Cultural Influences in Anonymous Business Negotiations

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Abstract

Studies on intercultural negotiations typically involve face-to-face interactions in a classroom or laboratory setting. Such experiments are brief and involve a strictly imposed deadline. The negotiations typically involve dyads from the same country. The comparisons are done on the basis of experiments replicated in several countries. Internet technologies allow for communication across the cultural frontiers. While the communication is not as rich as in the case of face-to-face discussions, it allows subjects to negotiate in an asynchronous mode and at their own pace. It is also possible to conduct anonymous negotiations lasting several weeks. This paper explores the implications of culture on anonymous bilateral negotiations conducted with the use of INSPIRE, a Web-based negotiation support system by participants from Austria, Ecuador, Finland, and Switzerland.

1. Introduction

Joint activities across the national borders are not a new phenomenon but in the past they were limited mostly to national governments and large corporations who over the years of experience developed certain amount of expertise in cross-cultural communication. Recently, small and medium size businesses have been increasingly active in conducting business across borders. Hence there is a growing need for these companies to understand their foreign partners' thinking patterns and communication style which are to a great extent affected by their culture.

Studies on culture and negotiations that have been undertaken are, in majority, comparative and not intercultural (Lituchy 1997). Negotiation experiments are typically conducted in classroom settings (Graham 1985; Adler and Graham 1989; Adler, Brahm et al. 1992; Graham, Mintu et al. 1994; Roth 1995). The experiments are brief and the subjects are exposed to a highly simplified negotiation case. Furthermore, the negotiations are conducted face-to-face. Although such a setting allows for natural and rich communication it also introduces a bias since the subjects know the culture of their partners.

A significant influence of culture on the process and outcome of face-to-face intra- and inter-cultural negotiations was found in many studies (Adler 1983; Hofstede 1989; Adler 1993; Faure and Rubin

1993; Gulbro and Herbig 1995; Graham and Mintu-Wimsat 1997; Brett, Adair et al. 1998a). A study of the bargaining behavior between children in India, Argentina and the US (Druckman, Benton et al. 1976) found that Indian bargainers were more competitive than Americans and Argentineans. Another intracultural study involved a series of experiments with students from Israel, Japan, former Yugoslavia, and the US (Roth, Prasnikar et al. 1991). The results suggest that there are statistically significant cultural differences in the height of offers, percentage of rejected offers and in inefficient (not Pareto optimal) compromises. A comparative study reported that Americans were more satisfied, Japanese achieved lower profits and higher interpersonal attraction, French Canadians were more cooperative, and English Canadians achieved lower profit and spent more time negotiating in cross-cultural rather than intra-cultural negotiations (Adler and Graham 1989).

In the academic year 1997/98 we organized cross-cultural negotiations between students from four countries and seven universities. The data obtained from these negotiations has been used to analyze the similarities and differences within and between countries. There are several differences between our study and other studies including: the use of computer and communication technologies to observe the process of negotiation in a controlled setting; negotiations can be conducted anonymously thus the cultural attunement and bias are reduced; timing of offers and other information exchange depends solely on the negotiators; negotiators have access to decision and negotiation support tools; the negotiation case allows for specification of subjective preferences among issues and options; and negotiations may be conducted over several weeks, with or without an imposed deadline, that can be extended upon the users' request.

By using a Web-based negotiation system, INSPIRE (Kersten and Noronha 1999a). We tried to avoid the limitations imposed by negotiation experiments conducted in a classroom setting. Negotiations undertaken with the use of INSPIRE allow us to observe what cultural differences emerge, and under what circumstances. They may also provide information as to whether negotiators significantly change their behavior when they move from intra- to inter-cultural negotiations when they are not aware of the culture of their counterpart.

The results presented in this paper confirm that “culture influences negotiation through its effects on communication” (Elgstrom 1990). Moreover, our results suggest that in the absence of the visual and auditory clues the scope of cultural influences on the negotiators' expectations, their attitude and the negotiation process broadens. Furthermore, our study confirms the findings which suggest that although electronic communication decreases the communication richness, it allows for a much richer medium than commonly believed (Lee, 1994).

In the next section five dimensions of culture and other descriptors of the negotiators and the negotiation are discussed. In Section 3 we describe negotiations conducted via the INSPIRE system and the

participants. The hypotheses and results of the analysis of the empirical data are presented in Section 4. Conclusions and suggestions for further research are discussed in Section 5.

2. Culture and negotiation behaviors

2.1 Dimensions of culture

Because culture is an ill-defined concept numerous definitions of culture have been suggested (Faure 1993). In this study, however, we are less concerned with what constitutes a culture but rather with differentiating between INSPIRE negotiators. In order to do so we follow the negotiation literature and equate culture with the country. The long tem objective of INSPIRE negotiations is to contribute to a better understanding of culture and its impact on negotiations.

The literature offers different cultural dimensions from which we suggest the following to be relevant for the analysis of negotiators' behavior (Hall 1976; Hofstede 1980; Hofstede 1997). For the purpose of this study we selected five dimensions of culture: *individualistic/collectivist, power distance, masculinity/femininity, level of context*, and *time orientation*.

The individualistic/collectivist dimension introduces a distinction between the societies that put greater emphasis on the needs of the individual and those that attach greater value to the needs of the group (Hofstede 1980). In collectivist cultures the goals are aligned with those of the in-group (Triandis 1972); people tend to show more empathy towards members of the in-group (Lituchy 1997). In individualistic cultures there is an emphasis on personal needs and independent goals of the group, irrespective of whether they negotiate with in-group or out-group members (Lituchy 1997). According to (Hofstede 1980; Hofstede 1991) Austria, Finland and Switzerland are more individualistic cultures, whereas Ecuador is a highly collectivist culture.

Power distance measures the differences between peoples' perceptions and their ways of dealing with the authority and power (Hofstede 1980). One pole of the continuum represents a high power distance culture characterized by a strong sense of hierarchy and a preference for differentiated status. Communication across levels is restricted. At the other end of the continuum, social status differences exist as well, but people are less receptive to power differences. In negotiations, power and social status are considered less important (Brett, Adair et al. 1998a).

In high power distance cultures, negotiations may be dominated by discussions on social norms and standards, as negotiators attempt to determine social status (Graham, Mintu et al. 1994; Brett, Adair et al. 1998a). Ecuador has a relatively high Power Distance Index (PDI) whereas Austria has one of the lowest of the cultures examined by (Hofstede 1980); Finland and Switzerland are in-between.

The dimension of masculinity/femininity reflects the degree to which masculine norms such as achievement, material orientation etc. or feminine norms like relationships and people orientation, quality of life etc. are important in a culture (Hofstede 1980); p 205). An alternative label to this dimension is achievement (for high masculinity) versus 'nurturance' (for low masculinity) cultures (Chesebro 1998). Austria and Switzerland are two of the five most masculine cultures, whereas Finland is one of the five most feminine cultures. Ecuador has rather a masculine culture according to Hofstede (1980, 1991).

Hall (1976) distinguishes between high and low context cultures based on the importance of contextual factors in communication processes. According to him the content of a message could only be fully understood in the context of its transmission, i.e. nonverbal aspects of communication, physical environment, social status and power relationships, roles etc. In high context cultures, information is either in the physical context or internalized in the person and therefore an explicit coding is often not necessary, whereas in low context cultures messages are transmitted explicitly and directly (Ting-Toomey and Gao 1991).

According to Hall (1976; p. 91) Germans, Swiss and Scandinavians need a very high amount of explicit information transmission, i.e. are low-context cultures. Latin-American countries tend to be high-context cultures (Volkema 1998).

The orientation of a culture towards time is linked with the context dimension. High-context cultures tend to be polychronic, which means that people are involved in many different activities with different people at the same time (Hall 1976; p. 150). Additionally, this rather circular time perspective stresses high involvement of people (which produces a greater degree of context) and completion of transactions rather than adherence to a predetermined schedule. Contrarily, monochronic cultures with the linear time perspective prefer the completion of one activity at a time and therefore emphasize priority setting, schedules, segmentation, and promptness (Mayfield, Mayfield et al. 1997).

The summary of the cultural differences for the four countries is given in Table 1.

Table 1.

Selected dimensions of culture for four countries.

Dimension	Austria (AT)	Switzerland (CH)	Finland (FI)	Ecuador (EC)
Individualism	high (55)	high (68)	high (63)	very low (8)
Power distance	very low (11)	moderate (34)	moderate (33)	high (78)
Masculinity	high (79)	high (70)	low (26)	high (63)
Context	low	low	low	high
Time	monochronic	monochronic	monochronic	polychronic

2.2 Other descriptors of negotiators and negotiations

Culture and other variables such as gender, education, age, etc. describe the negotiator. In addition to the *negotiator characteristics*, (Sayer and Guetzkow 1965; Rubin and Brown 1975; Adler and Graham 1989) suggest that three additional constructs be used to describe business negotiations: *outcomes of business negotiations*, *situational constraints* and the *negotiation process*. Negotiator characteristics and situational constraints are exogenous. Process measures are endogenous and may be influenced by the first two characteristics.

Since the four constructs are often difficult to decompose into specific variables they are difficult to measure. They incorporate individual, group and social characteristics as well as subjective and objective features. Outcomes in some cultures may be limited to the compromise and its characteristics, but they also may include the process and the relationship with the opponent. Therefore, we propose an extended framework comprising six constructs based on three bipolar characteristics: exogenous vs. endogenous, subjective vs. objective, and individual vs. group, namely:

1. Culture and other characteristics of the negotiator (exogenous, objective, individual);
2. Situational constraints of the negotiator (exogenous, objective, individual);
3. Atmosphere during negotiations (endogenous, subjective, group);
4. Negotiation process (endogenous, objective, group);
5. Results of negotiations (endogenous, objective, group); and
6. Negotiator's expectations and assessment of the process, results, opponent and oneself (endogenous, subjective, individual).

2.3 Situational constraints

Situational constraints define the position of the negotiators in an organization and the conditions imposed on them and on the process. They include the specifics of the negotiation problem, organization(s) within which the negotiation is conducted, stakeholders' influences, negotiation protocol, and means and technologies of communication. The type of negotiations, for example, intra-cultural versus inter-cultural negotiations is also a situational constraint (Adler and Graham 1989).

In the INSPIRE negotiations the situational constraints were kept constant. All participants had to deal with the same bargaining problem, which was administered to them in the same way. They were not informed as to whether they were bargaining with someone from their own country or from a different country. Negotiators who were from the same country were from a different city in that country. However, they could inform their counter-parts about their identity during the negotiation. Although this made communication via email possible, none of the participants conducted negotiations

outside the INSPIRE system, however, some of them established a rapport and continued email exchanges after the negotiations were completed.

2.4 Process and atmosphere

According to literature on negotiations characteristics of the negotiation process and the atmosphere of negotiations play an important role. The concept of 'atmosphere' includes variables describing the personal attitudes of the negotiators during the process. Graham and others (Graham, Mintu et al. 1994; Graham and Mintu-Wimsat 1997; Calantone, Graham et al. 1998; Chan 1998) use the following concepts:

- *Problem solving attitude*: this variable indicates whether negotiators view the other negotiator as a strict opponent and only try to maximize their own utilities, or consider the negotiation as a way of solving a common problem to the satisfaction of both sides.
- *Attractiveness:* this variable describes the personal "chemistry" between the negotiators.

Both factors can be observed only during the bargaining process. They are, however, commonly referred to in the literature as ex ante characteristics and not as process characteristics. Process characteristics, on the other hand, involve the timing of offers, the number of offers and messages exchanged, the amount of concessions made, and other issues that occur during the negotiation.

2.5 Results and post-negotiation assessments

Much of the literature differentiates between task-related and satisfaction-related outcome dimensions. In a similar manner, we propose to distinguish the objective outcomes, i.e., what has been achieved, and the negotiators' subjective evaluation of their own and their counterpart behavior, and the negotiation process.

The influence of culture on negotiation results is indirect. If negotiators from different countries obtain different results, it is because they have different expectations, strategies and attitude, and they behave differently during negotiations. These differences should be captured by variables describing the negotiation process or atmosphere. Eventually, this may lead to different outcomes for negotiators from different cultures.

3. INSPIRE negotiations

3.1 Itex-Cypress negotiations

The business negotiation case involves representatives of two companies: Itex Manufacturing, a producer of bicycle parts and Cypress Cycles, a builder of bicycles. Itex is interested in selling and Cy-

press Cycles in buying parts for a new line of bicycles. An effort has been made to make the case as 'culture neutral'[1] as possible and easy to understand for participants from different countries so that no additional explanations be required. The case, written in English, is fairly simple and well structured which helps the users' with lower language proficiency to comprehend the issues involved. The case description was tested with a group of students taking an intermediate ESL course in order to verify its difficulty. The case description fits one and a half pages.

The participants negotiate on behalf of the company rather than for themselves. There are *four issues* that both sides have to discuss: the price of the components, delivery times, payment arrangements and terms for the return of defective parts. The negotiators are not given the issue priorities thus they have to decide if, for example, the price is more important than the delivery time. They also have to determine the specific trade-off values between issues. For each issue there is a given set of options, i.e., issue values. Altogether, there are 180 complete and different potential offers (alternatives) that contain all four issues.

Both parties are presented with their side of the case and told that their companies are interested in achieving a compromise. They are also informed that there are other suppliers and buyers so that a breakdown in negotiations is possible if they cannot reach a good deal. There is no further specification as to what indicates a good deal. Each side, however, is given a clear indication as to the desirability of the options (issue values) but only in terms of the direction and not specific trade-off values. The negotiators are asked to specify their own priorities (preferences) for each issue and for each option.

3.2 Negotiations via INSPIRE

INSPIRE negotiations follow three phases: the *analysis*, the *conduct of negotiation*, and the *post-settlement* (Kersten and Noronha 1999b). The analysis phase involves an analysis of the situation, the problem and the opponent, formulation of preferences, reservation levels, BATNA, and strategy. Data on the negotiation problem, negotiators' characteristics, including their preferences, and situational constraints are considered within this phase. In this phase data is collected with:

1. forms used to elicit preferences and construct a negotiator's utility function, and
2. a pre-negotiation questionnaire which every negotiator has to fill in after her/his utility function has been constructed and before the negotiation can begin.

[1] The Itex-Cypress case was written by Dr. David Cray, School of Business, Carleton University.

The negotiation phase involves exchanges of messages and offers. Offers comprise the negotiated issues and their values. The negotiation is parallel on all issues. Participants may submit the same offer many times, or keep the option of an issue unchanged, but each submitted offer contains a value for each issue. INSPIRE negotiators use Web pages to submit and review offers and counter-offers. An example of the fragment of a negotiation history page with two offers accompanied with messages and one separate message is given in Figure 1. The rating below each offer is the negotiator's (who calls herself Bettina) utility value of the offer.

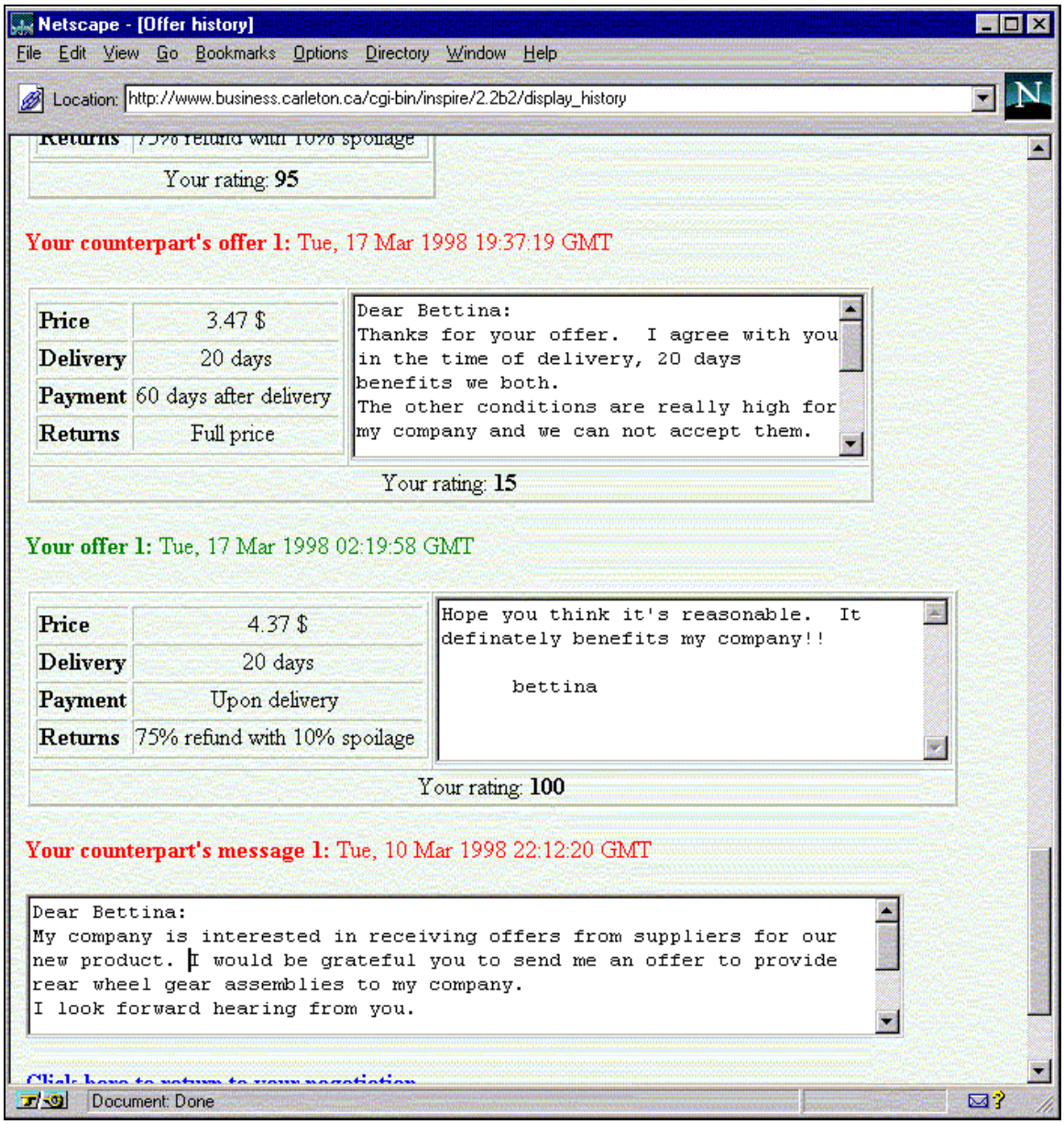

Figure 1. Fragment of a negotiation history page.

The negotiation ends when one of the following occurs: a compromise is achieved, one of the parties terminates the process, or a predetermined deadline passes. Research data collected during the concurrent phase relates to the conduct of the negotiation and it comprises process-related variables, such as the strategy and behavior used by negotiators, changes in the negotiation problem and negotiators' perceptions, and the dynamics of negotiations.

The post-settlement analysis (consequent) phase may be static and involve only the evaluation of the negotiation outcomes generated by, and after, the negotiation activity (Tung 1988). These outcomes include the information about the compromise and the negotiators' satisfaction. The analysis thus focuses on the evaluation of variables describing outcomes. Furthermore, INSPIRE users have the possibility to improve inefficient compromises.

The post-settlement phase ends with filling in the post-negotiation questionnaire. This questionnaire is not mandatory; a user may log out from the system or—upon filling in the questionnaire—is directed to multiple negotiation resources, handouts, systems which are available on the InterNeg site, but about which users are not informed during negotiation.

3.3 Participants

For this present study 166 participants were recruited from classes held at seven participating universities for the total of 83 dyads. The distribution of participants is given in Table 2. To achieve comparability and disallow for communication other than electronic, intra-cultural negotiations were conducted by participants from different universities in the same country. Intra-cultural negotiations were conducted only by Austrians and Finns. In Ecuador and Switzerland students from only one university participated in the experiment.

Table 2.

Negotiating dyads.

	Austria (AT)	Switzerland (CH)	Finland (FI)	Ecuador (EC)
Austria (AT)	9	--	--	--
Switzerland (CH)	14	--	--	--
Finland (FI)	13	14	13	--
Ecuador (EC)	4	--	16	--

In this study the country of residence is considered an adequate indicator of culture. All participants from Ecuador and Finland were born in these countries; 95% of Austrian and 60% of Swiss participants were born in Austria and Switzerland respectively. A similar homogeneity could be observed with respect to native languages. 90% of the participants from Austria and Ecuador and over 80% of

the participants from Finland can be considered as homogenous. Swiss participants are about evenly divided into German-speaking and French-speaking.

The participants did not receive any financial reward. They used INSPIRE as a course assignment, however, the assignments were not evaluated on the basis of their performance. Students knew that experimenters did not inform instructors about the compromise or the score achieved by the participants.

4. Hypotheses and results

4.1 Expectations

Culture attributes proposed by (Hofstede 1989) and (Hall 1976) directly relate to expectations that negotiators hold prior to the bargaining process (Tung 1988). For example, expectations regarding outcomes should be related to the degree of achievement-orientation. It is expected that members of highly masculine cultures have higher expectations concerning outcome (goal-orientation) and expect a less friendly atmosphere (i.e. a less nurturing behavior of the opponent).

With regard to the dimension of power distance (Graham and Mintu-Wimsat 1997) suggest that the social status and roles (i.e. buyer or seller) are more important for members of high power distance cultures. Based on this we formulate the following hypothesis.

Negotiators' expectations depend on their culture.

Three variables were used to test this hypothesis: the utility of the expected compromise, the utility of the worst acceptable compromise and the expected friendliness of the negotiation. The two utility values were calculated by asking the participants to select prior the negotiations the compromise the expect to achieve and the worst but still acceptable levels of each negotiation issue. For each of this alternatives the utility value was calculated.

The expected compromise yielding high utility is indicative of a competitive attitude and orientation on direct results of negotiations. This is typical for masculine orientations. Austria, Ecuador and Switzerland have high individualism index while Finland has a very low index value (see Table 1). This should imply that Austrian, Ecuadorian and Swiss negotiators should expect to achieve a higher utility than Finns. This expectation is, however, not confirmed. Ecuadorians had significantly higher expectations than the negotiators from other countries. Finns expectations are positioned between the Austrians and the Swiss, and the Ecuadorians. The ANOVA test indicates that culture has a significant effect on the utility value of the expected compromise at the 5% level. This suggests that the expectations are culturally motivated but masculinity/femininity orientation may have no significant impact.

Individualistic/collectivistic orientation influences people's perceptions of, and attitude towards, others, communication patterns and perception of differences. One may expect that in negotiations involving highly individualistic cultures there is less empathy towards the opponent and that the negotiators' expectations regarding the friendliness of negotiations should be different depending on these two indices. The ANOVA test indicates that the participants' expectations regarding friendliness of negotiations are culturally motivated with the significance level of 1.7%. No significant difference was found for the utility values of alternatives defined by reservation levels (the worst acceptable compromise).

4.2 Problem solving attitude and atmosphere

Expectations concerning the atmosphere may be related to individualism and the *problem-solving attitude* (PSA). PSA is described by cooperation, exploitation, honesty, informativeness and persuasiveness. According to (Graham, Mintu et al. 1994; Graham and Mintu-Wimsat 1997), negotiators from highly individualistic cultures are less cooperative and the effect of PSA on profit is stronger. We thus hypothesize that:

The negotiation atmosphere depends on the negotiators' culture.

Following (Calantone, Graham et al. 1998) we use factor analysis to compare PSA defined by the above five variables. The factor loadings obtained for the first two principal factors (F1 and F2) are given in Table 2.

Table 2.

Factor loadings for PSA.

Opponent perceived as...	Factor 1	Factor 2
Cooperative	0.34482	-0.23239
Exploitative	- 0.10318	0.84860
Honest	0.34733	0.00204
Informative	0.30366	0.29680
Persuasive	0.27938	0.27509

The first factor appears to be a good representation of the PSA. The variable describing exploitativeness of the opponent has the opposite sign than the other variables, because this characteristic describes a negative attitude. Persuasiveness may be interpreted in both directions. It is positively correlated with the other characteristics, indicating perhaps that an opponent with positive characteristics is also more persuasive than one with negative characteristics. It should be noted that, due to the scaling of variables used in the questionnaire, high values imply a low degree of problem solving attitude.

Interpretation of the second factor is more difficult. Given the orthogonality property of factor analysis, it encompasses effects not explained by the first factor. It should be noted that factor loadings for this factor are particularly high for the question describing a negative characteristic of the opponent. An opponent with a high score on the second factor could probably be described as a "tough" negotiator. Toughness in that sense would not be a contradiction to problem orientation, but rather an independent, orthogonal dimension.

Separate factor analyses were computed for the individual countries. The factor loadings were close, and no significant influences of culture could be detected in an analysis of variance of culture on the PSA score, or on its individual components. This confirms recent results obtained by Calantone, Graham et al. (1998) for face-to-face negotiations, who found that culture has little influence on negotiators' PSA.

Two effects of culture on negotiator attractiveness were found significant. Friendliness of negotiations significantly depends on the opponent's country of residence. Having an opponent from Ecuador means that the atmosphere is going to be less friendly than when the opponent comes from another country, at the significance level of 10%.

The willingness to see one's opponent was significantly influenced (at the level of 6.8%) by the interaction term between the two countries of negotiators. However, both the highest (3.3 FI-FI) and lowest (1.3 AT-AT) values occur in intra-cultural negotiations in countries that are similar on the individualism-collectivism dimension (on the scale 1-"extremely interested" to 5-"not at all interested").

4.3 Negotiation process

Cultural norms and values provide not only schemas for the interpretation of the situation and behavior of others but also scripts for appropriate social action (Brett 1998b). We therefore expect different cultural scripts for negotiation processes.

The time orientation of culture may play an important role in the process (Mayfield, Mayfield et al. 1997). In monochronic cultures, priority setting and time schedules are frequently used instruments. For this reason we expect that time constraints of this experiment will result in more agreements for dyads from monochronic cultures, and less if at least one of the negotiators is from a polychronic culture. In addition, we expect members of polychronic cultures to be more long-term- and relationship-oriented than monochronic cultures (Mayfield, Mayfield et al. 1997). Since they are interested in the establishment of a relationship they should exchange more and longer messages.

The differences in information exchange during communication between high- and low-context cultures may also have a direct impact on information sharing and the process (Brett 1998b). High-

context cultures tend to use indirect information sharing, whereas low-context cultures tend to use direct information sharing. In Graham's research (Graham 1985) the Japanese, as a high-context culture, shared much less information directly (e.g., answers to questions and direct negative reactions) than other negotiators. Instead, they shared information through the use of a relatively large number of offers and counteroffers (Brett 1998b). This leads us to the following hypothesis:

The negotiation process depends on the culture of the negotiators.

Several effects of culture on the communication behavior and on the time dimension of the process were found to be significant. One measure is the number of offers accompanied by messages. While there are no significant differences in the number of offers or the number of messages exchanged, significant differences were observed in the number of offers accompanied by messages and the total length of messages. The number of offers accompanied by messages was higher for Ecuadorians. This difference, however, was significant only at the 15% level.

Differences also occurred in the size of messages. In contrast to the number of messages, the size also strongly depended on the composition of the dyad, and not only on the country of the negotiator sending the message. The total length of messages sent by a Finn to a Swiss was more than four times the length of messages sent to a fellow Finn. It is interesting to see, that the two lowest values occur in intra-cultural negotiations (between Finns and between Austrians). This effect was significant at the 8% level.

Intracultural negotiations exhibited significantly more interactions during the last days of negotiation than intercultural negotiations (at the 3.7% and 5% significance levels). Again, intracultural negotiations are different from intercultural negotiations by exhibiting a much higher level of activity during the last days. Note that the intercultural negotiations involved participants from different cities and that the negotiation deadline was the same for each dyad.

4.4 Indirect influences of culture

In addition to the direct influences of culture on negotiations indirect influences are also possible. In general, the literature suggests a strong influence of goal-setting and aspiration levels on negotiation process and outcomes (White and Neale 1994). Higher goals lead to higher outcomes (Brett 1996) and produce higher demands, greater resistance to concession making and prolong negotiation processes (Chan 1998). Concerning the negotiation atmosphere, (Chan 1998) found that negotiators who set their initial goals at high levels were less conciliatory and less likely to adopt a PSA strategy.

The expected influence of negotiators' expectations on the negotiation atmosphere, process and outcomes are summarized in one hypothesis:

The negotiation atmosphere, process and results depend on the negotiators' expectations.

No significant effects of expectations on atmosphere were found. Negotiators' expectations had a fairly strong effect on process characteristics. The results of a regression analysis between communication structure and expectation variables show that participants who have high expected utility value tend to communicate more intensively. They send more offers and offers with messages (at the 1.3% and 3.3% significance levels respectively). However, there is no significant relation between the expected utility value and the number of messages without accompanying offers. This suggests that the negotiators who are outcome oriented tend to focus more on the offers and accompanying argumentation rather than communication which purpose is to prompt their opponent and provide additional explanations.

The influence of the utility of the worst acceptable compromise (reservation levels) on the communication is opposite though at a less significant level. The higher the utility level the less messages and offers the participants send, but this observation is statistically significant only for the messages without offers (at the 9.8% level). Expectations concerning friendliness do not significantly influence communication patterns.

At the individual level, utility of the expected compromise had strong influence on the utility of the achieved compromise while the utility of the worst acceptable compromise and expected friendliness had no significant impact. The regression analysis indicates that the utility value of the expected compromise had strong positive impact on the utility value of the negotiated settlement (at the 0.01% level). At the negotiation dyad level, no significant influences of expectations on the utility of the achieved compromise were found.

Process characteristics measured in our experiment concentrate on time aspects and exchange of offers and additional messages during the negotiation process. Prior research on information exchange found that negotiators who share truthful information about their priorities and preferences reach higher joint outcomes than those who do not (Pruitt, Carnevale et al. 1983). By honestly discussing their priorities, negotiators can recognize opportunities for joint gains (O'Connor 1997). We therefore expect a positive relationship between both the number and length of messages exchanged and the outcome. Similarly, we assume, that more information about priorities and preferences or restrictions of the negotiation partner allows for better understanding of the behavior of the partner during negotiation and leads to greater satisfaction with results and ones own performance. Hence, we hypothesize:

The negotiation results and the negotiation assessment depend on the process.

Effects of process variables on results postulated were found not significant. According to the hypothesis, there should be a positive relationship between communication and satisfaction. The results of the regression analysis of process variables on the satisfaction with the agreement indicate that while the influence of the number of offers accompanied by messages on aggregate satisfaction is indeed positive, the total number of offers had the converse effect, and the number of messages had no significant effect.

The positive effect of offers with messages can be explained by the fact that messages are verbal and in free format, while offers have a rigid structure. Verbal messages that accompany offers thus seem important in building a positive attitude towards the negotiations. This may be because they provide justification for the offers while messages that do not accompany offers may be sent to remind or push the opponent. A large fraction of activities taking place during the last day of negotiations decreases satisfaction significantly.

An ambivalent picture emerges with respect to perceived control by negotiators. We expected a positive influence of communication on control. The number of messages sent by the negotiator had a positive impact on his/her perceived level of control at the 5% level of significance. But on the other hand, total message length has a negative effect at the 6.5% level. No significant effects of process variables on meeting a negotiator's expectations were found.

Similar results hold for satisfaction with the negotiator's own performance. While barely significant (around the 11% level), the influence of the number of messages was again negative. On the other hand, shorter intervals between offers had a positive effect at the 1% level of significance.

6. Conclusions and future research

The main aim of our research is to study the effects of cultural traits in anonymous negotiations carried out via a technical medium. We observed that negotiators from Austria entered the negotiation with a rather pessimistic attitude with respect to the results and with respect to friendliness. In contrast to their expectations, the Austrians' perception of their negotiation partners was more friendly compared to the perceptions of other nationalities of their partners. Austrians were perceived to be less friendly than other nationalities by other negotiators. While communication behavior depends on the composition of the negotiating dyad, Austrians also take an extreme position in sending the least number of offers accompanied by messages. Their low expectations with respect to results are confirmed by the actual outcomes. They have also obtained significantly lower scores than negotiators from other countries. Consequently, they were least satisfied with their performance.

In many ways negotiators from Ecuador were exactly the opposite of Austrians. They expected (and achieved) the highest outcomes, and were most optimistic in their expectations about friendliness of

negotiations. Their expectations of friendly negotiations were not fulfilled, they perceived their negotiation partners as not very friendly and they themselves were also perceived as the least friendly negotiators. Another specific trait is a significantly higher number of offers and messages. Ecuadorians had the best performance and were also most satisfied with their performance in the negotiations.

Finland and Switzerland are rather close in most of Hofstede's cultural dimensions, except in masculinity. This closeness is also reflected in our data, where negotiators from those two countries often have strikingly similar values. Their expectations concerning results were somewhat higher than those of the Austrians, but much lower than those of the Ecuadorians, while expectations concerning friendliness were similar to those of the Austrians.

Negotiators from Finland and Switzerland were perceived friendlier than participants from Austria and Ecuador, but they did not differ from others in their own perceptions. Their communication behavior is similar, positioned between Austria and Ecuador. Their results are also in between the high achievements of the Ecuadorians and the low ones of the Austrians, but they are quite satisfied with their performance.

Our results indicate that culture has significant and direct influences on a negotiator's expectations and the negotiation process, particularly on the communication patterns of negotiators. These results confirm our hypotheses that negotiators' expectations and the negotiation process are culture dependent. Via expectations, culture also has a significant influence on the process and its results, confirming our hypotheses that the expectations and assessment of the process depend on culture.

One can argue that we study the effects of culture when the obvious sensory cultural cues are not possible and therefore the study of what is "left over" makes little sense. Admittedly, communication is greatly influenced by such non verbal clues as facial expressions, gestures, proximity, etc. These and obvious other artifacts are present at the surface level and are seen, heard and possibly sensed however, they are only manifestations of cultural traits present at the level of values, norms, rituals and so on. Literature on cross-cultural negotiations concentrates on studying more complex cultural constructs than the superficial ones.

Face-to-face negotiations introduce bias because the participants may modify their behavior and attitudes according to their perceptions of the counterparts' culture. Anonymous negotiations remove this bias. In fact and contrary to the first criticism, the effect of anonymous negotiations may be that the participants have to base their strategies and tactics on culture even stronger than in the face-to-face negotiations. The fact that there is less information available (especially implicit information about cultural norms and values of the other) causes higher social uncertainty, which ties behavior even stronger to own cultural scripts for such situations. We know of no comparative studies regarding this issue. A simple experiment that we plan to conduct is the comparison of the expected com-

promise, BATNA and reservation levels when the negotiators know their negotiation partners prior to the negotiation and when they must establish these values without prior knowledge of their counterparts.

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