DISTRIBUTED NEGOTIATION:

PRE-TESTING A SIMULATED CROSS-CULTURAL

BUSINESS TAKE-OVER GAME

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ABSTRACT

This article discusses eight repetitions of a business take-over game. The game's aim is to act as a vehicle for research into electronically mediated cross-cultural negotiation and as a training tool. During the game, three teams of four persons play the management teams of three companies, one of which is a daughter of the second that may be sold to the third. In four of the repetitions, the three teams were located in geographically dispersed places. Two of these used telephone and fax for negotiating, the two others used videoconferencing and fax. All teams enacted a "synthetic national culture" that belonged to their fictitious home country.

The game generates interesting implications for designing training environments that may be used by organisations for training cross-cultural negotiations. The game setting and data collection framework can also be developed for use as a research tool.

1. Introduction

It is hardly necessary to argue the scale and the importance of the changes that are taking place in international business today. The adjective 'virtual' appears virtually everywhere and can mean many things, usually connoting that these are desirable things. But, as O'Hara Devereaux and Johansen (1994, p. xiii) put it: "Technology can help put us in contact with one another - over oceans and over cultures - but it cannot make us understand one another. For that we must still depend on the oldest systems of all: human imagination, tolerance, determination, and the will to learn continuously".

It is not so easy for an organisation to know where to start if it wants to change its way of working. New technology appears on the Web every day, but what can it be used for? For administrative work,

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there is fairly wide consensus about software solutions such as, for instance, ERP, EDI, and Workflow systems. But for non-standard work activities, the situation is much less clear. There are many technological tools and there is quite a bit of how-to advice, but empirical data are still very scarce. This holds especially for work involving complex communication that is prone to misunderstandings in multicultural contexts.

Negotiation is a case in point. The history of international take-overs, for instance, is fraught with failures that are at least in part due to cross-cultural miscommunication (see e.g. Trompenaars and Hampden-Turner, 1997, pp 40-41). O'Hara Devereaux and Johansen acknowledge (1994, p. xviii) "the reality that has been conveyed to us in hundreds of interviews with global workers - the fact that cultural diversity, even more than distance, is perhaps the greatest challenge (and opportunity) of the global workplace."

This is a significant statement, since it is the technology that is most rapidly evolving, and that is often seen as most crucial. Yet it has also been known for some time that technology is not neutral with regard to culture (see e.g. Goulet, 1977, Kedia and Bhagat, 1988, or Hofstede, 1991). It has also been demonstrated that the concept of management itself, and therefore all decision making contingent upon it, is culture-dependent (see e.g. Hofstede, 1993). It is reasonable to expect, therefore, that strategic decision making in intercultural settings may be affected by communication technology (see e.g. Dustdar and Hofstede, 1998).

2. Research question

As a first step, the authors decided to investigate strategic decision making activities by means of behavioural simulation games played in settings that involved electronic communication media. In this way we could create partially controlled conditions. One of the behavioural simulations is the focus of this article. It was played a number of times, both same-place and across geographic locations. The game is "A Daughter in Danger", in which three teams simulate the management teams of three companies, one of which might be sold by another one to the third one. Technically speaking, the task is negotiating across teams, in the context of an international business take-over in industry. The game was designed to be playable across three geographically dispersed sites.

This article presents the game, the different occasions at which it was played, and the data collection that took place at each occasion. It then presents and discusses the results. It also formulates a number of propositions to be used in further research, and it draws some tentative conclusions.

3. Prior research

Our subject matter is at the intersection of a number of fields of interests. We carried out a modest literature search in each of these.

3.1 Use of games for training and experiments

Games are as old as human beings. Most games were developed and used to train certain skills. Thus, they frequently but not always simulate a real-life situation. The obvious example are today's management games and simulations used in training seminars all over the world (for the state of the art, see e.g. Crookall and Arai 1995). Also, an earlier version of the Chess game, a simulation of a battle, was used as a training tool for strategic thinking in the Indian army 500 B.C. (Caluwe, 1996). Even most types of sports were initially developed to train certain physical abilities like strength, condition, or motor skills to keep fit for hunting or battles.

Games and simulations can also be very effective research tools. They provide the perfect experimental situation since participants are given a limited set of rules and behaviors. Often, participants are invited to imagine a fictional situation and are asked to deal with it. For example, in Tan et al. (1998) the participants are asked to simulate a jury decision making process.

The simulation exercise we would like to discuss in this paper goes one step further than earlier experimental or simulation set-ups. Using culture scripts the participants are asked to choose a culture and act accordingly. This goes beyond previous experimental setups since the participants are not only asked to assume a different role than in real life but also to adopt other norms, values and behaviours. Basically participants were asked to "walk in another person's shoes".

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3.2 Effect of ICT support on negotiation

Andriole describes how current and emerging ICT can be used to support negotiations. In his view, "we are on the verge of major changes in the way individuals, groups, and even nations negotiate. Today's information and computer technology can support major negotiation processes and steps; tomorrow's technology will support 'virtual' continuous interactive negotiations." (Andriole, 1996).

He also argues that information (in all forms) is the mainstay of the negotiation process. The way information is produced and shared will influence the way the negotiation will proceed. In his paper, Andriole matches current and emerging ICT with process functions (steps) of the negotiation process. He shows that new ways of communicating and informating will influence all steps of the negotiation process. He concludes that his findings "suggest that we have underexploited current and emerging information technology in the negotiation process and that significant performance enhancements are possible through careful application of the technology." (Andriole, 1996).

3.3 Global teams

According to Solomon (1998), global teams fall into two categories: intercultural teams (people from different cultures meet) and virtual global teams (individuals remain in their separate locations around the world and conduct meetings via various forms of technology).

The issues facing global teams have been dealt with in a few studies. Basically, the issues can be divided into personal and technological issues (McCune, 1998). Typically the technical problems are clear-cut; the technology needs to enable the exchange of information between team members. With today's technology this does not pose any significant problem in most situations. However, as McCune writes " even the best technology cannot surmount some personal issues that complicate the collaboration process." (1998). Often, these personal issues are influenced or even caused by cross-cultural misunderstandings or incompatibilities. Or to put it in a different manner, "challenged from all fronts, successful global teams need guidance to overcome the substantial barriers they encounter." (Solomon, 1998; see also O'Hara Devereaux and Johansen, 1994).

3.4 Effect of culture on the use of media and ICT

A number of studies have tried to investigate the effect of culture on the use of electronic media and ICT. Assuming the technological issues can be solved, which technology is the most useful when dealing with certain cross-cultural situations, i.e. specific personal issues caused by or influenced by cultural differences?

Approaching the issue from a theoretical perspective, Kedia and Bhagat (1988) developed a conceptual model of technology transfer across nations. One of the moderating influences in their model are the culture based differences between the nations involved in the transfer. They developed a number of propositions related to the effect of different cultural dimensions on technology transfer. Basically they are arguing that a technology build for one culture may not fit into the other culture. This has been found before, see e.g. Goulet (1977).

A few experimental studies indicate that culture does indeed influence media use and media choice. In one of the first experimental cross-cultural studies on ICT use Ho et al. (1989) compared consensus levels in Singaporean and US GSS groups. They found cultural differences in the relationship between pre- and post-meeting consensus. Straub (1994) has found support for the thesis that media choice is related to cultural aspects. He argues that Japanese prefer to use fax to email because of two aspects of the Japanese culture - Uncertainty Avoidance and complex written language. Also, in a cross-cultural GSS study comparing Mexican and US groups using a GSS Meijas et al. (1996) found some support for the hypothesis that face-to-face discussion have a larger effect on consensus in Mexican groups than in US groups. They attribute the differences to higher Collectivism and higher Power Distance in Mexico. Tan et al.(1998) investigated how a GSS influences status effects in groups. They found that GSS reduced the status effects in groups, i.e. a higher status individual had a lesser effect on the group's final decision in a GSS setting. Interesting for our study is that the authors found that the influence of the GSS was stronger in Singaporean groups. The authors explain these differences with a difference in Power Distance (Hofstede, 1991) between the two cultures, i.e. the status influence in Singaporean groups was larger and could thus be reduced to a larger extent. A recent study comparing ICT adoption in West Africa, the Middle East and Australia found evidence for an relationship between eight dimensions of culture and ICT use (Hasan and Ditsa, 1999). In the authors' views, ICT can have a certain cultural identity and support certain cultural values. Also, ICT can have an impact on the culture.

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3.5 Effect of culture on negotiation

Smith and Bond (1993), in a comprehensive book on social psychology across cultures, discuss twelve studies about negotiation across cultures (pp. 132-138). All the studies show differences across cultures, but as the authors remark, in most cases it remains somewhat speculative how these differences should be interpreted. We shall mention a few of the studies here.

Glenn et al. (1977) studied contacts between U.S. and Syrian diplomats at a time of tension. The study indicated that U.S. diplomats preferred mentioning particular circumstances, devoid of context, whereas Syrian diplomats focused on the wider context of the relationship between the USA and the Arab world. Smith and Bond interpret these differences at the hand of the wide gap in degree of individualism between Syria and the USA, the USA having a much more individualistic culture.

Poret (1970) found, in an experimental situation, that the individualism/collectivism dimension correlated with target setting in negotiations. The negotiators from individualist countries set more adversarial targets than those from collectivist countries. This could be interpreted by referring to the statement made by Gudykunst and Ting-Toomey (1988) that in collectivist cultures it is 'not done' to disagree openly, because to disagree openly with somebody is to make them lose face.

Studies about differences in conflict resolution between Anglo-Saxons (individualist cultures) and South-East Asians (collectivist cultures) had similar results. The Asians preferred styles that preserved harmony, while the Anglo-Saxons preferred adversarial styles. Smith and Bond note that this would not necessarily mean that those from collectivist countries would be any more generous to those with whom they are negotiating. They would simply not be directly outspoken about it. This attitude, meant to preserve the opponent's face, might well be interpreted as dishonesty by negotiators from individualist countries. Incidentally, it is not so that negotiators from collectivist countries always preserve harmony. They can be remarkably fierce to out-group members, as is noted by Gudykunst and Ting-Toomey (1988).

3.6 Synthesis

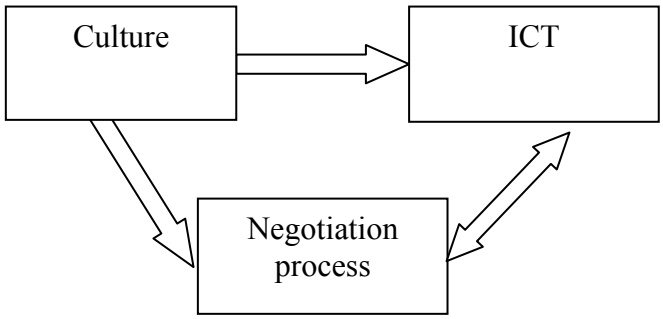

Figure 1: The effects according to the literature review

As this short review of previous literature shows, all aspects of this study are well worth investigating. Previous literature has shown that ICT can effect the negotiation process, culture influences the use of communication media, and culture influences the negotiation process (see Figure 1). Also, games and simulations have been shown useful for training and experiments in numerous situations and studies. This study presents a simulation game to train and investigate negotiations using different media in a cross-cultural setting. According to our literature review it is the first simulation study at the intersection of all three fields.

4. The game: A Daughter in Danger

"A Daughter in Danger" is a business game about a take-over (Bots and Hofstede, in press). It takes 12 people to play and three hours, plus about an hour of preparations for each participant. Participants could be business students close to graduation, or executives who are being trained to engage in cross-cultural communication.

Per game there are three 4-person teams that play the management of three companies:

- *Polyco International*, a large Chemical corporation
- *Mixit*, a daughter of Polyco, specialised in additives for plastics. They hold patents for processes to recycle polymers.

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- *Richarts* Unlimited, a large building company.

Mixit is making losses, and Polyco is not at all happy with this. In fact, unless they re-organise or sell, Mixit will go bankrupt (at the end of the game session, assumedly). Richarts are what their name suggests, i.e. a company with money. Mixit's knowledge could help Richarts convert waste insulation materials from building sites into valuable new materials. They might want to buy Mixit, or part of it. But Mixit wants to remain whole, and they are convinced they are a good company and deserve credit. So will the deal take place, and if so, what deal exactly and under what conditions?

Each team consists of the Managing Director, who is the others' boss, plus three equally senior members of the management team. These may be freely chosen. A suggestion: treasurer, Head R&D, Head of the works council. There are no scripts for these roles.

The teams will be assembled in one room during the game. For the negotiations they have to conduct with the other companies' management teams, they can either communicate face to face, or via telephone and fax, or via CU-SeeMe (including audio, video, chat). The possibilities depend upon the venue.

The three companies will have to act quickly. Bankruptcy for Mixit, the outcome that will occur if nothing happens during the game, is disadvantageous to all three companies. So, all teams have an interest in negotiating.

The participants receive the information above, plus a number of very different other sources of information, such as interviews with key persons, transcripts of e-mail exchanges, and Mixit's latest balance sheet. What we do not tell the participants is that some of this information is for all teams, some is for one team only. Neither are they told which of it is "need to know", which is "nice to know" and which is "noise". Most importantly, the teams do not know that no option is attractive to all. Polyco's best bet would be to keep Mixit but cut severely on its personnel. Mixit would be best served by being bought in its entirety by Richarts. Richarts, however, would profit most from buying only selected parts of Mixit. In particular, they need Mixit's research branch but not its bulk production branch.

4.1 The synthetic cultures

Each team has a fictitious 'synthetic National Culture' that the participants must get acquainted with before playing the game. These synthetic cultures were invented by Pedersen and Ivey (1994) as a skills-based approach for training counsellors for cross-cultural encounters. They argue (ibid., p. 2) that "Skills-based approaches to counselling have been proven to train counsellors perhaps more effectively than any of the alternatives". They also argue that taking culture as the creator of meaning is more appropriate to cross-cultural encounters than limiting the focus to a person, problem, behaviour, or situation.

The synthetic cultures are, in the words of Pedersen and Ivey (ibid., p.3) a "safe approach for examining cultural differences. They provide examples of cultural values derived from real cultures but without their overwhelming complexity". They are scripts for behaviour that mimic extreme manifestations of the dimensions of national culture described by Hofstede (1991): individualism/collectivism, power distance, masculinity/femininity, uncertainty avoidance. A team's culture might, for instance, be "low power distance" or "uncertainty avoiding". The scripts consist of seven golden rules of behaviour, plus a number of words with strong positive or negative connotation. An uncertainty avoiding culture would, for instance, hold the golden rules "What is different, is dangerous" and "Verbal style is emotional". They would like to use words such as "structure", "duty", "safe", and dislike words such as "maybe", "experiment", "loose". The values of one's synthetic culture are paramount to one during the game and will provide guidance about how to interpret one's role and how to interpret the other teams' actions.

The culture scripts that a team could choose from are:

- Indiv: Individualist.
- Collec: Collectivist, the opposite of Indiv.
- Hipow: High power distance.
- Lopow: Low power distance, the opposite of Hipow.
- Achievor: Achievement-oriented.
- Uncavo: Uncertainty avoiding.
- Unctol: Uncertainty tolerant, the opposite of Uncavo.

Available space does not allow presenting these scripts in detail here. Readers who are interested can find a version of these synthetic cultures at

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http://www.info.wau.nl/people/gertjan/TRADEMIS.html. Some background is given in Hofstede (1996) and in Hofstede and Pedersen (in press).

5. Research framework

This research is exploratory. This means that we did not formulate precise hypotheses to be tested. Rather, hypotheses that might be tested in future research will be the possible output of the present study. In fact, this research can be understood as a pilot study of this novel research set-up. In order to guide our game set-up and data collection, we used a fairly formal research framework. It is presented in figure 2. This framework is adapted from Wagner (1995) who himself builds on e.g. Dennis et al (1988), to help us set up the game and the data collection. Concepts are in capitals and their attributes in lowercase. The two main independent variables are in boldface. The arrows mean "is input to". All the boxes to the left of GAME, as well as 'facilitation' and 'synthetic culture mix' in GAME, represent input variables. There are three levels at which to collect data: the individual, the team, and the game (three teams: Polyco, Mixit, and Richarts).

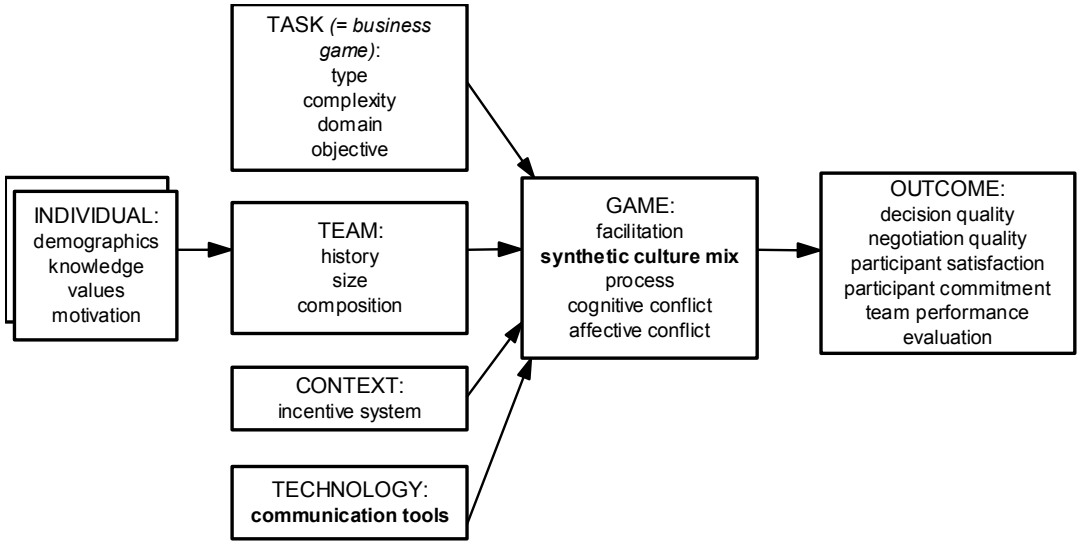

Figure 2: the research framework

5.1 Data collection

For games 5 through 8, all participants filled in a pre-game and a post-game questionnaire. The questions included those questions we needed to investigate all the attributes in our research framework. During all 8 games, the researchers collected data about the process. They provided a written report of 1-2 pages of text about each team's process.

Table 1 below indicates how we operationalised the constructs in the research framework. Some details are omitted for the sake of brevity. Unless indicated or obviously of a different format, all questionnaire items are 5-point scale questions.

5.2 The game sessions

"A Daughter in Danger" was played a number of times within the Netherlands. In all instances, the participants were either advanced students in disciplines related to management, or university staff. The game was in all instances played during three hours, not counting preparation and de-briefing. There were two rewards to be won in each of the settings, one for the best result and one for the most convincing national culture.

In all cases, the teams received the material they needed for their company role and their synthetic culture before the game session. At the beginning of the session, the game leader made them do an acculturation exercise that consisted of a number of hypothetical situations in which the team had to suggest a culturally appropriate course of action.

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First mode: face to face with consultants

The experiment for the first mode took place at Delft University. It was played in a face-to-face setting. Four games were played. Each game included four teams. Not only were there Polyco, Mixit and Richarts, but also a team of consultants hired by Polyco to facilitate the negotiations. The students being would-be consultants, this was an occasion for them to test their skills. The language was Dutch, all participants being fluent in this language. Given space limitations, since these four games were deviant in several respects and no formal data are available for them, they will receive little attention in this article.

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Table 1: from research framework to operational research variables.

Entity	Construct	Operational variable	Source of variable
INDIVIDUAL	Demographics	Age, gender, nationality, …	Ex ante questionnaire
	Knowledge	Education	Ex ante questionnaire
	Values	IRIC values survey	IRIC values survey, ex ante (Hofstede 1994)
	Motivation	"with what feelings are you looking forward …"	Ex ante questionnaire
TASK	all attributes	At team level: Company, synthetic culture	Fixed by the game scripts
TEAM	History	"how well do you know your team members"	Ex ante questionnaire
	Size	-	Fixed
	Composition	Aggregate	Data for individual group members
CONTEXT	Incentive system	culture award at team level	Game leaders' judgement of team process
		Performance award at team level	Game leaders' judgement of team result in game setting
TECHNOLOGY	Communication tools	Communication mode (face to face, tel / fax, video / fax)	Fixed per game
GAME	Facilitation	Yes or no	Fixed per game
	Synthetic culture mix	Free within limits	Fixed per game
	Process	Synthetic culture award mark (1-10)	Researchers' observations (per team),
	Cognitive conflict	"How many differences about the content of this decision did the team have to work through?"	Individual ex post questionnaire
	Affective conflict	"How much personal friction was there in the team during this decision?"	Individual ex post questionnaire
OUTCOME	Decision quality (per team)	Performance award mark (1-10)	Researchers' assessment (per team)
	Negotiation quality (per game)	"Do the three parties mention the same outcome" mark (1: no - 3: yes), "Do the three parties accept the outcome" yes/no.	Researchers' assessment based on documents written by teams at conclusion of the game
	Participant satisfaction	3 questions: "…did you enjoy…", "how satisfied with process …", "decision quality…",	Individual ex post questionnaire
	Participant commitment	5 questions: "loyal to team…", my opinion reflected…", I do more than what is necessary…", "share values of team members…", results important to me…".	Individual ex post questionnaire
	Team performance	"could you have reached a decision of the same or better quality on your own?"	Individual ex post questionnaire
	Evaluation	Informal	Ex post plenary session per site

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Second mode: by phone and fax

The experiment for the second mode included teams from Delft and Maastricht University. Two games were played. Communication between the teams took place via phone and fax. The teams from Maastricht included participants who did not master the Dutch language, but all participants mastered English. English was therefore used for the communication across teams.

Third mode: by CU-SeeMe and fax

The experiments for the third mode included teams from Delft, Tilburg and Wageningen University. Two games were played simultaneously. The teams communicated via CU-SeeMe (a videoconferencing tool over the Web that offers video, audio and chat) and fax. We were curious to see how the video tool would be used. Would the teams try to emulate a face to face context with it? The frame rate being a few frames per second, and the image no larger than 10 x 15 cm, the image did not seem very powerful as a visual substitute for a face to face setting.

5.3 Research design and results

This study does not pretend to be more than a pilot study. The number of repetitions per experimental condition is too low to enable more than elementary statistics to be carried out on the results. Furthermore, the effect of the presence of consultants in the first four games cannot be separated from two other effects: that of the communication mode and that of the history of the teams within a game. This is because the first four games were also those with face to face communication, as well as those in which all the participants per game had been fellow students to each other since almost four years.

Another peculiarity is that the teams were, within restrictions, free to choose their own synthetic culture. The reason for this is the following. On the one hand, assigning cultures to teams would not have improved our possibilities for analysis, because of the small number of games. On the other hand, prior experience (Pedersen and Ivey, 1994) has shown that letting players choose which culture they wish to adopt gives better playacting than assigning teams to cultures. It turned out that the participants were attracted to synthetic cultures that they perceived to be widely different from their own culture-bound values.

The questionnaire data are only available for the games 5 through 8. In addition to the points mentioned above, this implies that the game data fall into two groups of four games each, that we can compare only with caution. With this in mind, we limited the processing of the questionnaire data to computing averages, standard deviation and Pearson correlation coefficients at the level of individuals (n=48) and teams (n = 12). The small number of repetitions does not make it possible to draw conclusions with confidence. We therefore limited the presentation of the results to some indicative data and numbers; see table 3.

6. Discussion

6.1 The game as a training tool

The eight games describe here have been the first ones for “A Daughter in Danger”. The results prove the game to be well playable. That is, a) the game is neither too complex nor too simplistic, and b) none of the three stakeholders (Polyco, Mixit, and Richarts) has a marked advantage over the others.

In the de-briefing sessions, the players professed they had learned a lot about negotiating and decision making in teams under severe time stress. They also experience what it is to do this using electronic communication media.

There are also some drawbacks. In the electronic communication modes, the synthetic culture scripts were not enacted as much as they were in the face to face condition. This game will offer even better opportunities for cross-cultural learning if it is played in the sort of international setting for which it was designed. Synthetic cultures would then be chosen in such a way as to reflect aspects of the real cultural differences between the teams that are being trained.

The games also demonstrated that three hours of intensive negotiations are very tight. Yet we think they can be sufficient, provided the participants are well prepared. But half an hour’s debriefing, like we had, is definitely too little to reflect upon the experience.

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Table 3: summary of data for games 5-8

Game nr	Team	Performance assessment (1-10)	playacting assessment (1-10)	Negotiation result agreed?	Negotiation result accepted?	process description and result	remarks	Cognitive conflict (1: none -5: a lot)-	Affective conflict (1: none -5: a lot)
5 - tel/fax	Polyco (Lopow)	6	5	More or less	Yes	Polyco and Mixit almost strike a deal together. Then Richarts 'steals away' Mixit. Finally all three agree about a deal allowing Richarts to use Mixit's technology in license. All three parties are satisfied.	Fax was used to create distance and moments of control. Otherwise, they preferred to be on the phone, two teams at a time.	1.50	2.00
	Mixit (Uncavo)	9	5					1.50	1.75
	Richarts (Achievor)	7	5					2.75	1.25
6 - tel/fax	Polyco (Hipow)	4	7	Yes	No	Richarts seems to reach agreement with Polyco about buying Mixit but turns around and strikes a deal with Mixit directly. Polyco is left very frustrated.	Richarts (Hipow) in evaluation: "we could have done better had we been allowed to speak up freely"	2.00	2.33
	Mixit (Lopow)	6	6					2.25	1.00
	Richarts (Hipow)	6	6					3.00	3.25
7 - video	Polyco (Hipow)	5	6	Yes	Yes	Mixit take their leave from Polyco collectively and are hired by Richarts. Polyco is left frustrated.	Polyco could not send audio but could hear the other two communicate - which these were not aware of. This allowed Polyco to get some hidden intelligence.	2.25	1.75
	Mixit (Achievor)	6	5					1.80	1.60
	Richarts (Hipow)	9	5					2.00	1.25
8 - video	Polyco (Hipow)	5	5	No	No	Mixit manipulates the other two into negotiating a joint venture. However, the time flag falls just before the agreement is concluded. Bankruptcy hits Mixit.	There was a conflict because Polyco thought Mixit had stopped communicating, while in fact the chat channel had gone down. Went unnoticed for half an hour, with mounting tension, because parties did not check transmission success of messages.	3.00	1.00
	Mixit (Uncavo)	5	5					3.75	1.75
	Richarts (Achievor)	5	5					2.75	2.00

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6.2 The influence of communication technology upon negotiating

Figure 1 shows what the literature has to say about the interaction between culture, media, and negotiation. In our setting, we can only give some observations about the influence of synthetic culture and our communication modes on negotiating. In order to give better evidence, data will have to be available at a much larger scale.

Games 5 through 8 showed febrile, opportunistic negotiating, with unexpected changes of alliances in both the telephone and the video condition. All teams fought for it. It turned out that both synchronous and asynchronous media had their place and that essentially, the teams could cope with whatever communication channels were available to them. In game 7, the audio channel refused, and the teams switched to chat and fax. This opportunistic flexibility is what one would expect of Dutch players. It might well be that in other cultural settings, absence of certain communication channels would have a far greater impact.

One danger of asynchronous electronic communication technology is that one cannot easily assess whether one's messages come through. This led to serious misunderstandings in both game 7 and game 8.

6.3 The game as a research tool

This game and the data collection associated with it can be used for various investigations. These include:

- Studies of a social psychological nature about the extent to which participants can actually adopt synthetic cultures, and about the influence of actual national cultures on this. The evidence so far suggests that teams which are truly multicultural incur higher affective conflict than do culturally homogeneous teams.
- Studies that investigate the effect of having different mixes of national cultures - both true and synthetic - in a negotiation situation. It may well be that certain configurations are prone to disruption of the negotiations. For instance, it can be suspected that the combination of a Hipow mother company with a non-Hipow daughter (games 5 and 6; see table 3) is such a configuration.
- Studies that compare this training environment to others.
- Studies that compare communication modes, leaving other variables as constant as possible. The mix of synthetic cultures could be the same for all game repetitions. Three communication modes might be compared, in a balanced design: 1) face to face, 2) remote but including synchronous communication 3) remote, asynchronous. The ex post questionnaire could be extended to ask questions about the commitment to both the other teams and the deal that was struck.

  In our data set it appeared that in the electronic setting (games 5-8) relationships between the teams, as shown by the alliances they struck, were far less stable than in the face to face setting. The kind of drastic shifts in alliances reported in table 3 occurred in none of the face to face games. However, with the present data set it is not yet possible to attribute this phenomenon to a specific cause. A hypothesis to be tested in future research is that deals that are concluded in a face to face setting are better kept than deals that are struck over electronically mediated, less rich communication media.

However, in order to carry out any full-fledged experiment, a lot more data will be needed than was collected here. Because the prime unit of analysis is the game, and if we compare just two synthetic culture configurations or experimental settings, the rule of thumb is that we need some seven games per condition. So, the minimum is some fourteen games, meaning some 14 * 12 = 168 participants are needed.

7. Concluding remarks

"A Daughter in Danger" may contribute to improving negotiating skills and to intercultural competency for executives or would-be executives. It is challenging and enjoyable. Performance in a game such as this one can be used in assessing competency for cross-cultural teamwork in the job.

Half a day is an absolute minimum for playing and de-briefing the game, not counting preparation. Separate preparation for playing the synthetic cultures, e.g. through acculturation exercises in a prior session, would be very desirable. Alternatively and preferably, teams could consist of nationals from different countries, so that culture was not enacted but true. A limitation of the games discussed here is that mainly Dutch students were the actors. A real cross-cultural setting would yield more informative data. The next objective will be to find such a setting for the game.

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In these games, there was evidence that using various electronic communication media between teams of mainly Dutch players who did not know each other did not preclude effective negotiation.

Asynchronous communication media do not allow a sender to check immediately whether the recipient has actually got the message. This led to serious misunderstandings in both games that used these media. These findings may have some implications for the choice of communication media for decision making under time stress.

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