assessed cooperative motivation with the question “I will try to be as cooperative as possible” (1 = definitely not, to 5 = certainly). Corroborating Hypothesis 4, cooperative motivation was positively related to overall error scores (i.e. lower fixed-pie perceptions), $r = .36$, $p < .041$. A one-way ANOVA with conflict issue as between-dyad factor showed a main effect for conflict issue, $F(2,34) = 3.43$, $p < .044$. Consistent with Hypothesis 5a, participants in the evaluative negotiation had higher intentions to cooperate ($M = 3.92$) than participants in the negotiation about interests ($M = 3.25$), $t(23) = 2.53$, $p < .019$. Contrary to Hypothesis 5b, participants in the intellective negotiation had an intermediate intention to cooperate ($M = 3.75$) and did not differ from the negotiation about interest.

**Joint Outcomes**

We assessed the joint outcomes for exploratory purposes. Higher joint outcomes reflect better use of the available integrative potential in the task. The number of agreements did not differ as a function of conflict issue, $F(2, 35) < 1$. The participants individually received points for every agreement that they reached. These points were related to the labels in the case chart that corresponded with the penalty the dyad agreed upon. In the conflict about interests, the participants received 7 points for every agreement that had the corresponding label ‘very good’ in their case chart. They received 6 points when the corresponding label was ‘good’, 5 points when the label was ‘rather good’, 4 points when the label was ‘good nor bad’, 3 points when it was ‘rather bad’, 2 points when the label was ‘bad’ and 1 point when the label was ‘very bad’. The same procedure was followed for dyads in the intellective and
evaluative negotiations. Thus, the lawyer and district attorney could receive different amounts of points for the same agreement, depending on the labels that corresponded with the penalty in their individual case charts. To calculate the joint outcomes, the individual outcomes (points) of the lawyer and the district attorney within each dyad were summed. The maximum number of points a dyad could earn was 34, the minimum was 0 (in case of impasse on all cases).

There was no effect of conflict issue on joint outcomes, $F(2,35) = 1.72, ns$, although there seemed to be a trend for participants in the negotiation about interests to reach higher joint outcomes ($M = 28.69$) than participants in the negotiation about intellective issues ($M = 23.00$) or evaluative issues ($M = 24.50$). Neither was there an effect of conflict issue on the mean joint outcomes corrected for number of agreements, $F(2,35) = 1.98, ns$.

**Study 2: Negotiation Behavior and Outcomes as a Function of the Conflict Issue**

The main hypotheses in Study 1 were supported, but the analysis of fixed-pie perceptions and cooperative intentions on the one hand and the joint outcomes from the negotiation on the other did not reveal a consistent pattern. A negotiation about interests produced stronger fixed-pie perceptions and a lower cooperative motivation than negotiations about intellective and evaluative issues, but also produced higher joint outcomes (albeit not significant). To obtain a better insight in this rather counter-intuitive pattern, Study 2 was designed to examine the influence of conflict issue on two broad classes of negotiation behavior; forcing and problem solving.

**Negotiation Behavior**
Negotiation research typically distinguishes between value-claiming, forcing behavior and value-creating, problem-solving behavior (Lewicki, Litterer, Minton, & Saunders, 1994; Pruitt & Carnevale, 1993; Walton & McKersie,
1965). Forcing involves competitive claiming such as making positional commitments, using threats and power and trying to persuade the other party to give in. Problem solving, in contrast, involves the exchange of information about preferences and priorities, clarifying underlying principles, and trading off less important items for more important ones (logrolling) (Lewicki, et al., 1994; Pruitt & Carnevale, 1993). Problem solving leads to higher joint outcomes (e.g. Kelley & Schenitzki, 1972; Mannix, Thompson, & Bazerman, 1989; Pruitt, 1981; Weingart, Bennett, & Brett, 1993). Specifically, negotiators reach higher joint outcomes when they make offers that concern multiple items simultaneously than when they make offers that consider items one by one. Under simultaneous processing negotiators share more information about preferences across items and thus are more likely to detect possibilities for tradeoffs and concomitant integrative agreements (Pruitt, 1981; Weingart et al, 1993, p. 514).

Negotiators with a fixed-pie perception typically start with value-claiming, forcing behavior (Bazerman & Neale, 1983; Pinkley, et al., 1995; Thompson & Hastie, 1990; Thompson & Hrebec, 1996; Walton & McKersie, 1965). Given Study 1, one would expect participants in negotiations about interests to engage in more forcing than participants in negotiations about intellective or evaluative issues because participants in the former situation have stronger fixed-pie perceptions and lower cooperative motivation. As a result, the observed rate of integrative agreements should be lower in the negotiations about interests than in intellective or evaluative negotiations. However, this reasoning runs counter to the findings for the joint outcomes in Study 1. As mentioned, data revealed a (non-significant) trend for participants in the interest condition to reach more integrative agreements, suggesting that they engaged in (somewhat) more problem solving.

An explanation for this apparent inconsistency follows from Walton and McKersie's (1965) differentiation-before-integration hypothesis. The idea is that parties start with value-claiming, forcing behavior but after a while, when costly impasses loom, switch to integrative problem-solving behavior and seek mutual, rather than personal benefit (see also Pruitt and Carnevale, 1993).
Interestingly, the switch from forcing to problem solving is less likely to occur in negotiation involving intellective and evaluative issues than in negotiations about interests. Negotiations about intellective and evaluative issues tend to be resolved only when one party concedes to the other (Kelley & Thibaut, 1969; Rubin, 1994) and not by integrative behavior. Trading off losses on one or more items for gains on other (more important) items is less justified and less acceptable when it concerns “sacred values” like the truth, life, liberty or justice (Lax & Sebenius, 1986; Tetlock, Peterson, & Lerner, 1996; Weingart, et al., 1993). That is, people do not like to trade off right for wrong or justice for injustice. In negotiations about interests, monetary losses on one item can be compensated for by monetary gains on another item. For intellective and evaluative issues, however, the truth or justice on one item may not be able to compensate for incorrectness or an unjust decision on another item (Laughlin, 1980; Laughlin & Ellis, 1986). Consequently, negotiations about intellective and evaluative issues tend to be resolved only when one party concedes to the other (Druckman & Zechmeister, 1973; Kelley & Thibaut, 1969; Rubin, 1994).

Taken together, individuals in negotiations about intellective and evaluative issues are bound to persuading or being persuaded and cannot and will not engage in tradeoffs. Individuals in negotiations about interests are more likely and more willing to use tradeoffs in order to reconcile their conflicting preferences. We predict more tradeoffs in negotiations about interests than in negotiations about intellective and evaluative issues (Hypothesis 6). Consequently, we predict higher joint outcomes in negotiations about interests than in negotiations about intellective and evaluative issues (Hypothesis 7).

**Method**

**Design and Participants**
Conflict issue (interests vs. intellective vs. evaluative) was manipulated as a between-dyad factor. To replicate part of Study 1, we included cooperative motivation as a dependent variable. Main dependent variables were forcing and problem-solving, and joint outcomes from the negotiation. Participants
were 33 male and 55 female undergraduate students at the University of Amsterdam. About one half of the sample participated for course credit, the other for money (12.50 Dutch guilders; equivalent to $6.25). Participants were randomly assigned to dyads (N = 44). In every session one to three dyads were run simultaneously.

**Procedure**

The procedure used in Study 1 was slightly simplified by omitting the measure of fixed-pie perception. Only at the end of the negotiation, participants filled out a brief questionnaire to measure the effectiveness of the manipulations and to assess cooperative motivation. After the participants read their role instructions, the experimenter told the dyad they had thirty minutes to discuss their positions and to reach agreements, and that their discussion would be recorded on a tape recorder. We increased the discussion time from 15 minutes in Study 1 to 30 minutes in Study 2 to obtain richer insight in the interaction processes and to get a better feel of potential differences in joint outcomes. The dyad was given a sheet of paper on which they could report their agreements. After thirty minutes of discussion (or earlier, when all cases were settled upon) the experimenter stopped the recorder and handed out a questionnaire. Upon completion, participants were paid and debriefed.

**Negotiation Task and Manipulation of Conflict Issue**

The task and the manipulation of the conflict issue were identical to the task and manipulation in the first experiment. We added a so-called ‘congruent case’ (Thompson & Hrebec, 1996); a case of a bag theft, for which the lawyer as well as the district attorney favored a low monetary fine (See Appendix B). As in Study 1, participants were not informed about their opponent’s preferences for the penalties, nor were they allowed to show their charts to each other.
Dependent Variables

Manipulation checks and cooperative motivation. The checks for the manipulation of conflict issue and the measurement of cooperative motivation were the same as those used in Study 1.

Negotiation behavior. The negotiations were recorded and transcribed. Each individual speaking turn was coded using a scheme based on research by Pruitt and Lewis (1975; see also De Dreu, Giebels and Van de Vliert (1998)). We coded two instances of forcing: positional commitments and persuasive arguments. A speaking turn was coded 'Positional Commitment' when it contained a strong statement that the speaker was unwilling to change his or her proposal. An example is 'I really cannot agree with anything but a monetary fine'. We coded persuasive arguments following Kaplan and Miller's (1987) coding scheme for informational and normative arguments.

Informational arguments are influence attempts to accept information obtained from another as evidence about reality (Deutsch & Gerard, 1955). Normative arguments are influence attempts to conform to the positive expectations of the other (Deutsch & Gerard, 1955). Decision-making research (Kaplan, 1987; Kaplan & Miller, 1987) shows that intellective issues tend to elicit informational arguments and evaluative issues tend to elicit normative arguments (Kaplan, 1987; Kaplan & Miller, 1987; Kelly, Jackson, & Hutson-Comeaux, 1997; Rugs & Kaplan, 1993). A speaking turn was coded 'Informational persuasion' when it referred to the case description or inferences of the case description or inferences about the effects of the penalty; such statements provide factual information or evidence regarding reality. An example is: "He has already been convicted twice, so that obviously did not stop him from stealing". A statement was coded as 'Normative persuasion' when it referred to norms and values or when in contained the explicit expression of preferences for or against a penalty; such statements involve the assertion of preference or (implicit) pressure to conform. An example is "Jail penalty is too harsh, I think he does not deserve that."

We coded two instances of problem solving: tradeoffs and information exchange. A speaking turn was coded 'Tradeoff' when it contained a proposal
in which a tradeoff was made between the penalties for two or more cases. An example is: “If we give a jail penalty to the clothes theft, I want the illegal immigrant to get a low monetary fine”. A speaking turn was coded as ‘Information Exchange’ when one of the parties asked the other party for a reaction about an offer, for information about the other party’s priorities, or for an offer. An example is: “You did not wanted a jail penalty for this man, did you? No, I think a jail penalty is not effective in this case.”

Any speaking turn could have multiple codes. The first author and a research assistant who was unaware of the research design and research goals coded one third of the transcripts. Cohen’s Kappa was .65 (Cohen, 1960), which is considered substantial (Landis & Koch, 1977). Analyses of the negotiation behaviors were based on the codes of the “blind” research assistant.

**Joint outcomes.** We recorded the number of agreements after 30 minutes of discussion. The maximum number of agreements was five, as dyads discussed five criminal cases. The calculation of the joint outcomes was identical to Study 1. Because we added a congruent case, the maximum joint outcome a dyad could earn was 46, the minimum was 0 (in case of impasse on all cases).

**Results**

**Treatment of the Data**
As in Study 1, data were analyzed at the dyadic level (Kenny & LaVoie, 1985).

**Manipulation Checks**
The checks for the manipulation of conflict issue were the same as in Study 1. There was a main effect of Conflict Issue, $F(2, 41) = 3.45, p < .041$, qualified by an Conflict Issue x Reason interaction, $F(4, 82) = 19.96, p < .001$. Simple main effects (see Table 5) showed that participants in the negotiation about interests wanted the penalty because of their career rather than because they thought this was most effective or most just. Participants in the intellectual negotiation
wanted the penalties because of the effectiveness rather than because this was best for their career or because this was most just. Participants in the evaluative negotiation wanted to give their penalties because of the justness of the penalties rather than because they thought it would be good for their career or because they thought it to be most effective.

**Table 5.** Means (standard deviations) and tests statistics of the manipulation checks of conflict issue (Study 2).

<table>
<thead>
<tr>
<th>Conflict Issue</th>
<th>Career</th>
<th>Effectiveness</th>
<th>Justness</th>
<th>Test Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interests</td>
<td>4.37(^a)</td>
<td>3.03(^b)</td>
<td>3.00(^b)</td>
<td>F(2, 82) = 14.87, (p &lt; .001)</td>
</tr>
<tr>
<td></td>
<td>(.83)</td>
<td>(.69)</td>
<td>(.66)</td>
<td></td>
</tr>
<tr>
<td>Intelective</td>
<td>2.50(^a)</td>
<td>3.85(^b)</td>
<td>3.00(^*)</td>
<td>F(2, 88) = 9.82, (p &lt; .001)</td>
</tr>
<tr>
<td></td>
<td>(.98)</td>
<td>(.88)</td>
<td>(.54)</td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>2.16(^a)</td>
<td>3.34(^b)</td>
<td>3.75(^*)</td>
<td>F(2, 88) = 17.90, (p &lt; .001)</td>
</tr>
<tr>
<td></td>
<td>(.83)</td>
<td>(.70)</td>
<td>(.82)</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Different superscripts are given to row means that differ significantly at \(p < .025\) according to a pairwise t-test.

* The difference between b and c in the evaluative negotiation is marginally significant (\(p < .06\)).

The questions about the objectivity of the concepts of an 'effective penalty' and a 'just' penalty' were analyzed in a pair-wise t-test with the problem ('effective penalty' vs. 'just penalty') as within-dyad variable. Results showed that an 'effective penalty' was considered to be more objective (\(M = 2.71\)) than a 'just penalty' (\(M = 2.36\)), \(t(43) = 2.33, p < .025\). Thus, the manipulation of the intelective and evaluative issue was successful.

**Cooperative Motivation**

As in Study 1 participants in the negotiation about interests had a lower cooperative motivation (\(M = 2.86\)) than participants in the intelective
negotiation \( (M = 3.42) \), \( t(26) = -2.35, p < .027 \), or in the evaluative negotiation \( (M = 3.56) \), \( t(29) = -2.82, p < .009 \). There was no significant difference between the intellective and evaluative negotiation, \( t(27) < 1 \).

**Negotiation Behavior**

In one session a technical error lead to missing data; the missing values of the behavioral data for this particular dyad were replaced by the means of the behavioral data of the dyads that negotiated about the same (intellective) conflict issue. As in past research, we corrected the frequencies of each behavior by the number of speaking turns. Table 6 shows the means and standard deviations of the behaviors as a function of the conflict issue, as well as the test statistics.

**Forcing.** No effects for conflict issue were found on any of the forcing behaviors (see Table 6). Thus, it is concluded that conflict issue did not influence the overall amount of forcing during negotiation.

**Problem solving.** No effects of conflict issue on information exchange were found (see Table 6). Consistent with Hypothesis 6, there was a significant effect of conflict issue on the number of tradeoffs, \( \chi^2(1, N = 44) = 3.84, p < .05 \). In the negotiation about interests there were five couples that made one or more tradeoffs, in the intellective negotiation there were no tradeoffs and in the evaluative negotiation there were two couples that each made one tradeoff.

**Joint Outcomes**

No significant differences in the number of agreements were found, \( F(2, 41) < 1, ns. \) Only dyads that reached five agreements were included in the analysis of the joint outcomes (Tripp & Sondak, 1992). Consistent with Hypothesis 7, ANOVA on the joint outcomes revealed an effect of conflict issue, \( F(2, 25) = 3.87, p < .034 \). Dyads in negotiations about interests \( (M = 44.22) \) reached higher joint outcomes than dyads in negotiations about intellective \( (M = 42.50, p < .025) \) or evaluative issues \( (M = 42.89, p < .025) \). The intellective condition did not differ from the evaluative condition.
Table 6. Means (standard deviations) and test statistics of the negotiation behavior as a function of the conflict issue; Study 2

<table>
<thead>
<tr>
<th>Conflict Issue</th>
<th>Interests</th>
<th>Intellecive</th>
<th>Evaluative</th>
<th>F (2,41)</th>
<th>p &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Positional Commitments</td>
<td>.004 (.007)</td>
<td>.006 (.008)</td>
<td>.008 (.012)</td>
<td>.95</td>
<td>ns</td>
</tr>
<tr>
<td>2. Informational Influence</td>
<td>.17 (.10)</td>
<td>.19 (.08)</td>
<td>.17 (.08)</td>
<td>.29</td>
<td>ns</td>
</tr>
<tr>
<td>3. Normative Influence</td>
<td>.20 (.08)</td>
<td>.17 (.06)</td>
<td>.23 (.07)</td>
<td>2.31</td>
<td>ns</td>
</tr>
<tr>
<td>4. Tradeoffs*</td>
<td>.89 (1.45)</td>
<td>.00 (.00)</td>
<td>.11 (.33)</td>
<td>3.84</td>
<td>.05</td>
</tr>
<tr>
<td>5. Information Exchange</td>
<td>.06 (.03)</td>
<td>.08 (.03)</td>
<td>.07 (.03)</td>
<td>.83</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note. Tradeoffs were absent in intellective negotiations, therefore the frequency of tradeoffs was analyzed by a Chi-square test.

Relationship between Behavior and Outcomes
Table 7 shows the correlations between negotiation behavior and joint outcomes. Consistent with past research, tradeoffs were positively related to joint outcomes and positional commitments were negatively related to joint outcomes. To examine whether tradeoffs mediated the effect of conflict issue on the joint outcomes, we verified whether the significant relationship between the conflict issue condition and the joint outcome was attenuated when we controlled for tradeoffs (Baron & Kenny, 1986). An ANCOVA with conflict issue as between-dyad factor, joint outcomes as dependent variable and the number of tradeoffs as covariate showed that the effect of conflict issue on joint outcomes was no longer significant, F(2, 27) = 2.32, ns. This supports the reasoning that negotiations about interests tend to result in higher joint outcomes than negotiations about intellective and evaluative
issues because individuals in the latter two situations are less likely to make tradeoffs than individuals in the former situation.

Table 7. Means, standard deviations and correlations between negotiation behaviors and negotiation outcomes; Study 2

<table>
<thead>
<tr>
<th>Behaviors</th>
<th>$M$</th>
<th>$SD$</th>
<th>1*</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Joint outcomes</td>
<td>43.18</td>
<td>1.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Number of agreements</td>
<td>4.41</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Positional Commitment</td>
<td>0.07</td>
<td>0.03</td>
<td>-.41*</td>
<td>-.33*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Informational Influence</td>
<td>.18</td>
<td>0.09</td>
<td>-.19</td>
<td>-.12</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Normative Influence</td>
<td>0.21</td>
<td>0.07</td>
<td>-.08</td>
<td>-.09</td>
<td>-.09</td>
<td>-.36*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Tradeoffs</td>
<td>0.002</td>
<td>0.007</td>
<td>.34+</td>
<td>.14</td>
<td>.00</td>
<td>-.18</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>7. Information exchange</td>
<td>.065</td>
<td>.029</td>
<td>-.22</td>
<td>.21</td>
<td>-.33*</td>
<td>-.21</td>
<td>.25</td>
<td>.20</td>
</tr>
</tbody>
</table>

Note. **$p < .01$, *$p < .05$, +$p < .10$.  
$N = 28$ dyads.

Study 3: Replication in an Organizational Setting

The first two studies together paint an interesting picture of the influence of conflict issue on negotiators' perceptions, motivations, behavioral tendencies and outcomes. When interests rather than intellective or evaluative issues are involved, negotiators tend to have stronger fixed-pie perceptions, display less cooperative motivation but are more willing to trade off losses on
unimportant items for gains on more important ones. Consequently, they reach higher joint outcomes.

One final problem of concern is that the pattern of results may be contingent on the specific operations used in the first two studies, and we need to know whether our findings generalize to other settings and populations. Study 3 was designed to examine this, and tested Hypothesis 6 (about higher levels of problem solving when interests rather than evaluative or intellective issues are involved) with a heterogeneous sample of managers and professionals in a variety of organizational settings.

**Method**

**Design and Participants**

The study had a 3 (conflict issue: interests vs. intellective vs. evaluative) by 2 (negotiation ending: positive vs. negative) design, with the conflict issue as between-subjects factor and negotiation ending as within-subjects factor. A *positive* ending was defined as a negotiation that was managed in such a way that all parties involved were satisfied, with a low likelihood of new conflict. A *negative* ending was defined as a negotiation that was managed in such a way that at least one of the parties was dissatisfied with the solution, with a high risk of renewed conflict. We included the ending factor to prevent respondents from giving biased reports (e.g., only highly intense negotiation, or only those negotiations that were successfully resolved). In addition, by including both positive and negative endings, we were able to assess whether certain negotiation behaviors occurred as a consequence of the conflict issue, regardless of the ending of the negotiation.

The data were gathered by interviewing 34 male and 41 female managers and employees (average age = 37 years) from different profit and non-profit organizations. Ten research assistants approached managers and employees in their circle of acquaintances. Only those participants were selected who worked longer than three months in their current jobs and were tenured. Most
participants had managerial tasks; the other participants were professionals without leadership duties.

**Procedure and Dependent Variables**

Male or female research assistants visited the participants and handed them a questionnaire. In the questionnaire, participants were asked to describe a negotiation that ended positively (according to the participant) and one that ended negatively (according to the participant). In 50% of the interviews the participants were asked to describe a negotiation with a positive ending first, and in the other 50% of the interviews the participants were asked to describe a negotiation with a negative ending first. The descriptions of the negotiations were coded for conflict issue by two independent coders. The coders were familiar with the definitions of conflict issue as described in the Introduction. For each description, the coders determined the conflict issue and then classified the negotiation as concerned with interests, with intellective issues or with evaluative issues (for examples, see Table 8). Cohen’s Kappa (Cohen, 1960) for the conflict issue coding was .71. Differences were resolved through discussion (if needed, the first author acted as a mediator).

After each description, the participant filled out a brief questionnaire about the amount of *forcing* and the amount of *problem solving* during the negotiation. Forcing and problem solving were measured with three items each, to be answered on five-point Likert scales (always 1 = *absolutely not applicable*, to 5 = *very applicable*). An example of an item that measured forcing is: ‘I insisted that the other party should give in’. An example of an item that measured problem solving is: ‘I talked openly to the other party in order to find a solution that was mutually satisfying’. The forcing and problem-solving scales were measured reliably (Cronbach’s alphas ranged from .60 to .87).
Table 8. Examples of negotiations involving interests, intellective and evaluative issues, broken down for ending of the negotiation; Study 3

<table>
<thead>
<tr>
<th>Interests</th>
<th>Positive: Two people work together, and one of them thinks she is doing more than her share of the work. She brings it up, the other person does not agree, but after this incident the work is more evenly distributed.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative: A store is short of personnel, therefore the remaining personnel needs to work more than they are hired for. The boss promises to hire more personnel, but does not take any concrete action. After a while, one of the employees leaves because of the work pressure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intellectual</th>
<th>Positive: Two people are arguing about the interpretation of a new law. Finally they decide to go a law expert and to accept her interpretation of the law as the correct interpretation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative: Somebody had made an error in a booking procedure. Two colleagues argued about how it should be done, but they could not agree on it. They still disagree about the correct procedure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluative</th>
<th>Positive: Two colleagues argue about where to put a fax machine. One colleague is in favor of a convenient place, but the other thinks that a fax machine in that particular convenient place looks ugly. In the end they agree on the convenient place because their office 'is not a showroom'.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative: A person considers the behavior of a co-worker towards her as utterly inappropriate and repelling. The co-worker disagrees. They argue heavily about it and third parties try to mediate but in the end both parties still disagree and their relationship, that used to be good, appears to be harmed forever.</td>
</tr>
</tbody>
</table>

Results and Discussion

Forty-six descriptions concerned negotiations about interests (24 with a positive ending and 22 with a negative ending). Twenty-nine descriptions concerned negotiations about intellective issues (15 with a positive ending and 14 with a negative ending). Fifty-nine descriptions concerned negotiations about evaluative issues (26 with a positive ending and 33 with a negative
Conflict issue was not associated with positive or negative ending, \( \chi^2 (2, N = 134) = .84, ns. \)

Negotiation behavior (positive ending). ANOVAs with forcing and problem solving as dependent variables and conflict issue as between-subjects factor showed that participants reported more forcing when the negotiation involved intellective issues rather than interests or evaluative issues (see Table 9 for means and test statistics). Consistent with Study 2 and Hypothesis 6, participants reported more problem solving when the negotiation involved interests rather than intellective or evaluative issues.

**Table 9.** Means (standard deviations) and test statistics of forcing and problem solving as a function of the conflict issue and the ending of the conflict

<table>
<thead>
<tr>
<th>Conflict issue</th>
<th>Positive ending</th>
<th>Interests</th>
<th>Intellectual</th>
<th>Evaluative</th>
<th>( F(df) )</th>
<th>( p &lt; )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Forcing</td>
<td>3.17*</td>
<td>3.88b</td>
<td>3.26*</td>
<td>( F(2,63) = 3.52 )</td>
<td>.036</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.96)</td>
<td>(.72)</td>
<td>(.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problem solving</td>
<td>4.08*</td>
<td>3.20b</td>
<td>3.49ab</td>
<td>( F(2,62) = 4.55 )</td>
<td>.014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.85)</td>
<td>(.98)</td>
<td>(1.01)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Negative ending

|                | Forcing        | 3.36      | 3.51         | 3.28       | \( F(2,66) = .18 \) | \( ns \)    |
|                |                | (1.14)    | (1.27)       | (1.23)     |             |             |
|                | Problem solving| 3.56*     | 2.39b        | 2.45b      | \( F(2,66) = 8.52 \) | .001        |
|                |                | (.99)     | (1.12)       | (1.09)     |             |             |

**Note.** Different superscripts are given to row means that differ significantly at \( p < .05 \), according to a Tukey-B test. Overall F-tests are based on one-way ANOVAs.
Negotiation behavior (negative ending). ANOVAs with forcing and problem solving as dependent variables and conflict issue as between-subjects factor showed that the level of reported forcing behavior did not differ as a function of conflict issue. Consistent with Study 2 and *Hypothesis 6*, participants reported more problem solving when the negotiation involved interests rather than intellectual or evaluative issues (see Table 9 for means and test statistics).

**General Discussion**

Negotiation research almost exclusively considered negotiations about interests (Pruitt & Carnevale, 1993), and only very few studies considered negotiations about evaluative issues (i.e., values; Druckman, et al., 1988). These latter studies measured rather than manipulated positions on evaluative issues and do not inform us about causal relationships. Also, these studies focused on agreement instead of perceptual and joint outcome measures. The other way around, group decision making research almost exclusively considered decisions about intellectual and/or evaluative issues (see, e.g., Baron, Kerr, & Miller, 1993; Kaplan & Miller, 1987; Laughlin & Ellis, 1986), and did not incorporate decisions about interests into the analysis. The current research bridged these two separate lines of inquiry by manipulating conflict issue and studying negotiator’s fixed-pie perceptions, cooperative motivations, behavioral interaction and joint outcomes from the negotiation.

In order to compare different conflict issues, a new paradigm was developed in which participants role-played a negotiation between a lawyer and a district attorney about several criminal cases. The topic of discussion was guided by interests (how good is a particular sentence for one’s career), by intellectual issues (how effective is a particular sentence to reduce recidivism), or by evaluative issues (how just is a particular sentence). In the first two studies, manipulation checks were successful and showed that dyads sought particular sentences because it was good for their career (interests), because they thought it was most effective (intellective), or because they
thought it was most just (evaluative). In addition, results showed that
effectiveness was seen as more scientific and objective than justness,
corroborating the idea that the former approached an intellective issue and the
latter approached an evaluative issue. Finally, the successful replication of
results obtained in the laboratory in the context of negotiations in
organizations lends considerable confidence in the construct validity of our
operations.

Theoretical Implications
Results of Study 1 showed negotiations about interests lead to stronger fixed-
pie perceptions and lower cooperative motivation than negotiations involving
evaluative issues. This was predicted in Hypothesis 1 and reconciles the
apparent inconsistency in results from negotiation research concerning fixed-
pie perceptions on the one hand and decision-making research concerning the
false consensus effect on the other. These findings have an interesting
implication for our understanding of the reasons underlying fixed-pie
perceptions in negotiation. Thompson and Hrebec (1996) generated two
explanations for the fixed-pie perception. The first was that fixed-pie
perceptions are part of the human cognitive architecture and relatively
impervious to change. The second was that fixed-pie perceptions are
culturally determined and a product of the western, individualistic culture.

Current findings suggest an alternative. If fixed-pie perceptions are part
of the human cognitive architecture, we should have found that fixed-pie
perceptions were equally strong in negotiations involving interests,
intellective, and evaluative issues. This was clearly not the case. Likewise, if
fixed-pie perceptions were due to the cultural background of our participants
(all were raised in an individualistic, western culture), we should have found
that fixed-pie perceptions were equally strong in negotiations involving
interests, intellective, and evaluative issues. Rather, it appears to us that the
interaction of the desire that the other party agrees with oneself (cf. false
consensus effect) and the conflict issue under consideration explains why
fixed-pie perceptions appeared in negotiations about interests, but not in evaluative negotiations.

An interesting finding in Study 1 was that although individuals became more accurate about each other’s preferences over time, face-to-face interaction seemed to decrease accuracy. This suggests that interaction may often be confusing rather than clarifying. Indeed, Druckman et al. (1977, p. 107) noted that parties in a conflict of interests may give "alternative rationales" to justify their demand for scarce resources and may use ideological arguments to serve their own interests. O’Connor and Carnevale (1997) showed that negotiators deliberately misrepresent their actual preferences to get additional concessions from their opponent. Obviously, such (strategic) misrepresentation confuses the deceived party about the other party’s preferences. In a similar vein, Pruitt (1981) mentions that negotiators are often reluctant to openly engage in negotiation, because they want to keep good relations with the other party or because there is a norm that people should take each other’s positions into consideration while defending their own. In the current research, we have evidence that face-to-face interaction in the case of negotiations about interests confuses parties and reduces their abilities to accurately predict the other party’s preferences. Further research could clarify which of the above mentioned reasons accounted for this effect.

An unexpected result in Study 1 was that negotiations about intellecitive issues elicited equally strong fixed-pie perceptions as negotiations about interests. When intellecitive issues are at stake, negotiators focus on finding the correct answer, based on facts and logical reasoning. Therefore, negotiators may have been more attentive to the information the other party provided, and thus quickly found out their opponent had an opposed position on the issue. Another explanation is that in intellecitive negotiations, negotiators believed they were right. ‘Being right’ might have been treated as a scarce resource (because there is only one correct answer for intellecitive issues) as soon as they found out that the other party disagreed with them. Judd (1978) observed that a conflict becomes competitive and focused on fixed-sum solutions when people try to prove that they are right and the other party is
wrong. However, these are post-hoc explanations and the reasons for the quite strong fixed-pie perception in negotiation about intellective issues needs further investigation.

Study 2 focused on the negotiation process and outcomes. It showed that people in negotiations about interests displayed higher levels of integrative behavior, leading to more integrative agreements (cf. Hypothesis 6 and 7). More specifically, negotiators used tradeoffs when interests were involved, whereas they did not when intellective or evaluative issues were at stake. In Study 3, the behavioral pattern of results was replicated using a critical incident methodology with managers and professionals in organizations as research participants. The explanation we offered was that in the case of intellective and evaluative issues it is 'not done' to use tradeoffs (cf. Tetlock, et al., 1996). It is hard to assess the value of truth or justice. Some people may even consider it priceless, and accept nothing less than the entire truth or complete justice. Thus, all items regarding truth or justness may seem equally important, leaving no room for tradeoffs or integrative agreements.

From a bird's eye perspective, the series of studies in this article suggest that conflict issue influence negotiation at three distinct but inter-related levels. When interests rather than intellective or evaluative issues are involved, negotiators tend to develop fixed-pie perceptions and have low cooperative motivation. Nevertheless, their greater willingness to engage in logrolling behavior, by trading off losses on less important items for gains on more important items allows them to obtain significantly higher joint outcomes than negotiators considering intellective or evaluative issues. All in all, these results corroborate Druckman and Zechmeister (1973, p. 450) theoretical argument that "the mode of resolution for value conflicts is not joint compromise or concessions ...[instead] altered understanding of the situation by one or both parties is necessary". In a more recent publication, Druckman (1994, p. 549) concluded from his meta-analytic review that negotiators have greater difficulty compromising "when the differences ... on important issues are derived from long-held social attitudes, and/or are linked to contrasting ideologies". Thus, seeking middle ground and mutually
acceptable solutions through give and take is unlikely to solve intellective and evaluative issues.

**Future Research**

The reader may argue that negotiations are never about interests, intellective issues or evaluative issues alone, but rather involve a mixture of conflict issues (cf., Ohbuchi & Tedeschi, 1997). In that sense, our classification of conflict issues into interests, intellective issues and evaluative issues is a triangular continuum rather than a strict trichotomy. Negotiations we encounter in daily life may look more or less like one of the ‘pure’ negotiations we considered in this research. The current article presents a methodology for future research that could focus on those ‘mixed’ cases where interests, intellective and evaluative issues are at stake simultaneously.

A related question for future research is how negotiations develop when to one party the conflict issue involves interests, while to the opponent, the conflict issue involves an intellective or evaluative issue. Especially when interests and evaluative issues are mixed across parties, the interesting situation occurs in which one party is seeking for tradeoffs, while the other considers doing so as unacceptable and not done. Put otherwise, a different definition of conflict issue may give rise to rather negative interpersonal perceptions, that are likely to contribute to the escalation of the conflict (De Dreu, Nauta, & Van de Vliert, 1995).

A final avenue for future research is to examine whether, when and why the content of issues at the negotiation table change from interests to evaluative issues, or vice versa. Often, negotiators switch the discussion about the distribution of resources to the question what the appropriate distribution rules are (Druckman & Zechmeister, 1973; see also Pruitt, 1981; Thompson & Loewenstein, 1992). Such transitions in conflict issue may render the negotiation more confusing, more difficult, and hence less likely to result in mutually beneficial, integrative agreements.
Conclusion

By incorporating conflict issue into the analysis of negotiation, we increase our understanding of perceptual, motivational, and behavioral processes in negotiation. Clearly, when interests are involved, negotiations develop quite differently compared to when intellective or evaluative issues are at stake. Conflict issues trigger different perceptions, different norms about proper conduct (i.e., whether logrolling is appropriate) and, consequently, more or less mutually beneficial, integrative agreements. In addition, by incorporating conflict issue into the analysis of negotiation we connect negotiation research to the domain of small group decision making, thus advancing towards a more general theory of small group behavior.