

A Cross-cultural Study on Negotiation Behavior

A Video Experimental Investigation in Germany and the People's Republic of China

by

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Abstract

In bargaining, mutual understanding is a prerequisite for successful negotiations to reach an agreement satisfactory for all partners. This is still more important if the cultural background of the parties is different, as e.g. between Western and Asian partners. Our cross-cultural study investigates bargaining behavior in Germany and China by running a video experiment. Bargaining pairs are represented by three persons each, deciding together as a group and being video taped (Hennig-Schmidt, 1999). They bargain on the distribution of a given amount of money by alternating offers. If they consent they receive the amount agreed upon, if not, they receive a conflict payoff differing essentially for both partners. The video method is well suited for cross-cultural research because it allows direct comparison of discussions in both countries.

Clear differences in negotiation styles between German and Chinese bargainers are found. Confirming results from international questionnaire studies, negotiations last significantly longer in China. Chinese negotiators in strong positions are more successful in taking advantage of the given power relation. They insist on their relative powerful position from the beginning whereas weak negotiators do not accept this position from the outset. The latter adapt to the given power relation by making significantly larger concessions than German do. Due to the transcripts, we attribute these findings to the influence of Confucian ethics, giving rise to behavior as attention to role and hierarchy.

Keywords: experimental economics, video experiments, bargaining experiments, concession behavior, Chinese-German cross-cultural study

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1. Introduction

Bargaining belongs to the most frequent phenomena in social interactions. This does not only apply to individuals in everyday life, e.g. when purchasing goods and services. More importantly, it is the essential activity in business life, international trade, national and international politics. Understanding the behavior of bargaining partners, their goals and motivations as well as other factors that might influence the negotiation process are a prerequisite for successful bargaining in the sense that both parties reach a mutually satisfactory agreement. The analysis of these factors is still more important if the cultural background of the parties involved in the negotiation is different. This is especially true in business relations and political negotiations between Western and Asian partners. Our study, therefore, will investigate negotiation behavior in China and Germany.

By the open door policy initiated in 1978, the Chinese marketplace became most important for foreign enterprises. Yet, to create and sustain successful business relations, removal of uncertainties due to misunderstanding between the partners involved is indispensable (c.f. Shankar and Ronen 1987; Buchan et al. 1999, 2001). Studies on work-related value dimensions across cultures clearly show that disparities in Chinese and Western value systems exist (c.f. Hofstede 1980, The Chinese Culture Connection 1987) which might render negotiations and joint business projects extremely difficult if the partners are not aware of these cultural disparities.

The goal of our paper is to reveal differences of negotiation styles between German and Chinese bargainers in an experimental context. Our results show that there *are* differences. Yet if they can be recognized and accounted for, a basis for mutual understanding and trust can be generated as a precondition for a long-lasting mutually beneficial cooperation.

Many cross-cultural studies of Chinese and Western business projects focus on this issue. Lin and Germain (1998), e.g., in a study on the influences sustaining satisfactory joint venture relationships between U.S. and Chinese partners, find that the perception of cultural similarity together with familiarity of partners due to relationship duration are significant factors guaranteeing success of joint ventures. Based on a study on the managerial style of Sino-foreign joint ventures Boisot (1994) points to the importance of building trust and understanding between partners in the development of joint venture collaboration. Trommsdorff and Wilpert (1994) in a study on German-Chinese cooperative business projects report that factors resulting from a different cultural self-image are responsible for problems between Chinese and German managers. See also Sullivan (1998) on this issue.

In addition to a small number of individual bargaining experiments (see for instance Buchan et al 2001, Croson and Buchan 1999)¹, most Western Chinese cross-cultural investigations of negotiations are based on questionnaire studies (c.f. the studies mentioned above) or analyses of interviews (e.g. Rosen 1999). In these studies, the data are collected retrospectively from managers who are involved in cross-cultural trade. It would be much more desirable, however, to get direct information on the decision making process within the negotiating teams, e.g. by direct observation, to uncover the respective negotiation tactics, motivations, argumentation and perception as well as the cultural differences in these factors. In questionnaires and interviews these elements might not be reported² (c.f. Trommsdorff and Wilpert 1994; see also Reis and Gable, 2000, on the systematic bias of retrospective data) and if they are reported they cannot be verified since, in general, there is no reliable information on the in-group processes of the other party involved. For obvious reasons simultaneous but distinct observation of negotiating teams in the „real world“ are rather unlikely. Economic experiments, however, allow such investigations.

The methodology of experiments has a number of remarkable advantages over other methods of generating economic data. It allows to create economic situations in the laboratory under *controlled* conditions. Experiments can be designed to correspond as closely as possible to the real situation the researcher wants to analyze. Results found by other researchers can be replicated and studies with exactly the same design can be repeated in different cultural environments. This is problematic for field or questionnaire studies, because rarely the same conditions can be established again. Experiments are especially useful for cross-cultural analyses (Kerr et al. 2000, Smith 2000, John and Benet-Martinez, 2000). They not only enable the scientist to compare results obtained in *different cultures*; they allow to compare results that are obtained in different cultures *under the same conditions* such as design, instructions, variation of treatments etc.

An experimental method particularly well-suited for cross-cultural research is the video method. It was introduced into economics by Hennig-Schmidt (1999) and allows the observation of the participants. The players are represented by three persons each, deciding together as a team and they are being video recorded throughout this process. The video tapes are transcribed word for word into text protocols and evaluated. This method allows direct compara-

¹ Cross-cultural bargaining experiments involving other Asian countries have been run by Roth et al. (1991) and Buchan et al. (1999). Cross-cultural experimental studies in China investigating topics different from bargaining are for instance Kachelmeier and Shehata (1992a,b, 1997). There is quite an extensive experimental literature in social psychology which we will report on in section 2.

² We will come back to this issue in section 6.

bility: *discussions* in the countries investigated refer to the same well-defined experimental context and the same situation in the bargaining process.

The present cross-cultural study exploits the above-mentioned advantages of the video method investigating a bargaining video experiment run with students at Bonn University, Germany, (called *G-Ex* in the following) and Sichuan University, Chengdu, P.R. China (called *C-Ex* in the following).

The paper is organized as follows. In Section 2 we report on relevant Chinese-Western cross-cultural literature, Section 3 and 4 describe the experimental design and method as well as the organizational procedure. Section 5 states hypotheses and results, and compares the findings in the German and Chinese experiment. In section 6 we discuss the results obtained and conclude.

2. Relevant Literature on Chinese-Western cross-cultural Studies

How well do findings on negotiation behavior in Western countries generalize to negotiators in the People's Republic of China? Chinese-Western cross-cultural business studies maintain that cultural differences in negotiation and decision-making exist which appear to be a function of the Confucian value system and the Chinese socio-economic structure (c.f. Tung 1989; Child and Marcoczy, 1994). These differences persist despite changes in the political system (Hwang 1987; Hofstede, 1991; Huang et al. 1997). Research in cross-cultural psychology has also shown that decision models based on the research tradition of Western cultures seem inadequate for explaining Chinese decision-making behavior (c.f. Leung and Bond, 1984; Chinese Culture Connection, 1987; Chiu, 1990; Zhang and Yang 1998). In the traditional Chinese culture there are no absolute standards of value, as compared to the absolute rules on which Westerners tend to depend. Chinese culture is situation-centered and choices are greatly influenced by the situational context (Yang 1986; Bond and Hwang 1986; Bian and Keller, 1999a,b).

A characteristic most important in differentiating between Western and Asian cultures is the relative dominance of individual versus collective interests (Hofstede, 1980; Triandis et al., 1990; Singh, 1997). In individualistic cultures, typically found in Western Europe and North America, individual interests tend to prevail over group interests. In collectivist cultures like China, there is a strong concern for group interests. Collectivists are oriented towards harmony in well-defined in-groups. They behave in an aggressive way towards out-group members (Hwang 1987), as for instance in a bargaining relationship with strangers.

Confucian thought maintains the stability of society being based on unequal relationships between people (c.f. Shankar and Ronen, 1987; Buchan et al., 1999). There is a strong desire for behavior such as attention to role and hierarchy (Leung and Bond, 1984). Analyses of moral behavior in Chinese society (Wilson 1981, Young 1981) emphasize the respect for hierarchy and dominance in all dimensions of life as a mayor Chinese cultural trait as well.

Behavior in a collectivist culture based on Confucian thought like China would result in the acceptance of the power relation in a social relationship, as for instance a bargaining situation. Relative to Germans or Americans, Chinese people tend to be more accepting of inequities in power among members of society (Hofstede 1980, 1991). Factual or perceived power asymmetries may induce the more powerful partner to engage in more demanding behavior (Lin and Germain 1998). In the context of our experiment, we expect Chinese bargainers to respect the power asymmetry given by the experimental design in a much more pronounced way than the Germans would do. We will elaborate on this in section 5.

3. Experimental Design

Imagine a situation where two partners bargain on the distribution of a given amount of money by alternating offers. If the bargainers come to an agreement both parties receive the share they agreed upon, if not they receive a previously specified small amount of money which is much higher for one party than for the other. This experimental design describes in a simplified, yet characteristic way the usual bargaining situation, e.g. of a joint venture, when the distribution of the jointly earned profit is at stake and the alternative to an agreement is that both firms go on doing their business independently with each of them earning less than in the joint venture.

Since bargaining is a frequent type of social interaction in real world settings it is not surprising that not only economists but also social psychologists are interested in phenomena that characterize bargaining situations. Gruder (1970) gives a concise description of the conflict bargainers are confronted with in a negotiation process pointing out the main features of our experiment: The goal of the participants in a bargaining situation is to reach some agreement as on how to divide between themselves the total outcome from their relationship. They are interdependent since each participant's share of the outcome is determined partly by the other's and partly by his own decision. Each bargainer tries to influence the other in order to make a decision which would yield himself a relatively greater share of the total at the other's ex-

pense. Opponents are aware that the other has an alternative to the negotiation, even if this alternative is to opt out and receive much less than by agreement. Each bargainer should be careful not to demand too great a share of the outcome. If his opponent perceives this as a threat she may be forced to opt for her alternative, thus destroying the potentially profitable relationship. However, the relatively attractive outcome attainable by agreement should serve as an incentive for both to continue bargaining in order to achieve a mutually acceptable settlement.

Selten (1981) presented a non-cooperative model of characteristic function bargaining in order to be able to run experiments in characteristic function form where interaction and communication are anonymous and highly formalized. The bargaining procedure suggested in this „allocation proposal" model accounts for the social interaction of bargaining and the multistage character of negotiations when alternating offers are made. Selten's model is the basis for our video experiment the rules of which will be described in the next paragraphs³.

Two players, 1 and 2, anonymously bargain on the distribution of a given amount of money, the coalition value $v(12)$, by alternating offers. Each of the players comprises a group of three, in some cases two, persons. Decision options of the players are: making a proposal, shifting the initiative to make a proposal, accepting a proposal, and breaking off the negotiation. If players agree on an allocation they receive the amounts they agreed upon. If they do not reach an agreement, they receive a conflict payoff $v(1)$, $v(2)$, respectively, with $v(1) > v(2)$, and $v(1) + v(2) = v(12)/2$. In our experiment $v(1) = 128$, $v(2) = 32$, $v(12) = 320$. If conflict payoffs are taken as a measure of bargaining power, player 1 is four times as powerful as player 2. Conflict payoffs are also called outside options or alternatives.

The bargaining time and the number of offers is not restricted, and no bargaining costs (e.g. discount factor) are assumed⁴. The presentation to the subjects was context-free and did not refer to any real world situation⁵.

4. Experimental Method and Organizational Procedure

³ See also Kuon and Uhlich (1993) on a computer experiment based on Selten's (1981) model.

⁴ One important reason for not introducing restrictions of this kind was our interest in subjects' verbalization of arguments. We wanted to give them extensive opportunity to discuss all possible aspects of decision making. For *C-Ex*, however, we had to introduce a time limit in some sessions. Due to extensive negotiations in *C-Ex* (the first session lasted nearly 4 hours) and organizational requirements (some sessions had to be run in the evening and the buildings were closed at 11 p.m.), after 2.5 hours of bargaining (the longest time period in *G-Ex*) participants were informed that they would be paid their outside options if they did not reach an agreement within the next 20 minutes.

⁵ English translation of the introduction to subjects see Appendix A.

The video method has the advantage that the process of decision making can be made observable by having subjects play together in a group.⁶ Since they are video taped during the discussion of their decisions, their spontaneous arguments and considerations are recorded. This method gives valuable information in addition to what more traditional experimental methods are able to yield (c.f. Loomes 1999). Moreover, information is provided that is often not available or noticeable by other methods (Bakeman 2000, Kerr et al. 2000). In particular, non-numerical behavioral data can be gained such as information on goals, norms guiding the behavior of subjects and motivations (c.f. Hennig-Schmidt 2002).

The disadvantage of the video method is that sessions are costly due to the higher number of participants compared to individual experiments. Moreover, already a relatively small number of sessions yield a large amount of information which has to be handled. Also, transcribing the video tapes is time consuming. We therefore restricted ourselves to 9 sessions in *C-Ex* and compared them to 6 sessions in *G-Ex* using the same treatment. We evaluated about 65 hours of video tapes and 1100 pages of transcripts.

G-Ex was run in the Laboratory of Experimental Economics, University of Bonn, in December 1991 and February 1992. In July 1999 the same video bargaining experiment was run at Sichuan University, Chengdu, P.R. China. In *G-Ex* 35 students participated studying economics (19), Law (13), Political Science (2), North American Studies (1). The 54 participants in *C-Ex* studied mathematics (26), economics (25), art design, biotechnology and computer sciences (1 each).

The instructions have been translated into Chinese using a slightly modified version of the back translation procedure described in Brislin (1970). After translation into Chinese and back translation, the final version of the instruction was generated in close collaboration between the authors at Bonn University. Participants in our experiment have been motivated by financial rewards according to their performance. Payoffs were calculated in a way that the average payment per hour the subjects could gain, roughly corresponds to the amount they could earn in a part-time job. The point-to-cash rate was 0.10 DM in Germany and 0.3 Yuan in China. In case of break offs the low conflict payoffs would pay players a frugal meal at the students' restaurant in the respective universities.

The organizational procedure was the same in both countries. When registering for the experiment the subjects were informed that they would be video taped. They signed an agreement that the tapes could be used for scientific purposes. They were told when and where the experiment would take place. Groups were assigned randomly to be player groups 1 and 2 and

⁶A detailed description of the video method can be found in Hennig-Schmidt and Li (2000, 2002).

were situated in rooms apart from each other. Those making the first offer were asked to appear 15 minutes earlier than groups making the second offer. Participants were seated in front of the video camera in such a way that all verbal and nonverbal expressions could be recorded. The video camera was switched on when the session started. A student helper was seated next to each camera to ensure that the subjects did not stop recording. The subjects were provided with one copy of the introduction and several copies of the bargaining protocol⁷.

At the beginning of each session the introduction was read aloud to the students by the experimenter (Hennig-Schmidt in Bonn and Li in Chengdu)⁸. They were requested to read them again carefully and to ask questions which were answered. Having finished the introduction the experimenter left the room to instruct the other group in exactly the same way. This was the starting time for the first proposal round. After a decision had been taken the subjects had to record it on the bargaining protocol. Each participant had to sign that he/she assents to this decision. The experimenter was called by the student helper and was informed about the decision. She left the room and conveyed the decision to the other group. In case of acceptance, break off, or reaching the time limit in *C-Ex*, the other group was informed and the subjects were paid. Video taping stopped after payment.

5. Hypotheses and Results

The studies discussed in section 2 show that cross-cultural differences in decision making styles exist. In contrast to Westerners, Chinese behave differently in in-group and out-group situations. Whereas they seek for harmony in in-groups, they behave in an aggressive way towards out-group members. In our experiment, the subjects were confronted with a strong out-group situation. They did not know their counterparts and bargained anonymously with them, the experimenter transmitting proposals only. They were in a highly competitive situation since one bargainer's gain simultaneously determined the counterpart's loss. We hypothesize Chinese players 1 to insist on their stronger position, and players 2 to accept this position more easily admitting higher payoffs to them than Germans would do. Acceptance of the hierarchy given by the experimental setup should also become evident through concessionary behavior during the bargaining process. In *C-Ex*, we expect players 1 to make lower concessions and players 2 to make higher concessions than in *G-Ex*.

⁷ See Appendix A.

⁸ Hennig-Schmidt as the principal investigator was present at both *G-Ex* and *C-Ex*.

5.1 Final agreement payoffs

Before stating the results, we will explain the notation. Throughout the remainder of the paper proposals, agreement and disagreement outcomes will always be stated in terms of player 1's payoff. Proposals made by player 1 will be called demands, those made by player 2 will be termed offers.

Figure 1 (see Appendix B) shows final payoffs in *C-Ex* and *G-Ex*. We observe two classes of outcomes: (1) those that are settled *at the Equal Split* and (2) those with payoffs *different from the Equal Split* (abbreviated ES in the following).

- (1) In *ES-sessions* a final payoff of 160 was offered by player 1 groups. This happened two times in *C-Ex*⁹.
- (2) In *non-ES-sessions* player 1 groups bargained for more than ES. These negotiations resulted in *agreement* and *non-agreement sessions*.

Transcripts show that player 1 groups typically want their relative power in terms of higher alternatives to be reflected in final outcomes and hence bargain hard to achieve more than the ES (c.f. Hennig-Schmidt et al. 2002). In contrast, players 1 offering half of the coalition value show a divergent attitude towards negotiations: they are satisfied with an outcome giving both groups the same amount of money in absolute terms thus avoiding a potential conflict on splitting the coalition value unevenly. This different way of behaving does not only show in payoffs but also in bargaining length¹⁰, the sessions being much shorter with regard to time¹¹ and proposal rounds. In the following, we therefore focus on those sessions where typical strong players seek to take advantage of the power relation given.

We first concentrate on agreement payoffs, sessions including non-agreement payoffs will be analyzed in section 5.2.

RESULT 1: *Final agreement payoffs in C-Ex are higher than in G-Ex.*

⁹One group in the *G-Ex* settled at ES as well, yet in a treatment which we do not consider here (c.f. Hennig-Schmidt 1999).

¹⁰This topic will be discussed in the next paragraph.

¹¹Time is calculated as total bargaining time of the group making the first proposal, not taking into account the time needed for instructing participants.

Support: Using a Mann-Whitney test, the hypothesis that final agreement payoffs in *C-Ex* are not higher than in *G-Ex* can be rejected ($p = .016$, one-sided). In agreement sessions, Chinese player 1 groups are able to enforce their strong position in a much more pronounced way than Germans do.

Why are payoffs in *C-Ex* higher than in *G-Ex*? Negotiation is a process where bargainers typically start from high initial demands and successively make concessions to reach an agreement. Result 1 may be due to different concession behavior in *C-Ex* and *G-Ex* since offers and counteroffers "are a language with nuance and cultural variation" (Camerer, forthcoming, Chapter 3). To investigate this question, we next analyze the bargaining process with emphasis on concession behavior.

5.2 Concession Behavior

In non-agreement sessions we cannot infer from final payoffs on concession behavior because groups receive the conflict payoff. To include these groups into concession analysis, instead of final payoffs, we incorporate final demands or highest offers before the break off was initiated or induced (c.f. Figures 2a,b, Appendix B).

Higher payoffs of Chinese compared to German player 1 groups could arise because they start from higher initial demands and insist on their relative power, inducing player 2 groups to make relatively large concessions. On the other hand, player 2 groups could already start with higher initial offers accepting the relation of strength given by the experimental design from the outset. Table 1 shows the measures of concessionary behavior in *C-Ex* and *G-Ex* that we analyze in the following.

Table 1: Concessionary behavior in *C-Ex* and *G-Ex*

Measures of concessionary behavior	Player 1 groups <i>C-Ex</i> vs. <i>G-Ex</i>	Player 2 groups <i>C-Ex</i> vs. <i>G-Ex</i>
Initial demands/offers	<i>C-Ex</i> > <i>G-Ex</i> **	n.s.
Final demands/highest offers	n.s.	<i>C-Ex</i> > <i>G-Ex</i> *
Bargaining duration	<i>C-Ex</i> > <i>G-Ex</i> **	
Average concession per round (<i>AC</i>)	<i>C-Ex</i> < <i>G-Ex</i> *	<i>C-Ex</i> < <i>G-Ex</i> *
Average relative concession (<i>ARC</i>), <i>all</i> groups	n.s.	<i>C-Ex</i> > <i>G-Ex</i> **
Average relative concession (<i>ARC</i>), <i>settlement</i> groups	<i>C-Ex</i> < <i>G-Ex</i> **	<i>C-Ex</i> > <i>G-Ex</i> *

* Mann-Whitney-U-test, 5% one-tailed; ** Mann-Whitney-U-test, 1% one-tailed; n.s.: not significant

Our first point of interest are initial demands/offers (cf. Figures 3.1 – 3.9, and 4.1 – 4.6, Appendix B).

RESULT 2: Initial demands in C-Ex are higher than in G-Ex. Initial offers in C-Ex do not differ from those in G-Ex

Support: Using a Mann-Whitney test, the hypothesis that initial demands in *C-Ex* are not higher than in *G-Ex* can be rejected ($p = .009$, one-sided), whereas the hypothesis that initial offers in *C-Ex* are not higher than those in *G-Ex* cannot be rejected ($p = .497$, one-sided). Note that mean opening offers are nearly the same in both treatments, 130.11 in *C-Ex* and 130 in *G-Ex*.

We next analyze final demands/offers (cf. Figures 3.1 – 3.9, and 4.1 – 4.6, Appendix B).

RESULT 3: Final demands in C-Ex are not higher, but highest offers are higher than in G-Ex.

Support: Using a Mann-Whitney test, the hypothesis that initial demands in *C-Ex* are not higher than in *G-Ex* cannot be rejected ($p = .117$, one-sided), whereas the hypothesis that final offers in *C-Ex* are not higher than those in *G-Ex* can be rejected ($p = .016$, one-sided).

Results 2 and 3 suggest that from the very beginning of the negotiation Chinese players 1 show their relative power more clearly as compared to Germans. Chinese and German player 2 groups, however, do not differ in initial offers; their offers start off at nearly the same level. Yet, Chinese are willing to settle at significantly higher payoffs than Germans do. We expect this difference in concessionary behavior to become evident during bargaining.

Before we elaborate on concessionary behavior, we will analyze bargaining duration. Chinese player 1 groups gain higher agreement payoffs. Do they have to bargain longer for these profitable outcomes?

RESULT 4: Player 1 groups in C-Ex bargain longer and need more rounds to achieve higher payoffs than those in G-Ex.

Support: Using a Mann-Whitney test, the hypothesis that average bargaining time (number of proposal rounds) in *C-Ex* is not higher than in *G-Ex* can be rejected (both bargaining time and

number of proposal rounds, $p = .001$, one-sided). Comparison of time as well as rounds needed to reach a final settlement show a highly significant difference. The average bargaining time (number of proposal rounds) was 177.7 minutes (106.6 rounds) in China, against 94.8 minutes (31.8 rounds) in Germany. .

We now turn to concessionary behavior. In order to analyze the concession process we calculated several statistical measures. A simple measure of concessionary behavior accounting for bargaining duration is the *average concession per round (AC)* which is a group's total concession divided by the number of rounds minus 1 because concessions can only be made after the first round.

RESULT 5: *German player 1 and 2 groups make significantly higher concessions per round than did the respective Chinese groups.*

Support: Using a Mann-Whitney test, the hypothesis that German player 1 and 2 groups do not make higher concessions per round than did the respective Chinese groups can be rejected. (player 1 groups $p = .026$, player 2 groups $p = .011$, one-sided).

A summary statistic which appears to be a better measure of concessionary behavior because it accounts for the concession process, is the *average relative concession (ARC)* (c.f. Gächter and Riedl 2002). *ARC* is calculated as follows: The *relative concession* is the difference between the group's lowest previous demand/offer and the current demand/offer divided by the current bargaining area. The *current bargaining area* is given by the difference between the previous highest offer/lowest demand and the standing offer/demand¹². A group's *ARC* in a session is the mean of all its relative concessions.¹³

RESULT 6a: *ARC of player 1 groups do not differ between treatments; ARC of player 2 groups in C-Ex are higher than in G-Ex.*

RESULT 6b: *In agreement sessions, ARC of players 1 in C-Ex are lower than in G-Ex, ARC of player 2 groups in C-Ex are higher than in G-Ex.*

¹² We did not take into account negative concessions because participants are aware that once concessions have been made the bargaining area cannot be increased again by asking for more than the previous lowest demand/highest offer.

¹³ For example in session C2 group 1 starts with an opening demand of 280 which is answered by group 2 with an opening offer of 160. Group 1 now makes a concession of 10. The current bargaining area is 120, and the relative concession of group 1 is $10/120 = .0833$. The average concession for group 1 in session C2 is .0339.

Support: Using a Mann-Whitney test, the hypothesis that *ARC* of Chinese player 1 groups are lower than those of the respective German groups cannot be rejected ($p = .117$, one-sided). *ARC* by player 2 groups in *C-Ex* are significantly higher than in *G-Ex*, ($p = .007$, one-sided). If we correct for those groups that did not reach a settlement, the difference in *ARC* of player 1 groups becomes highly significant in that in *G-Ex* *ARC* is significantly higher than in *C-Ex* ($p = .008$, one-sided)¹⁴.

Analyzing the concession process, we found Chinese players 2 to make larger concessions than Germans do. We see no difference in player 1 groups' behavior. If we, however, consider settlement groups only, German player 1 groups, also, concede much more than Chinese do. This finding suggests that compromising in *G-Ex* leads to agreement whereas tough bargaining in *C-Ex* leads to either agreement or non-agreement. We will return to this point in section 6.

6. Discussion and Conclusion

The present paper aims at revealing differences of negotiation styles between German and Chinese bargainers in an experimental context. The analysis of *decisions* in section 5 showed marked differences in concession behavior between German and Chinese negotiators. In accordance with our expectation from the discussion of the influence of Confucian ethics on behavior, Chinese player 1 groups insist on their relative powerful position from the beginning whereas Chinese player 2 groups do not accept this position from the outset. They adapt, however, to the given power relation by making significantly larger concessions than the respective German groups.

These findings are corroborated by the transcripts. Chinese players explicitly take into account bargaining power. Player 1 groups not only insist on receiving more than player 2 groups because of their higher outside option. Their principle of assessing the profitability of the deal is the surplus they receive *in addition to their outside option* and *not* in addition to ES. It is not the players' absolute payoffs that are compared but the surplus they pocket. They insist on the given power asymmetry, their bargaining behavior is based on a Split-the-Difference argument. Player 2 groups' line of reasoning is similar to that of players 1. They also argue in terms of surplus and assess the success from the negotiation by comparing the

additional profit both players receive, basing their behavior on a Split-the-Difference argument, as well. Player 2 groups accept the given power asymmetry. This, however, begins to show later in the negotiation because initial offers do not differ from those in *G-Ex*.

Although player 1 groups in *G-Ex* insist on receiving *more* than player 2 groups, perceiving their bargaining power to be superior due to their higher conflict payoff, player 2 groups are not impressed by the difference in outside options. They do not accept the power relation given. In their view, outside options matter only when breaking off negotiations, but this is not expected in situations where offers exceed conflict payoffs substantially. Players 2 as well as players 1 assess the profitability of the negotiation by comparing the *absolute* amounts they will be paid rather than by the profit *in addition* to their outside option. The reference point for both types of players is ES.

Analyzing *negotiation goals* as revealed by the transcripts¹⁵ in addition to the decisions made, also shows a marked difference. Since in *C-Ex* the reference point for both types of players is Split the Difference and not, as in *G-Ex*, the Equal Split, Chinese players 1 strive for higher final payoffs and players 2 accept higher final payoffs than the German participants. Already from the very beginning of the negotiation, player 2 groups' aspirations as to final payoffs in *C-Ex* are lower than in *G-Ex* although this is not revealed by the proposals. In particular, they indicate much more often than German player 1 groups that they would be willing to reward the stronger position of players 1 by striving for an allocation according to Split the Difference. They base their calculation of acceptable payoffs on *alternatives* and split the *surplus* evenly, whereas German players 2 try to reach an Equal Split dividing the *coalition value* equally.

Negotiations in *C-Ex* lasted significantly longer than in *G-Ex* confirming comparative business studies (Tung 1989, Trommsdorf and Wilpert 1994) stressing that for Westerners „Time is money“ whereas the Chinese take much more time to make their decisions. Our findings in section 5 suggest that compromising in *G-Ex* leads to agreement whereas tough bargaining in *C-Ex* might either lead to agreement or to non-agreement. We therefore briefly discuss the impact of bargaining style on agreements in both cultures.

In both *C-Ex* and *G-Ex* two sessions ended by non-agreements (c.f. Figure 1). Non-agreements do not conform with game theoretic predictions since subjects should prefer more money to less, i.e. they should accept an offer which exceeds their outside option. However,

¹⁴ ARC of player 2 groups in *C-Ex* stay higher than in *G-Ex* ($p = .032$).

¹⁵ In general, negotiation goals cannot be observed from decisions alone. The transcripts, however, clearly show, that goals are formed as to the final payoffs the subjects want to achieve.

break offs are a non-negligible phenomenon in bargaining, in field studies as well as in experiments (c.f. Roth 1995).

Analyzing concession behavior shows non-settlement sessions to be those where players 1 and 2 made the lowest *ARC* both in *G-Ex* and *C-Ex*¹⁶. Tough bargaining obviously bears the danger of conflict in both experiments. There is a striking difference in break off behavior, however: in *G-Ex* we observe *active* break offs where player 2 groups *initiated* a conflict. Chinese subjects did *not* actively break off, but rather did not come to a settlement within the time limit, i.e. they did not accept the other group's offer before the deadline. Bargaining hard may easily lead to a break off in negotiation in Germany, whereas tough bargaining in China may lead to settlement but also to non-agreement.

From the transcripts we conclude that Germans might not be prepared for long lasting negotiations with no apparent result, whereas Chinese bargainers may not be prepared for a break down in negotiations. We found that more than 13 different words for negotiation break-down have been used by Chinese participants. Only one of these words has the meaning of really terminating negotiations while the others comprise connotations of delaying, postponing, suspending negotiations, „putting them on the back burner“, or getting back to business after a while. For Chinese bargainers break-downs might not be a credible threat because they believe their opponents to rather take a profitable offer than the outside option.

Our results show that differences exist in negotiation styles which can be attributed to the different cultural background. Which conclusions can we draw from these findings for practical purposes? Chinese are tough bargainers. If they perceive themselves in the powerful position they are not willing to make concessions as high as Germans would do. In negotiations with foreigners one can expect Chinese to perceive the situation as an out-group relationship implying aggressive and ongoing „Eastern“ bargaining practices (c.f. Hwang 1987, Huang et al 1998). Germans, however, confronted with long-lasting bargaining and not seeing any progress in concessions by the Chinese side, at some point impatiently might leave the negotiation table without intending to re-establish the relationship. Chinese obviously are not prepared for behavior of this kind. The divergent bargaining practices can render negotiations extremely difficult. However, if both sides are aware of possible consequences of their behavior they might be willing to adapt even to unusual practices to facilitate a mutually favorable intercultural agreement.

We conclude our paper with some remarks on the informational gain of video experiments. As was pointed out in the introduction, observing subjects may reveal differences in negotia-

tion styles that are not detected in questionnaire or interview studies. The following example corroborates this statement. Trommsdorff and Wilpert (1994) point to the fact that Chinese negotiation behavior makes use of the application of stratagems recommended by Handbooks of Warfare (e.g. Sunzi, Sun Bin, 2002)¹⁷. They suspect these strategies to have been applied in the sample of joint ventures they have been analyzing, but they have not been able to uncover them from the interviews. In the transcripts of *C-Ex* we clearly found evidence for thinking in strategies and tactics. Participants very often argue in terms of warfare using proverbs to accentuate their point of view. One mayor point of concern is whether they keep the initiative and behave strategically more clever than their opponent. They analyze the previous bargaining steps of their counterpart very intensely trying to infer their goals and intentions. This attitude markedly differs from the one in *G-Ex* and is an important reason why bargaining lasts extremely long in *C-Ex*.

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¹⁶ In player 2 groups there is one exception in that *ARC* in C1 is lower than in C5 and C7.

¹⁷ An analysis of today's importance of stratagems can be found in Senger (1988).

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Appendix A

Introduction to subjects

You participate in a bargaining experiment where two groups negotiate with each other. To evaluate the communication process within the groups the experiment is recorded on video.

The goal of the game is to maximize your own profit while bargaining on a coalition value.

The game ends if one group accepts the proposed division of the other group, or if one group breaks off the negotiation. If there is an agreement, each member of the group receives the payoff the group agreed upon. If there is a break off of negotiations, each member of the group receives the guaranteed payoff for his/her group (the alternative).

I will now explain the negotiation process from the bargaining protocol. The other group received an identical bargaining protocol.

You have been randomly chosen to make the first (second) proposal. A money payoff, called the coalition value, amounts to 320 points. If there is a breakoff of the negotiation, the guaranteed payoff for group 1 is 128 points and the guaranteed payoff for group 2 is 32 points.

Please discuss which of the following four decision alternatives the group is to be choosing, and please discuss also the reasons why the group chooses just this decision:

1. You make a proposal on the division of the coalition value to the other group. The proposal has to be non-negative and integer-valued.
2. You shift, i.e. the initiative to make a proposal passes to the other group without your making a proposal.
3. You accept the proposal of the other group.
4. You break off the negotiation.

Agree upon one of the four possibilities. Write down the result of your discussion into the column of the protocol that is provided for your group. Each member of the group has to confirm this entry by his/her signature. Your proposed allocation of the coalition value will then be transmitted to the other group.

Following each bargaining round please fill in one copy of the questionnaire. It will be collected afterwards.

After having finished the experiment each member of the group will be paid either the accepted share of the coalition value or the guaranteed payoff for his/her group. Each point is worth 0,10 DM (0.3 Yuan).

Try to maximize your own profit!

There is no time constraint.

Are there any questions?

Bargaining Protocol for Session C1 Group No. 2, Chinese Experiment

Bargaining Protocol		Date: July 7, 1999			Session No. C1		
		Starting time: 3.00 p.m.			Group No. 2		
		End: 6.30 p.m.			Page 1		
Current Proposal					Payoffs		
Proposal No.	of Group No.	Group 1 receives	Group 2 receives	Signatures	Coalition value	Alternative	
						Group 1	Group 2
1	2	168	152		320	128	32
2	1	256	64				
3	2	167	153				
4	1	255	653				
5	2	160	160				
6	1	255	65				
7	2	.	.				
8	1	.	.				
9	2	.	.				
10	1	.	.				
11	2	.	.				
12	1	.	.				
13	2	.	.				
14	1	.	.				
15	2	.	.				
16	1	.	.				
17	2	.	.				
18	1	.	.				
19	2	.	.				
20	1	.	.				

Appendix B

Figure 1: Final payoffs in the German and the Chinese experiment

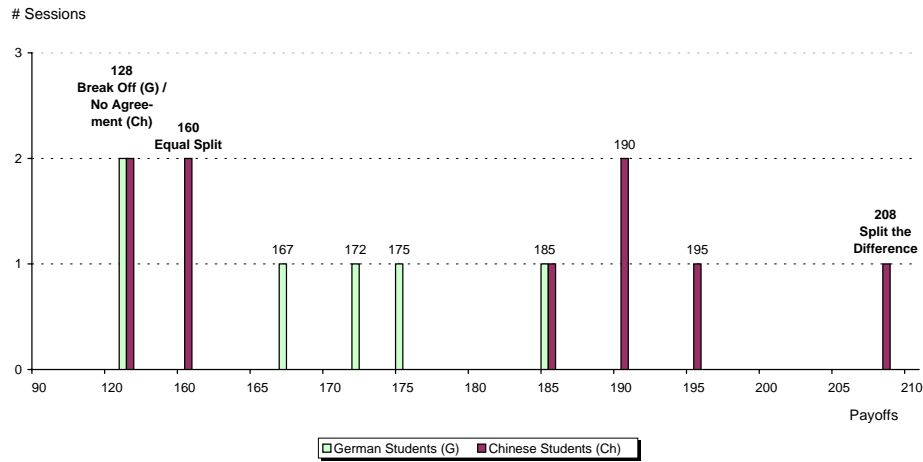


Figure 2a: Final demands of S-groups

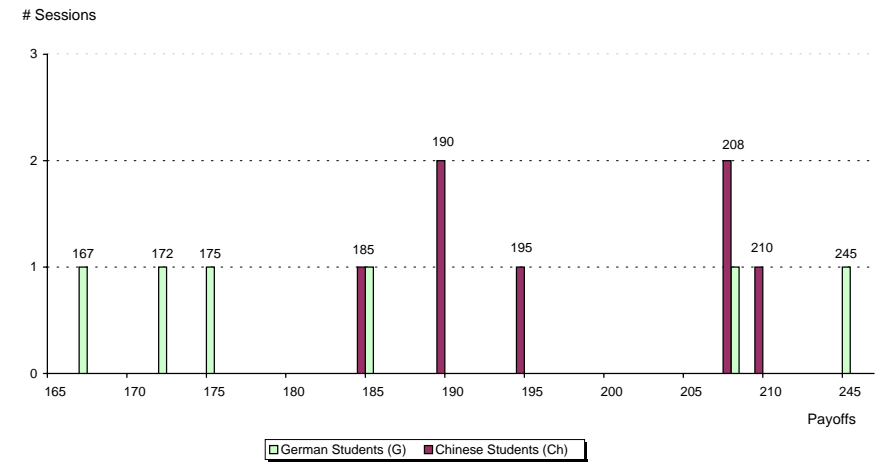
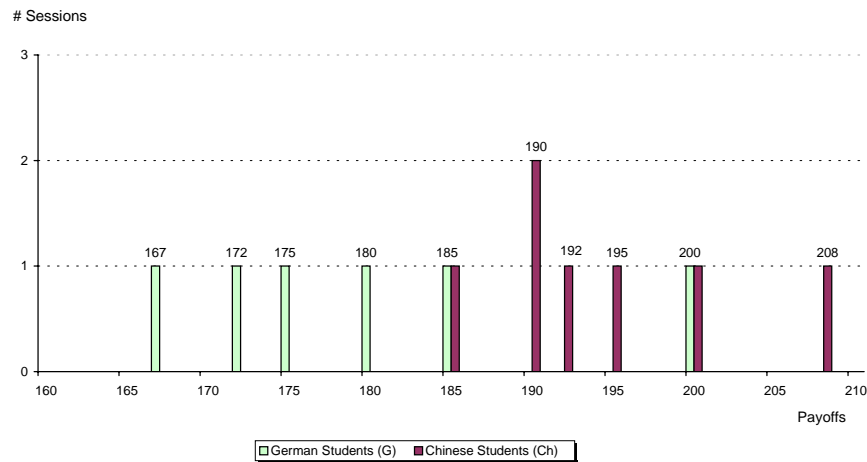
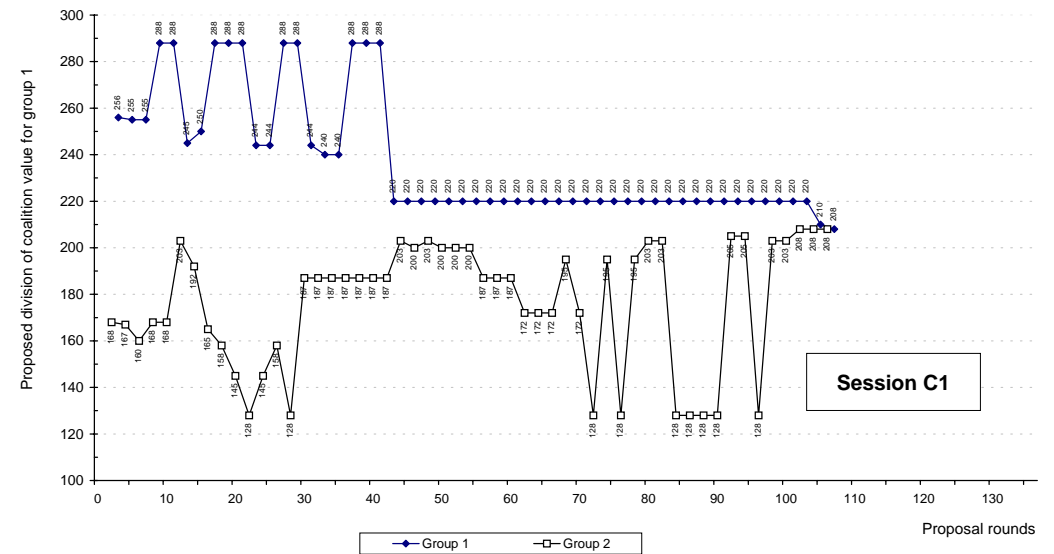
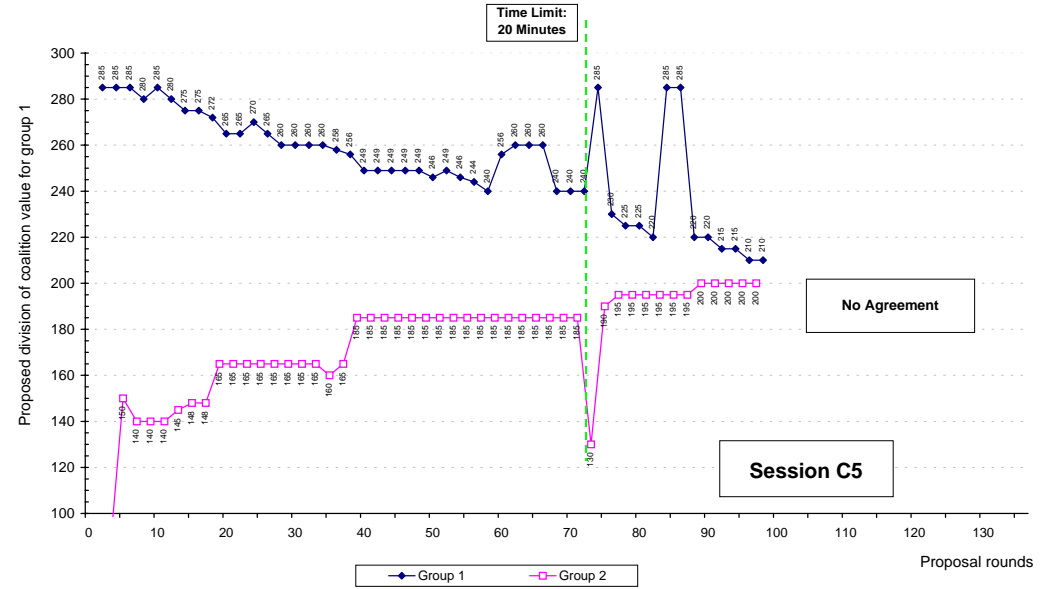
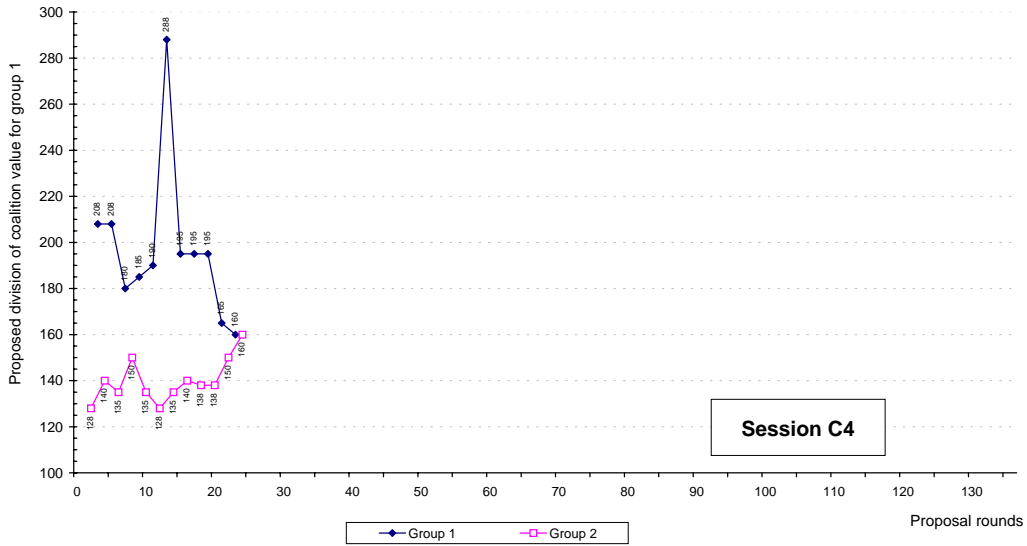
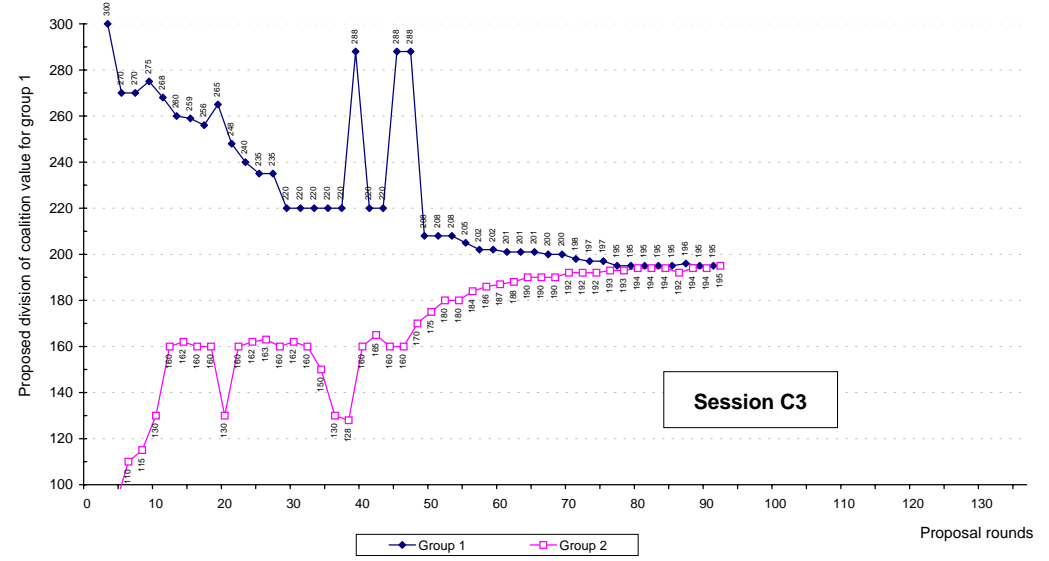
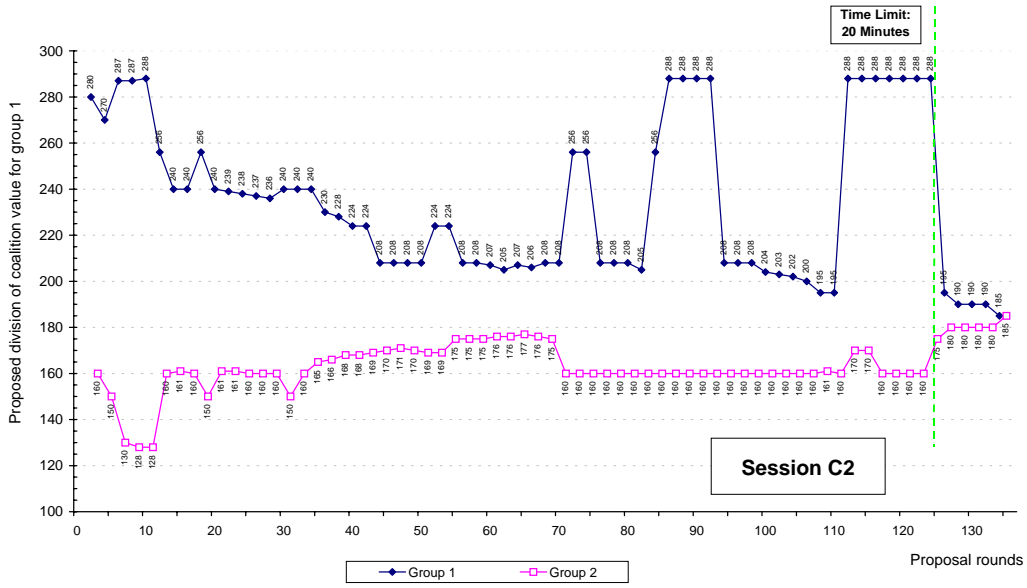


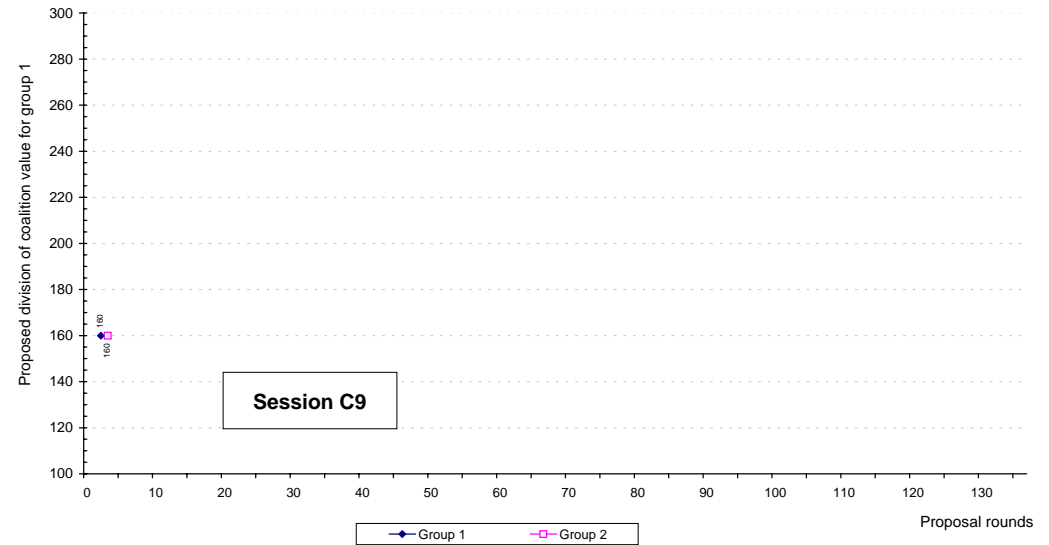
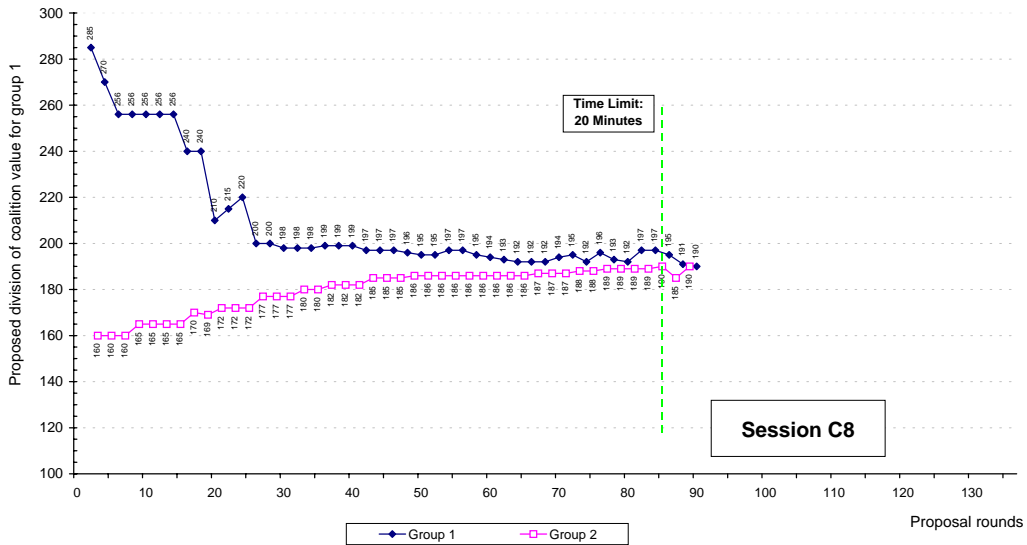
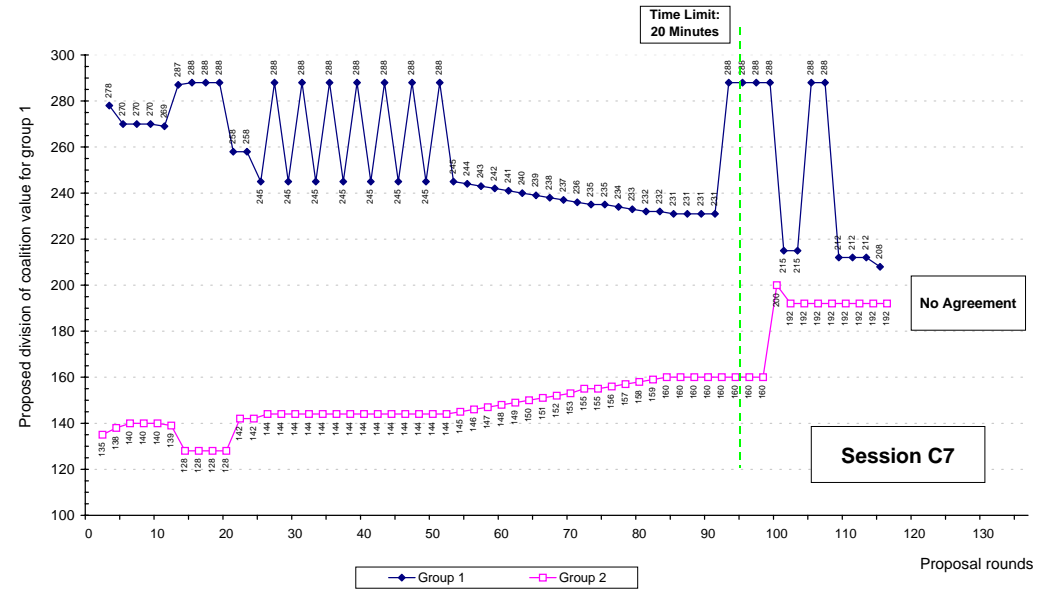
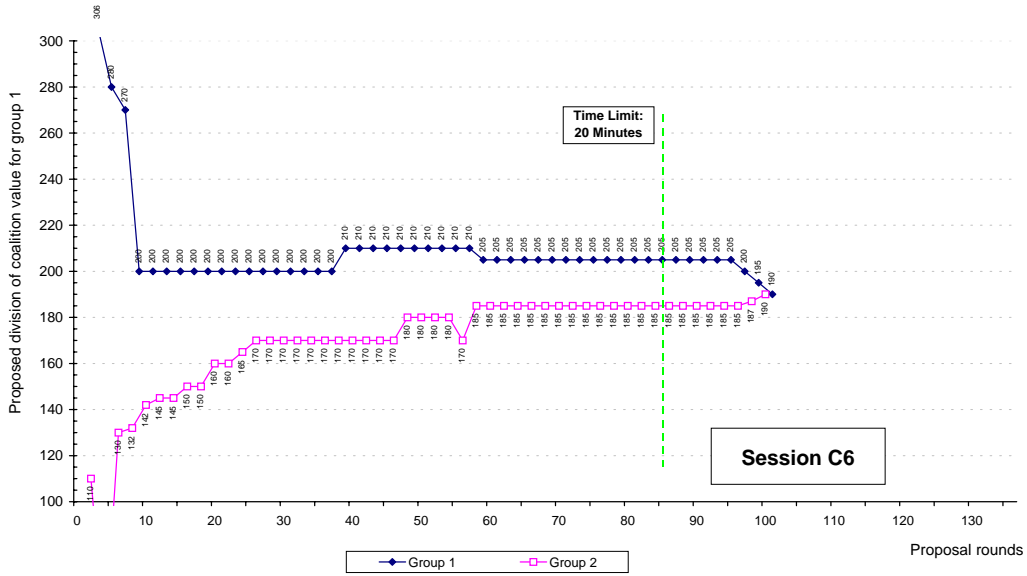
Figure 2b: Final offers of W-groups



Figures 3.1 - 3.9: Bargaining process in the Chinese experiment, sessions C1 - C9







Figures 4.1 -4.6: Bargaining process in the German experiment, sessions G4 - G9

