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EFFECTS OF TRUST AND CULTURAL BELIEFS ON NEGOTIATION PROCESSES:
DATA FROM AN EXPERIENTIAL ROLE PLAY

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ABSTRACT

The purpose of this research is to determine if an experiential exercise can be used as an agent for collecting data. It is proposed that this approach to data collection yields useable results. Participants in the current study were 327 students from 14 sections of an organizational behavior course at a university in the southeastern U.S. They formed 109 triads to enact an experiential role-play with one student playing a Mexican negotiator, one an American negotiator, and a third an observer. The main and interactive effects of trust, three cultural beliefs, and nationality on negotiation processes were tested. The estimates for main and interactive effects were nearly all significant, suggesting that these role-playing games can yield useful data. Implications for practice are discussed.

INTRODUCTION

Benefits and pitfalls of experiential role plays have been well documented (Gosenpud, 1990). However, the usefulness of classroom exercises for the purpose of gathering data for research, as suggested by Butler (1996a), has not been thoroughly explored. Following ABSEL's recent emphasis on assessment (Anderson, Cannon, Malik, & Thavikulwat, 1998), we designed a research study around an experiential exercise in order to demonstrate that exercises can be used as research instruments as well as teaching tools.

The After NAFTA negotiation exercise (Butler, 1996b) was used for the study. The purpose of the study was to explore main and interactive effects of trust and cultural beliefs on two

negotiation processes, information sharing and process efficiency. Several studies have supported the effects of trust on negotiation processes and outcomes (Boss, 1978; Butler, 1995; Butler, 1999; Kimmel, et al, 1980; Zand, 1972). However, despite the salience of trust in negotiations, in addition to the current importance of international negotiations, we do not know of a study that has investigated the interaction of trust with cultural beliefs of negotiators.

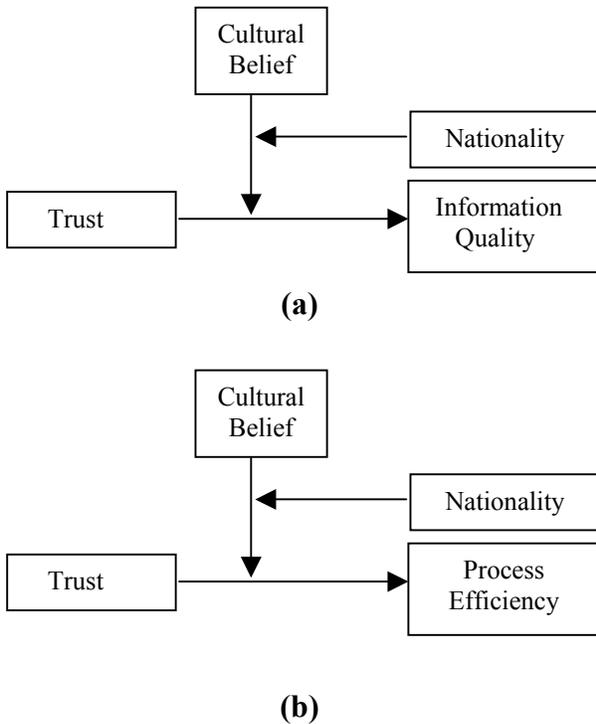
Under NAFTA, commerce between Mexican and U.S. businesses has expanded (Holstein & Robinson, 1997). As a result, there is an increasing emphasis on negotiations between Mexicans and U.S. citizens ("Americans"). Therefore, it is useful to explore the differences between the two cultures, and to attempt to understand how these differences might affect the processes of negotiations between people from the two countries.

According to Hofstede (1991), there are three cultural beliefs that differentiate Mexicans from Americans. First, individualism: Americans tend to believe in individual achievement and self-reliance while Mexicans tend to believe in collective achievement and dependence on interpersonal relationships. Second, power distance: Mexicans tend to perceive greater difference in power between people (for example, "managers, parents, and teachers should have power over their employees, children, and students") than do Americans, who tend to believe in equality in power among people. Third, uncertainty avoidance: Mexicans tend to avoid uncertainty (such as unfamiliar tasks and ambiguous situations) more than Americans, who tend to be more comfortable than Mexicans

with uncertainty. Thus, we focused on these three cultural differences.

The process of negotiation includes the quality of information exchanged and the process efficiency of the negotiation (Butler, 1999). These two procedural conditions can be modeled as functions of trust and cultural beliefs as portrayed in Figure 1.

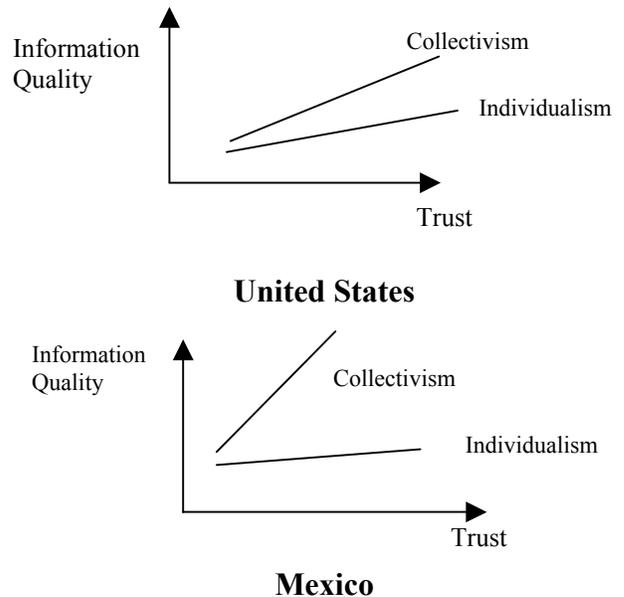
**FIGURE 1.
THREE-WAY-INTERACTION MODELS
PREDICTING INFORMATION QUALITY
AND PROCESS EFFICIENCY IN
NEGOTIATION.**



These models propose 3-way interactions among trust, cultural beliefs, and nationality in the prediction of quality of information exchanged and process efficiency. Since the purpose of this paper is to show how role plays can generate research data, and not to test models, the research will be exploratory. However, to demonstrate the type of hypotheses that might be developed and tested, several hypotheses are stated here, although not developed.

First, one would expect a generally positive effect of trust on information quality. [H1: The relationship between trust and the quality of information will be significant and positive.] Second, this relationship should be weaker for those believing in individualism than for those believing in collectivism. [H2: Individualism will moderate the effect of trust on information quality, and this interaction will be significant and negative.] Third, this negative interaction should be weaker for individualists, Americans, than for collectivists, Mexicans. [H3: Nationality (Mexico = 0, U.S. = 1) will moderate the extent to which individualism moderates the effect of trust on information quality, and this 3-way interaction will be significant and positive.] Figure 2 shows these hypothesized relationships.

**FIGURE 2.
NATURE OF 3-WAY INTERACTIONS
AMONG TRUST, INDIVIDUALISM, AND
NATIONALITY PREDICTING
INFORMATION QUALITY.**



METHOD

Participants and Procedure

Participants were 327 students enrolled in 14 sections of an organizational behavior course conducted at a university in the southeastern

Developments in Business Simulation & Experiential Learning, Volume 27, 2000

U.S. Of the participants, 117 were practicing managers pursuing their MBA degrees. The rest were graduate and upper-level undergraduate students.

Participants were grouped, randomly within each class section, into 109 triads (two negotiators and one observer per triad) in order to perform the AFTER NAFTA exercise as a requirement for the course. (See Butler, 1996b, for a complete description of this role play.) This exercise is a negotiating role play designed to offer two types of integrative (win-win) negotiated agreements, a logrolling solution, and a bridging solution. (Logrolling occurs when both parties give up a little to gain a lot. This can happen if they prioritize the issues differently. Bridging occurs when the negotiators refocus away from incompatible surface issues onto compatible underlying interests.) To forge either of these types of integrative agreement, the negotiators must share specific information that they know.

Every pair of participants role-played mayors of two towns on each side of the Mexico-U.S. border. The negotiators and the observers were assigned according to the results of questionnaires given to the students in each class section two or three weeks before conducting the exercise. These questionnaires pre-tested the students' cultural beliefs in individualism-collectivism, power distance, and uncertainty avoidance. Scores that reflected "Mexican-like beliefs" were calculated by summing the scores for collectivism, power distance, and uncertainty avoidance. The students most like Mexicans were assigned to the Mexican mayor's role and those most like Americans were assigned to the U.S. mayor's role. The students who scored in the middle third of the Mexican-like belief scale were assigned as observers.

The negotiation (between Mayor Lewis of Lakeview, Arizona, and Mayor Gonzalez of Las Aguas, Mexico) concerned an agreement about the location of a new manufacturing plant to be built by the Kokishi Company of Japan. Both

mayors desired to have the new plant located in their own town. Such a plant would have provided jobs for all their own people who wanted to work. The reduction in unemployment would have brought them enough popularity to be re-elected when their terms would soon expire. They both needed to win their elections because without the mayor's salary, they could not afford to send their sons to college. Their primary, number-one, life-long dreams had always been for their sons to go to the University of Arizona. They would gladly have traded their mayorships and forgotten all about the Kokishi plant if their sons were to have chances at a college education.

To achieve both a logrolling solution and a bridging solution, the mayors needed to share certain information. The information about Lakeview was that Kokishi liked Lakeview Technical College, which specialized in employee training. However, Lakeview did not have an emergency facility with squad members trained in handling potential hazards from the chemicals that Kokishi would be using. It would cost Lakeview \$300,000 to build an emergency facility and hire trained technicians.

Contrarily, Las Aguas had a fire department with squad members trained in handling potential hazards. However, it did not have a technical college. It would cost Las Aguas \$300,000 to build and staff such a college.

Both Lakeview and Las Aguas had five types of zones, shown on a map included in the role-players' materials. Locating the plant in some of these zones would cost the town a net loss in taxes and other costs per acre. Locating it in other zones would bring a net gain per acre. There was one possible location for the plant, on the border, that allowed both mayors to logroll by sacrificing small gains in order to avoid the large cost of the emergency facility or college. Clearly, the mayors needed to share information about their towns in order to logroll.

Developments in Business Simulation & Experiential Learning, Volume 27, 2000

Another crucial piece of information concerned college scholarships that each mayor could obtain for their sons. Mayor Gonzalez knew about a football scholarship Mayor Lewis' son could get. Mayor Lewis knew about a medical school scholarship Mayor Gonzalez's son could get. Hence, to reach a bridging solution, the mayors needed to share information about their personal goals and about other things that they knew.

At the beginning of the role-play, the negotiators were given role sheets and observers were given report forms on which to record information. The negotiators were randomly assigned, within class section, to two levels of initial trust expectations. Using the approach of Zand (1972) and Boss (1978), two different role descriptions were applied. For 53 pairs of negotiators, the role descriptions included a suggestion of initial mistrust, "You have learned from your experiences during the past years that you can not trust Mayor Gonzalez personally. There has been a high level of fear and suspicion between the two of you." For 56 pairs of negotiators, the role descriptions included a suggestion of initial trust, "You have learned from your experiences during the past years that you can trust Mayor Gonzalez personally. There has been a high level of mutual reliance and confidence between the two of you." In every triad, both negotiators were assigned to the same condition. The negotiators completed brief pre-role-play questionnaires to ensure that they understood their roles and the cultural beliefs assigned to them.

While the negotiators studied their roles and completed their pre-role-play questionnaires, the researcher thoroughly briefed the observers in another room. After the observers' briefing, the researcher and observers returned to the negotiating room and waited until all negotiators had finished their questionnaires and felt that they knew their roles. Then the instructor read a briefing that included four requirements for the negotiators: "Where would you like to have the Kokishi plant located?" "What will be your

total income (loss) from locating the plant on 200 acres in your town?" "What precautions will you take to ensure that the other negotiator is telling the truth and will do as promised?" and "What else do you plan to do? That is, what are the other terms of your agreement?" After this briefing, the 25-minute negotiations began. Each minute, the instructor recorded the time on the blackboard. At 20 minutes, the instructor reminded the negotiators that all four of the questions had to be answered.

When the role-play ended at 25 minutes, the observers and negotiators answered questions on their Observer's Report Forms and Negotiators' Final Report Forms. The variables were operationalized as follows.

The observers and negotiators responded to six questions about relevance, accuracy, and completeness of information shared. Three of them pertained to the quality of information Lewis shared with Gonzalez. Another three pertained to the quality of information Gonzalez shared with Lewis. The responses were on a Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. For each triad, the mean of nine responses of the quality of information Lewis shared with Gonzalez was used as the measure of information quality shared by Lewis. The mean of the other nine responses was used as the measure of information quality shared by Gonzalez.

Negotiation process efficiency was measured in minutes taken by the negotiators to realize that they could both get what they wanted, a college scholarship for each of their sons. A binary variable was used to represent nationality: Mexico = 0, U.S. = 1.

Each negotiator also responded to four questions from the Conditions of Trust Inventory (Butler, 1991) about their overall trust (1 = strongly disagree to 5 = strongly agree). The mean of Lewis's four responses was used as the measure of Lewis' trust in Gonzalez at the end of the role-play. The mean of Gonzalez's four re-

Developments in Business Simulation & Experiential Learning, Volume 27, 2000

sponses was used as the measure of Gonzalez's trust in Lewis at the end of the role-play.

The last three variables were the cultural beliefs: individualism, power distance, and uncertainty avoidance. The negotiators had been told to emulate the cultural beliefs of their assigned country. On their pre-role-play questionnaires, each negotiator responded, on semantic differential scales ranging from 1 to 9, to three questions about each of the three cultural beliefs. The mean of each set of three questions was used to measure each of the cultural beliefs.

Analyses

From 109 negotiating dyads, 218 observations were generated, one for each negotiator. Six regression analyses were performed. Three analyses tested the effects of trust, nationality, and each of the three cultural beliefs on quality of information shared (Figure 1a). Three analyses tested the effects of trust, nationality, and each of the cultural beliefs on the process efficiency of the negotiations (Figure 1b).

For the three tests of the model in Figure 1a, there were missing data for 14, 15, and 17 observations for analyses with individualism, power distance, and uncertainty avoidance, respectively. For the three tests of the model in Figure 1b, there were missing data for 5, 6, and 8 observations for the analyses with individualism, power distance, and uncertainty avoidance, respectively.

RESULTS

Table 1 reports the results of the regression analysis. Nearly all main effects and interactions were significant. The data supported all three of the example hypotheses. First, trust was significantly associated with the quality of information shared. The standardized regression coefficient (β) of 1.14 ($p < 0.0001$) represented the positive relationship between trust and the quality of information when modeled with the cultural belief of individualism. Second, the interaction

between individualism and trust was significant. Its negative β of -2.61 ($p = 0.0003$) demonstrated that individualism moderated the effect of trust on information quality, and that the effect of trust on information quality was weaker for those believing in individualism than for those believing in collectivism. Third, the 3-way interaction among trust, individualism, and nationality was significant. Nationality moderated the extent to which individualism moderated the effect of trust on information quality. The positive β of 4.00 ($p = 0.0005$) shows that the interaction between individualism and trust was weaker for Americans than for Mexicans.

The effects on information quality of the other two cultural beliefs, power distance and uncertainty avoidance, were also estimated. In addition, we performed regression analyses which explored the effects of trust, cultural beliefs, and nationality on negotiation process efficiency. All the results are included in Table 1. These results can be interpreted in the same way as the interpretation of the effect of trust, individualism, and nationality on information quality.

DISCUSSION

The results of this study supported the proposition that experiential role-playing games can be used as data-collecting agents and yield significant results. The pattern of significant effects presents compelling support of the validity of the data.

The purpose of this study was to provide a foundation for future research efforts. Data from experiential exercises enables researchers to investigate research questions and contribute to the body of knowledge in the field. These role-playing games are useful both for research and as teaching aids (Butler, 1996a).

The After NAFTA role-play yielded data that were useful in testing the three hypotheses. The first hypothesis stated that trust was related to information sharing. The support of this hypothesis is important for understanding that a

Developments in Business Simulation & Experiential Learning, Volume 27, 2000

trusting climate between negotiators is beneficial to win-win solutions, since such solutions would be rare in the absence of information sharing (Butler, 1999).

The second hypothesis predicted the interaction between individualism/collectivism and trust. We found that individualism moderated the

effect of trust on information quality in a negative way. Therefore, it is important to understand the opposition's relative belief in individualism versus collectivism. If negotiating opponents tend toward individualism, it is important to allow them space to make decisions on their own. In

TABLE 1
STANDARDIZED COEFFICIENTS FOR INFORMATION QUALITY AND NEGOTIATION PROCESS EFFICIENCY AS FUNCTIONS OF TRUST, CULTURAL BELIEFS, AND NATIONALITY.

Dependent Variables	Main Effects				Interactions				Model Fit	
	Trust	Belief	Nationality	Trust * Belief	Trust * Nationality	Belief * Nationality	Trust * Belief * Nationality	R ²	F	
Information Quality When Cultural Belief is:										
Individualism	1.14**	2.28**	1.59*	-2.61**	-1.53*	-3.96**	4.00**	0.33	14.05**	
Power Distance	-0.87**	-1.72**	-2.48**	2.03**	2.83**	1.07*	-1.27*	0.31	12.61**	
Uncertainty Avoidance	-0.53	-1.48*	-2.09**	1.58**	2.25**	0.98*	-0.01*	0.30	11.80**	
Process Efficiency when Cultural Belief is:										
Individualism	-0.70**	-1.76*	-1.57*	1.86*	1.60*	3.24*	-3.24*	0.08	2.67*	
Power Distance	0.65	1.00	1.79	-1.30	-2.09*	-1.15*	1.24*	0.07	2.27*	
Uncertainty Avoidance	0.77	1.47*	2.01*	-1.50*	-1.99*	-0.94*	0.82	0.07	2.16*	

Note. Nationality: Mexico = 0, U.S. = 1. * p < 0.05, two-tailed. ** p < 0.01, two-tailed.

contrast, the collectivist would want to make a decision in a group environment. The collectiv-

ist would also need a higher level of trust in the negotiations.

The third hypothesis addressed the three-way interaction between trust, individualism, and nationality in the prediction of information sharing. Nationality moderated the extent to which individualism moderated trust. This finding could have implications for international negotiations. For example, the combination of collectivism and trust seemed to be more important to Mexicans than to Americans in yielding high levels of information sharing.

The other cultural beliefs of power distance and uncertainty avoidance were also considered by the research. It is important to understand how these variables might affect the information shared in negotiations. In real-life situations, negotiators can take advantage of these characteristics to improve understanding of their opponents. By gaining an understanding of opponents' cultural beliefs, negotiators can focus on things that are important to their opponents and thereby achieve their own goals. In the After NAFTA scenario, the Mexican role-players believed in more power distance between individuals as well as higher levels of uncertainty avoidance. This can be used in negotiation to recognize that Mexicans respect authority figures and may be more willing to yield to such a person. At the same time, their high level of uncertainty avoidance should be taken into account and a negotiator would want to minimize the amount of uncertainty in the situation.

The current study has a number of implications for academicians and negotiators. The valid data gathered from a role-playing exercise suggests that academicians can use such exercises for their research. The research results emphasize the importance to negotiators of understanding their opponents' cultural beliefs, in combination with building trust. Beliefs and trust interacted in predicting the quality of information shared.

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