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**BUILDING TRUST:
EFFECTIVE MULTI-CULTURAL
COMMUNICATION PROCESS
IN VIRTUAL TEAMS**

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**BUILDING TRUST:
EFFECTIVE MULTI-CULTURAL COMMUNICATION PROCESSES IN VIRTUAL
TEAMS**

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I need to understand that people are working to stated objectives, that they are able to meet the objectives and that they are competent. Technical competence is easier to yield than behavioral competence. To understand the internal and stated needs of each company and how this interacts within the team is important. Our counterparts are really being buffeted by their home organizations. There has to be a lot of trust that they are trying to do the job that they have agreed to do and to the best of the ability. [A member of a virtual team in the aerospace industry].

Collective trust is a crucial element of virtual team functioning. As exemplified by the above quote, collective trust can be defined as *a shared psychological state in a team that is characterized by an acceptance of vulnerability based on expectations of intentions or behaviors of others within the team* (Rousseau, Sitkin, Burt and Camerer, 1998; Cummings and Bromiley, 1996). Collective trust is challenged by the often prominent differences in culture and lack of face-to-face interaction in virtual teams. In this chapter, drawing on research in organizational behavior and cultural anthropology, we examine why cultural differences reduce trust in virtual teams and then focus on the role of communication processes in building trust. Specifically, we examine the communication techniques and strategies that can be used to reconcile intercultural communication challenges in order to draw upon the strengths of each culture represented within a multicultural virtual team. Our key contribution in this chapter is increasing the precision of current thinking pertaining to the source and reconciliation of the communication difficulties that prevent development of virtual collective trust.

In addition to reviewing previous research, our arguments in this chapter are based on evidence from a research project on virtual teams conducted through The Center for Effective Organizations at the University of Southern California. This larger study began in July 1999 and was comprised of two phases. The first phase consisted of in-depth qualitative case analysis with two different virtual teams from each of eight organizations. The second phase involves a comprehensive quantitative survey that will be administered in each firm and analyzed as to statistical predictors of virtual team effectiveness. In developing the sample for this study, we gathered teams that had members representing many different cultures, with culture being broadly defined as characteristic ways of thinking, feeling, and behaving shared among members of an identifiable group (Earley and Gibson, 2001). Defined as such, cultures exist at many different levels, including national cultures (e.g., French culture as compared to German culture), organizational cultures (e.g., General Electric's culture as compared to Daimler Chrysler's culture) and functional cultures (e.g., engineering culture as compared to human resource management culture). Culture is a source of shared understandings and sensemaking, and shapes the beliefs, expectations, and behaviors of members of the cultural group (Schein, 1993). For example, some cultures have a more individualistic (e.g., focus on self-interest) versus collectivistic (e.g., focus on group interests) orientation (Chatman and Jehn, 1994). Some are “high context” and feature strong cultural characteristics, while others are “low context,” such that assumptions and values are not widely shared in the group, and vary from individual to individual or unit to unit (Gordon, 1991). Cultures also differ in the extent to which they focus on communal (e.g., nurturing) versus rationalistic (e.g., agency oriented) values (Kabanoff et al., 1995) and in the extent to which hierarchy is emphasized (Hofstede et al., 1990).

In this chapter we focus on examples drawn from three of the virtual teams from phase one of our study. Each of these virtual teams consisted of a different composition of cultures participating in the team. The first virtual team, which we will call “Europe Connect,” consisted of twelve members representing six organizations from four different European countries. There were two corporations involved, two universities, one non-profit institute, and one small consulting company. The organizations were based in England, the Netherlands, Austria, and Finland. Team members were from multiple disciplines including: industrial design, graphic design, user interface design, design engineering, software engineering, computer science, usability research, and sociology. This team has the greatest amount of diversity in terms of culture. The second virtual team, which we will refer to as “Aerospace Alliance,” consisted of twenty-one team members and five stakeholders (i.e., internal customers), from four different corporations. Three of the firms are U.S. based, and one is based in the U.K. All of the corporations involved were aerospace firms with different specialties, but all participants were in the same industry. This team had a moderate amount of diversity in terms of cultures. The third virtual team, which we will refer to as “Auto Unification,” consisted of ten members representing two global automotive organizations that recently merged, one U.S. organization, and one German organization. This team has the least amount of diversity in terms of cultures.

We conducted a comprehensive analysis of interviews with leaders, members and stakeholders of each team to determine cultural differences, and then examined incidences in which participants discussed evidence of trust or lack of trust (see Note 4.1 for a detailed description of the research methods). Finally, we analyzed these instances to determine the processes which impacted development of trust, and to look for clues as to how to reconcile

intercultural break downs in trust. We elaborate on our findings below, drawing upon examples from our interviews to illustrate key points.

TRUST IN VIRTUAL TEAMS

Trust is important in any type of team, but is a critical enabling condition in virtual teams (Cohen and Gibson, Chapter 1 this volume; Jarvenpaa, Knoll, and Leidner, 1998). Research has demonstrated that it can increase confidence and security in relationships, and promote open and influential information exchange (Earley, 1986) as well as reduce transaction costs, negotiation costs, and conflict (Zaheer, McEvily, and Perrone, 1998). Trust has also been related to performance of interorganizational collaborations, in terms of goal fulfillment, quality, timeliness, and flexibility (Zaheer et al., 1998).

In virtual collaborations, trust is harder to identify and develop, but may also be even more critical, since the virtual context often renders other forms of social control and psychological safety less effective or feasible. Further, other factors known to contribute to social control and coordination, such as geographical proximity, similarity in backgrounds, and experience, are often absent (Jarvenpaa et al., 1998). Because of the infrequency of face-to-face communication, direct observation and monitoring of team members is not possible. Further, computer-based communication media differs from traditional face-to-face communication in that it eliminates cues about interpersonal affections such as warmth, attentiveness, and trust.

In fact, research has demonstrated that communicators use physical and linguistic “co-presence” (physical co-location) to make inferences about one another's knowledge (Hollingshead, 1998). This implies that lack of face-to-face contact in electronic communication may negatively impact message understanding. Indeed, electronically mediated groups have

been found to have more difficulty establishing meaning of information and managing feedback in discussion (DeSanctis and Monge, 1999). Other studies show individuals take longer to form impressions of one another when conversing electronically because it takes longer to decode social cues (Sproull and Kiesler, 1986). Some theories suggest that face-to-face encounters are irreplaceable for building and repairing trust in traditional collaboration. Recently, researchers have argued that this is also true in virtual collaborations (Jarvenpaa and Leidner, 1999). In a virtual environment, according to O'Hara-Devereaux and Johansen (1994: 243), "Trust is the glue of the global workspace."

Unfortunately, to date, research has shed little light on the underlying mechanisms that explain the particular difficulties in establishing trust in organizational virtual teams. Our basic argument is that the degree and type of cultural differences represented on the virtual team matter a great deal. Specifically, we propose that in on-going virtual teams, the number of cultural differences represented on the team is negatively associated with the establishment of trust. Why might this be true?

CHALLENGES TO FORMATION OF TRUST

Reviewing several decades of trust research across disciplines, Rousseau et al. (1998) surmise that two conditions are necessary for building trust: risk and interdependence. Risk is one condition considered essential in psychological, sociological, and economic conceptualizations of trust (Coleman, 1990). Risk is the perceived probability of loss, as interpreted by the decision maker (Chiles and McMackin, 1996). Some minimal level of risk necessitates trust, but too much risk counters the propensity to trust. At a basic level, trust would not be needed if actions could be undertaken with complete certainty and no risk (Lewis and

Weigert, 1985). Uncertainty regarding whether the other intends to and will act appropriately is the source of risk. Risk creates an opportunity for trust. Only if some initial risk is taken is it possible for the trustee to demonstrate his or her trustworthiness. For example, a member of Aerospace Alliance explained the following:

When you are performing your design task, nothing is going to work right the first time. People who may be working on adjacent parts, those people come to you with their parts. It is frustrating but it forces you to work with that other person. It is not something that people are used to. You almost just can't stand to find someone looking over your shoulder... There may be some risk of embarrassment when revealing your sketches before you are ready to unveil your best one. The minute you know something, you have to put it down. You might feel bad about being wrong.

However, too much risk can be detrimental. Social norms and social categorization processes shape both the behaviors parties engage in, as well as their beliefs regarding the intentions of others (Whitener et al., 1998). Distrust and suspicion often arises between individuals from different groups (e.g., cultures), purely on the basis of group membership. In addition to our own interview excerpts, evidence for the existence of such category based distrust has been provided by ethnographic research on in-group/out-group dynamics. This research demonstrated that categorization of individuals into distinct groups often resulted in individuals' evaluating outgroup members as less honest, reliable, open and trustworthy than members of their own group (Spears and Lea, 1994). In virtual teams, natural subgroups often form based on national, organizational, or functional cultures. Due to in-group/out-group distinctions,

perceptions of risks in terms of information sharing across these cultural sub-groups are likely to be exaggerated, particularly when members of one sub-group have inadequate information about the other sub-group (e.g., culture). This may result in super-optimal levels of risk perceptions that prohibit trust. A member of Aerospace Alliance describes this in the following quote:

When you have teams, this is something you will experience in a lot of them. You have a lot of pride. You don't want to admit that I screwed up and that it is going to cause a lot of problems with your partners. We find a problem with a model...we immediately jump to conclusions about the other guys. This creates mistrust. If you had more of an understanding of it, perhaps you wouldn't have finger pointing going on in the back room. You don't want to say it too soon, 'the sky is falling.' There's an issue of when do you have to let someone know, and when are you letting them know too soon? You need to pull back and say, 'what have I done here and how it is affecting you?'

Larkey (1996) argued that the categorization process is related to the degree of divergence, defined as adherence to cultural communication patterns in the face of differences. Divergence is a reaction to perceived risk and is illustrated in the first half of the quote above. This can be contrasted with convergence, defined as adjustment of communication style to match one's partner. Convergence helps to counterbalance risk and is illustrated in the following quote from Auto Unification:

We had a couple of communications and then we decided we needed to get out to the suppliers and show them we are one company...And what would happen is that first we

would brief each other and then we would drive and spend a couple of hours talking in the car...He sees things in a similar manner, the same strengths, the same opportunities, so I can have confidence and trust in this guy.

Research on institution-based trust is also relevant here. Scholars in this domain maintain that trust reflects the security one feels about a situation because of guarantees, safety nets, or other organizational control structures (Shapiro, 1987). In the absence of such structures, perceived risk is likely to be higher and trust is likely to be lower. For example, a member of Aerospace Alliance said:

I cannot stand it when my part interferes with your part and people are looking at this immature part. There is nothing wrong with going ahead except for your own reluctance. When people put something out there, there is a threat that people are going to do something with it. Everyone is looking at the same data in real time and it is changing. And you have to be comfortable that what is there today isn't going to be the same tomorrow and that bothers people.

At the same time, the more cultures represented on the virtual team, the greater the tendency to establish strict control mechanisms. Some controls actually appear to signal the absence of trust and, therefore, can hamper its emergence. Institutional controls can also undermine trust when legal mechanisms give rise to rigidity in response to conflict and substitute high levels of formalization for more flexible conflict management (Sitkin and Bies, 1994). For example, one member of Team Europe Connect mentioned the following:

I don't fully understand what we can talk about and what we cannot talk about. They haven't specified that we can't talk about the technical specifications of the product, because there aren't any technical inventions involved. It is, I think, the concept which is a problem to talk about, but this is confusing.

On a related note, another member stated,

The contracts were pretty vague, and they're not so specific, because the more specific you are the more hard it is to meet your goals! So it took me a lot longer to actually figure out what we were doing, like a year or something. Which is too long. And then it is hard to motivate people into going in the right direction if you don't know what the direction is.

Beyond an optimal level of risk, interdependence is also critical in establishing trust in virtual teams. There are various types of interdependence in organizations including task interdependence, outcome interdependence, and resource interdependence, but essentially interdependence captures the degree to which one party depends upon the actions or information of another in order to accomplish his or her work (Wageman, 1995). The way in which work is designed places some minimum requirements on levels of interdependence. Beyond that, members often have some flexibility in terms of with whom they interact. Development of collective trust requires opportunities to interact and exchange information, which occur less frequently when interdependence is low. In fact some scholars have argued that the key to effective collaboration is high interdependence (Marshall and Novick, 1995). Yet, often, the

more cultures represented in a virtual collaboration, the more difficult it is to maintain interdependence, and thus the less trust. A member of Aerospace Alliance said the following:

Collaboration can be enabled by the process and tools that you use. Human interaction is dependent upon the personalities of the people involved. There needs to be a desire to interact, and a fundamental ability to interface. One of the ways to build trust, was to help out with each other's task as much as possible. Do it in a subtle way. Take something off line and make some suggestions, then you're not threatening their position and you are building collaboration.

The logistics of interaction across cultural boundaries usually means that members *within* a cultural sub-group (e.g., within an organization or within a function) will have greater interdependence than will members *across* cultural sub-groups. In other words, it is much easier for me to share information and interact on the task (or sub-task) with members of my own culture than with members of the other cultural subgroups. However, if I do not interact with members of other cultural sub-groups, how will I know that I can trust them? Thus, lower overall levels of interdependence result when more cultures are represented on a virtual team, and this reduces trust. A member of Aerospace Alliance mentioned the importance of interdependence in the following quote:

If they had a deadline for the deliverable, you'd get the deliverable on the deadline despite the quality of the product. In return, if we didn't meet a particular deadline after receiving their part of the product, then it looked like our fault. There was blame cast

behind our back. We had a discussion about this several times. I think it got better as we learned to work better together interdependently. The individuals concerned needed to have more trust of each other.

In summary, trust is critical in virtual teams, and is often threatened by suboptimal levels of risk and interdependence in a multicultural setting. The psychological dynamics that occur when multiple cultures interface make it difficult to establish comfortable levels of risk and interdependence that facilitate trust and subsequently, team effectiveness. As we elaborate below, we obtained direct evidence of these relationships in our interview data.

EVIDENCE FOR LINKS BETWEEN CULTURAL DIFFERENCES AND TRUST

Our exploratory interview analysis suggests that teams with greater cultural differences (e.g., Team Europe Connect) were characterized by a greater proportion of negative expressions of trust than teams with fewer cultural differences (e.g., Aerospace Alliance and Auto Unification). In fact, a statistical analysis (Analysis of Variance or ANOVA) demonstrated that the mean number negative responses per individual on a team varied significantly across teams ($F= 21.72$, $P< .001$) (See Table 4.1, 4.2, and 4.3). Even compensating for variation in length of the interviews, the same results were obtained with an Analysis of Covariance (ANCOVA), entering number of words per interview as the covariant. For example, members of Team Europe Connect had this to say about building trust in a highly diverse multicultural environment in which multiple countries, organizations, and functions are represented:

I think trust is being personal with people and honest and direct about things. I haven't seen this very personal approach. I only see political ways. By convincing first the one and then the other. But not just directly, the natural way. I don't know, maybe trust has something to do with knowing what the other one is talking about...I think that people should be honest and critical but that the [Team Europe Connect] people aren't.

There has to be a level of trust and understanding. People have to know how to take what people say. There was a constant, ongoing communication problem which began because [certain parties] simply have different way of saying things, they always sound so much harsher...than they actually mean it.

Trust has been very difficult on this project, because partners have their own interests and they pull the project toward their interests. I guess trust is something that you stick to the plan in some way, but you leave room for separate interests.

I don't think [company name] trusts the people at the [university name] more than they trust those at the [a second university, but I'm sure the relationship is better between [the company and the first university], because they share a common language.

[University name and company name] are pretty close as far as I understand...because they're physically close and speak the same language. [research institute] gets along pretty well with [design institute] because the people share a designer background. There are three cultural blocks from North to South, Scandinavia, Anglo-Saxon, and

Vienna...There's national culture, the skills the person has, and the type of organization that they work in.

Insert Table 4.1 Here

Insert Table 4.2 Here

Insert Table 4.3 Here

In contrast, members of Aerospace Alliance, which had far fewer cultural differences represented on the team said the following:

In some cases, it doesn't matter that they are different. In some cases it matters a lot. This is an issue with the U.S./U.K. We in the U.K. assume that we are communicating but often we are not. In some ways it is easier when there is a different language...The interesting thing from our point of view is that in the U.S., there are differences...between California and the Midwest. We [in the U.K.] feel closer to, and I think sometimes, the Californians feel closer to us, than they do to the Midwesterners. We have more similarities. Particularly when you get to those tricky issues of humor...British humor has a sarcastic edge to it. It often is misconstrued in the Midwest.

You have to be careful not to let the IT geeks run the show. Engineers have a similar profile. IT people are different. They have far less need for peer approval. They have less need for interaction. They are remarkably unresponsive to the bigger picture and need reminding of what this is all about. That is tricky. It is almost like you need the experts, but you need translators in the middle. People who can talk to the geeks in the language they understand. I have one or two people who are quite skilled at that.

We do need a modicum of translation. I act that way. We have different words for things. When we talk about systems, we mean utility systems on the aircraft. When [one company] talks about systems, they could mean anything. Some of the phrases for individual components are different. The UK works on a metric system. The U.S. a different system. Very these are small differences here.

We got to see and know the people outside the [Alliance] environment. That helps a lot to bridge the differences. Common interests and hobbies. Talk about that means that you are more relaxed when you approach somebody and say that the work is incorrect. Makes it easier and more relaxed to be able to do this. Can talk more frankly about real issues and real problems. If you don't know the person, not sure whether you should mention the issue.

Finally, members of Auto Unification, which had the fewest cultural differences represented on the team, had proportionately the least negative expressions of trust. The

establishment of commonalities and emphasizing similarities was often mentioned alongside the cultural differences. A member of this team explains in the following quote:

It seems that the younger Germans are much more like us. The stereotypes might be true about the older Germans, but the younger Germans are very international. They think more along the American mindset.

Another team member chuckled when we asked about cultural differences between the Germans and the members from the U.S.:

I laugh...because people here who haven't had a lot of interaction with the Germans assume that they are going to be stubborn and stiff, but they speak English better than you do! They like Coke and they have traveled the world. Does it sound like those are culture clashes?

The Germans appeared to agree, viewing culture as an opportunity rather than a challenge. One member stated:

I never felt that the cultural differences were a real problem. In mostly every case, those differences are known by the partners and accepted by the partners. Those things don't make any problems.

Another commented:

Systems costs, cycle time, HR, and technologies. Those are the four key areas. We are using a similar logic to get to our objective and what we are trying to decide on is our [joint] objectives. There should be integration across cultures. There is a lot of opportunity to work closer together than we have.

Thus, we have preliminary evidence that the greater the cultural differences, the more negative expressions of trust. While we view this evidence as an important first step, it will be informative for future research to more closely examine specific aspects of culture on the building of trust. For purposes of this research, we examined the number of cultures represented, assuming each culture has unique characteristics that are different in some respects than the other cultures on a team. It will be important for future research to determine the nature of each culture and to look for themes regarding how different cultures interact. We address these issues in the next section of our chapter, as we look for clues for building trust in virtual teams through intercultural communication.

BRIDGING THE DIFFERENCES:

COMMUNICATION PROCESSES IN VIRTUAL TEAMS

Communication is the process of transferring information, meaning and understanding from sender to receiver (Gibson, 1996). It is fundamental to any form of organizing, and provides the basic building blocks upon which people collaborate, make decisions and act to achieve organizational objectives. Communication is particularly critical in virtual collaboration, enabling parties to link across distance, time, departments, organizations, and nations (O'Hara-Devereaux and Johansen, 1994). Electronic communication, in particular loosens constraints of

proximity and structure, making it possible for distant parties to exchange messages with one another (Feldman, 1987). Some authors have argued that the real power of virtual forms of collaboration are realized only when communication processes are effective (Ring and Van de Ven, 1994; DeSanctis and Monge, 1999). The exact nature of communication processes in virtual teams, their antecedents and consequences are as of yet unknown, however, we can examine basic communication research, as well as research examining intercultural and electronic communication for clues as to the nature of these processes.

Communication Builds Trust

Communication processes are the key underlying mechanisms for establishing trust. There are several reasons why communication and information processing play important roles in trust building. Communication engenders cooperative relationships, provides insightful information about the personalities of team members, lays a basis for developing common values, and encourages continued interaction.

First of all, open and prompt communication among members is believed to be an indispensable characteristic of trusting relationships (Kanter, 1994). Without proper communication, cooperative relationships tend to suffer. Only if members can constantly sound off their differences, of which there are always some in any relationship, will they be able to avoid fatal conflicts. Thus, communication irons out the potential kinks in daily operations and makes for a satisfactory working relationship.

Second, members of virtual teams need to collect evidence about other members' credibility and trustworthiness, and communication facilitates that process. Without proactive information exchange, this process would take a long time. Sharing information among members of collaborative efforts leads to "information" symmetry rather than information

asymmetry (Hart and Saunders, 1997: 34). Members of virtual teams may deliberately provide unsolicited - including even somewhat sensitive - information to other members as a way of showing both goodwill and intimacy. As the reciprocal process engenders credibility, sustained information flow among members creates a trusting environment (Das and Teng, 1998).

Third, communication helps build trust because it provides the basis for continued interaction, from which members further develop common values and norms. Sustained interaction is a crucial mechanism for holding the members together. Through information exchange, members identify and develop more commonalities, reinforcing a sense of trust. Indeed, in a study of seventy-five teams, consisting of four to six members residing in different countries interacting for eight weeks, Jarvenpaa et al. (1998) found that the level of participation in exercises focusing on increasing information exchange among team members was positively associated with antecedents of trust such as perceived ability, integrity and benevolence of team members, although they had no effect on overall trust.

Although groundbreaking and insightful, a limitation of the research conducted by Jarvenpaa and her colleagues is that the participants were students, and not virtual teams members collaborating on behalf of different organizations. Furthermore, within a team, the participants in Jarvenpaa's research had no history of working together, and did not anticipate a future in which they would continue to interact. Thus, our study extends the careful groundwork laid by Jarvenpaa and colleagues by examining trust in ongoing teams that differed in the number of cultures represented on the team. We elaborate on the importance of this below.

Cultural Differences in Communication Processes

It has been suggested that the five phases of the communication process are universal; that is, they exist whenever communication takes place regardless of the specific culture or

organization in which it takes place. At the same time, research suggests that similarity in culture between a sender and a receiver can facilitate successful communication at each phase of the process (see Erez and Earley, 1993 for a review). Stated another way, the greater the cultural differences between sender and receiver, the greater the expected difficulty in communicating. When such differences are prevalent, we might expect a disruption in the work flow and errors in work performance. These intercultural differences in communication are most evident during the first two phases of the communication process during which messages are *constructed* and *transmitted*, and are often then reconciled during the third, fourth and fifth phases of the process, during which receivers acquire, interpret, and respond to messages (Gibson, 1996).

During encoding, communicators vary in the extent to which they use an implicit versus an explicit style of language. Implicit language carefully imbues messages within a more positive tone in order to decrease the chances of unpleasant encounters, direct confrontations and disagreements. Explicit language, on the other hand, communicates exactly what is meant in a much more direct manner, even if the message is negative or somewhat harsh. This characteristic is likely related to the extent to which the sender's culture emphasizes a collectivistic versus individualistic value orientation (Gibson, 1996). Collectivism encourages the use of an implicit style of communication, in which the communicator makes frequent use of qualifiers and ambiguous words such as "maybe," "perhaps," and "somewhat" in order to avoid confrontation, and members of these cultures tend to avoid negative responses while communicating with members of their own work group in order to preserve the sense of harmony within the group (Adler, Brahm, and Graham, 1992).

Messages also vary in the extent to which they are context free or context specific. Based on anthropological research investigating high versus low context cultures (Hall and Hall, 1987),

it is likely that communicators from low context cultures will tend to utilize external sources of information more often than internal sources when constructing messages (Gibson, 1996). A third way in which messages vary is the degree to which they contain rational material based on facts versus highly emotional material based on intuition and personal perspective (Glenn, Witmeyer, and Stevenson, 1977). Cultures vary in the extent to which they tend to emphasize either the rationalistic or more communal (emotional) values, thus encouraging one type of message style over the other.

A final important cultural difference often occurs during transmission. At this stage of the communication process, utilization of formal versus informal channels of communication likely depends upon the attitudes toward hierarchy in the communicator's culture (Gibson, 1996). Communicators from contexts in which hierarchy is explicit and revered are more likely to use formal communication channels that are authorized, planned and regulated by the organization and are directly connected to its official structure. Communicators from contexts in which hierarchy is minimized are more likely to use informal communication channels are routes that are not pre-specified by the organization but which develop through the typical and customary interpersonal activities of people at work.

INTERCULTURAL COMMUNICATION STRATEGIES

FOR BUILDING TRUST

Given our findings, we searched our case studies and the literature to define key implications for practice regarding the building of trust across cultures through the use of communication strategies. Many of the virtual teams in our study are highly effective, and their practices for developing trust are revealing. Based on our exploratory research and that of

others, these implications for practice can be identified in three general areas: (1) participating as a member of a virtual team, (2) developing virtual teams, and (3) structuring and managing virtual teams. We review each of these in turn below.

Participating in Virtual Teams

At a more micro level, there are several communication strategies that members of virtual teams can utilize in order to overcome intercultural communication barriers to trust. Most of these contribute to what has been referred to as a “supportive communication climate” as opposed to a “defensive communication climate,” which in turn results in a pattern of conflict that is either functional or dysfunctional (Lumsden and Lumsden, 1993). In a supportive climate, ideas are shared freely, conflict is based on the task, conflict resolution is open and perceived as fair, and problem solutions are well understood and mutually accepted. In a defensive climate, ideas are suppressed, conflict becomes related to personality issues, conflict resolution is “behind-the-scenes” and unsatisfying to many, and problem solutions are not understood nor well accepted by all. To create a supportive climate, as general rules, previous research indicates that proactive information exchange (Thomas and Trevino, 1993), regular and predictable communication (Crisp and Jarvenpaa, 2000), and explicit verbalization of commitment, excitement, and optimism (Jarvenpaa and Leidner, 1999) are key. For example, a member of Team Europe Connect suggested that a supportive climate may have helped them build trust in stating: “I don't think that there has been any ‘wow, good job’ type of things that would have built trust to other peoples’ capabilities.” Another suggested that a supportive climate can help to bridge differences:

There are different cultures among the partners, there are creatives, technology oriented folks, human factors; sometimes this doesn't combust...If the basic energy of the group is not dissipated by the differences in chemistry...if the basic story they are exploring together is good, then it keeps them motivated to work through the problems.

Beyond these more general strategies, members of virtual teams can also employ basic communication techniques such as those described by Gibson (1996). For example, **active listening** can help to overcome difficulties experienced in receiving ambiguous messages that may result in low trust. For example, one member of Auto Unification said this about message ambiguity:

It is much more difficult to communicate now that we are virtual. I'm not able to write e-mails with content. It is not as smooth as I would like. Sometimes we are very direct in our e-mails. In my experience, sitting at a table had good results in terms of trust.

Active listening (Morgan and Baker, 1985) has also been referred to as interaction management, degree of involvement in the conversation, and expressiveness (Spitzberg and Cupach, 1984). Basically, being an active listener requires requesting elaboration and/or clarification whenever the message being sent is not clear. For example, a member of Auto Unification said the following:

You must have a personal relationship. You can see how your counterpart reacts? How direct or not? How to deal with disagreements? Is he open with feedback? What is his character? It is not necessary to become friends with him, but must understand character and behavior by really listening.

Active listening is particularly helpful in teams when some members come from high context organizations (strong cultures) and others come from low context organizations (weak cultures) (Gibson, 1996). Recall that in low context organizations, members tend to prefer external sources of information, while those in high context organizations tend to prefer internal sources of information when constructing messages. If a low context receiver gets a message from a high context communicator, he or she may be initially uncomfortable with the lack of external social referents within the message. Rather than completely discounting the message, if the receiver is aware of the cultural differences and practices active listening, she can request additional clarification by asking the communicator to verify her internally deduced information using external sources of information. The receiver might ask the communicator, for instance, whether other team members have similar information, opinions, or experiences. The additional clarification is expected to help overcome the initial frustration. A member of Aerospace Alliance captures this technique in the following:

I trust the guys here more than the others, because I know I can call them up and say, ‘I see something here’ and they listen carefully and say, ‘Yeah, that is screwed up.’ They don’t try to hide things. One person isn’t dominating the teleconferences. I got a lot from going through the training systems. I trained a lot of those guys on this stuff. But I don’t think that is always going to be true.

A second technique, **listening for ideas** (Morgan and Baker, 1985) can help overcome difficulties attributable to collectivistic versus individualistic value orientations in organizations.

Communicators with a collectivistic value orientation tend to utilize an implicit style of communication, while communicators with an individualistic value orientation tend to utilize an explicit style of communication. Members from a more individualistic organization (explicit communicators) may have difficulty recognizing the “gist” of a message sent by members of a more collectivistic organization (implicit communicators). However, if she is aware of the intercultural differences, the individualist can carefully listen and extract the ideas that have been couched within the implicit message. Indeed, in one study of the patterns of success and failure in cross-cultural adjustment, listening skills were found to be closely related to interactional effectiveness (Nishida, 1985). A member of Team Europe Connect commented on the importance of this skill in building trust:

There has to be a level of trust and understanding. People know how to take what people say. There was a constant, ongoing communication problem which began because [certain parties] simply have different way of saying things, they always sound so much harsher...

A member of Auto Unification said the following:

Informal communication is very important for trust. My counterpart told me some problems and some internal issues from [his] side and I did the same this way.

The technique of **framing** can help to overcome the challenge of decoding messages sent across communicators with very different perspectives. Decoding is the process by which a

receiver interprets a message to derive meaning from it. Research suggests that when interpreting a message, a key method for avoiding intercultural miscommunication is framing. Framing has also been referred to as the ability to empathize with the communicator (Gudykunst and Kim, 1984). Basically, framing involves taking the other's frame of reference (Hammer, 1989). A member of Team Europe Connect mentioned the importance of this technique:

I would say that what I have learned is that you have to communicate information to designers in a completely different way than for researchers...I learned how [they] think and the kinds of information they need and expect. I certainly would do [my work] completely different than I did before.

Another member of Europe Connect stated:

The kind of objective language that researchers use, the traditional business is direct and practical. I think there are more ways to discuss the project and to discuss innovation, discuss development and the level of emotions and metaphors and that's the level...you must use it and you mustn't be afraid to use it with researchers and other people. I see people who are used to working in a business context and they get into this design and research context and they lose their bearings, they lose practical things. They don't dare to talk about emotional things they don't dare to talk about history, the future, visionary things.

Framing can help reconcile intercultural communication difficulties that are attributable to communal versus rationalistic values in organizations. As discussed earlier, communicators from organizations that emphasize communal values are likely to construct messages with emotional content. Receivers from rationalistic organizational cultures may initially feel uncomfortable with such messages, but by using the framing technique, the receiver may better understand the message by adopting a communal frame of reference (Gibson, 1996). In this spirit, DeSanctis and Monge (1999) recommend that virtual teams provide rich contextual information to communicating parties to help heighten message understanding and shorten the time that might otherwise be required to establish interdependence. For example, one member of Team Europe Connect had this to say about framing:

I find it very hard to get a frame of reference...I think it really needs a sense of direction. You have to develop an image of how context changes, maybe we need more sociologists, more ethnic stories, to give our project more context so that everyone knows, 'ah, we're going that way'...and in that sense, the vision should be a frame of reference. You can define it in very different ways but everyone should have the same frame of reference.

Responses to others' messages are also critical (Jarvenpaa and Leidner, 1999). A response is an endorsement that another person is willing to take the risk of interpreting the first person's message and, if necessary, supplying the missing elements to make it understandable. Because computer mediated communication entails greater uncertainty than face-to-face communication, there tends to be an intense need for responses (Hawisher and Moran, 1993).

Responses are trusting behaviors that indicate involvement, and involvement conveys attraction, intimacy, attachment, and affection (Jarvenpaa and Leidner, 1999). For example, one member of Aerospace Alliance said,

There is a very high level of trust on this team. More to support trust than distrust. Trust is notification. People contacting you when they need to. People tell you what they are going to do, and do it. Predictability. Following through with what you say you're going to do.

The technique of **following-up** can be extremely helpful in this regard. Following-up involves accurately repeating the communicator's message (Gibson, 1996). Doing so quickly appears to be especially effective (Hammer, 1989). For example, a member of Auto Unification said this about following-up:

In all honesty, this positive trusting relationship did not hold true early on at the buyer level. They haven't had the same opportunity to have the time with each other. They are still a little concerned. My guys were very critical early on. When they would get something back they would say this makes no sense. I said, yes, then put it in German and then send it back to them. Then they would realize that the language is English and this is their second language, and they need to follow up.

In the final feedback phase of communication, the following-up technique may help to reconcile intercultural differences attributable to differences across organizations regarding

hierarchy and structure. As discussed earlier, such differences are associated with communication patterns. Members from organizations with strong hierarchies are likely to prefer communication patterns that follow the chain of command. In contrast, those from low hierarchy may become frustrated with this process, actively bypassing it. Balancing the two by following-up with whichever channel is not used first, effectively becoming fluent in the use of formal *and* informal channels, can reduce the stress associated with the unfamiliar channels of communication. Although trust was high on the Auto Unification team, there were still issues to be resolved regarding hierarchy. One member explained it like this:

We have a high level of trust between the two groups, yet we are not totally there. We are still a little bit hesitant about sharing information. What we still do is that we tend to make sure that we discuss things first with our superior before we truly communicate with each other.

Developing and Supporting Virtual Teams

Team developers and facilitators can assist virtual teams in establishing communicating these norms in advance, including procedures for reconciling differences in communication practices that emerge as members do business across multiple boundaries. As business processes are redesigned, organizations will have to simultaneously find ways to preserve the beneficial norms that have been established while promoting newer ones that are more appropriate to the redesign (DeSanctis and Monge, 1999).

Some teams develop procedural templates for communicating using electronic media (Winograd and Flores, 1986; see also other chapters this volume) and this is beneficial for

reducing risk and insuring interdependence. Knowledge management systems can also help in this regard. For example, electronic communication products, such as conversations and documents stored in knowledge repositories, can provide stability to otherwise dynamic and uncertain relationships. A “transactive memory system” – knowledge about who knows what – can be formalized, documented, and re-applied (DeSanctis and Monge, 1999). A member of Aerospace Alliance talked about the importance of ensuring that learnings will be accessible and passed on to others in future collaborative efforts:

The trust issue is pretty sensitive, because almost all the folks [on this team] will not be going to [a future new product development initiative]. We don't understand the intelligence of that. You have a system of people that have gone through the program, who are just going to other areas. There are only one or two people that will be going onto the [new initiative]. That takes the trust and just throws it all away. They [on the new initiative] are going to start all over and make the same mistakes that we did.

Finally, ensuring that equity, fairness, and sense of procedural justice is maintained can increase trust. For example, one member of Team Europe Connect had this to say about their procedures early in the project,

The developing of the first concepts were done by all the partners...Right now, I'm not sure, but maybe that's a mistake. Because when the researchers are making concepts and also have to evaluate them later on, it's a little bit hard...for me it was really interesting. But from the methodological point of view it was a bit of a problem. [Some partners] lost

a little bit of reputation [with other partners] because they tried to do that work and were more or less amateurs. So I'm not sure about that.

Ironing out lateral communication appears to be particularly critical because it helps to create interpersonal relationships that often carry over into social life outside of the business environment, and this is important for building trust. For example, in an important study that bridges both the communication theory and multinational organizational theory, Ghoshal, Korine and Szulanski (1994) found that interpersonal relationships developed through lateral communication mechanisms such as joint work in teams, taskforces, and meetings, increased the communication effectiveness of virtual teams. The interpersonal relationships often spilled over into social connections made outside work. This idea was also evident in our interviews. A member of Auto Unification said:

We've spent time with each other outside of a business environment. People lower their guards a little. It only happens by spending time together. We've had specific projects that we have had to work together on. Development of global commodity strategies. Working on those types of things has helped us to instill trust.

A member of Aerospace Alliance commented:

Anything that you can do to get people together socially. A ball game. When we were there for training, I think we went to dinner one evening... That builds the extra trust. When you build that into a team and there is a crisis, the social interaction is the reserve.

That is pretty cheap. The cost is minimal. On a small project, can get away with not doing it. On a large program, the cost as compared to the gain, is incredible...The more that you can bring together people in the beginning, it has an exponential impact in the end.

At the same time, addressing procedural justice may mean paying special attention to expectations regarding hierarchy. Decentralized approaches coupled with strong and explicit leadership roles may be well advised. In support of this, Hinds and Kiesler (1995) found better lateral communication in less hierarchical virtual work groups. For example, members of Team Europe Connect recognized the power of hierarchy and personal relationships in stating:

You can't have one inexperienced person leading a partner organization working with a very experienced person. It was one of the problems.

I would say that the team is more or less task related. There are some friends, some personal friends and those relationships truly influence [Team Europe Connect] because its clear that those people communicate more than people who aren't friends.

Structuring and Managing Virtual Teams

At the organizational level too, establishing an optimal level of risk and increasing interdependence can increase trust. Locating organizations with a good reputation seems to be an effective starting point. A firm with a reputation of being honest, fair, trustworthy gives members of other organizations the needed first piece of evidence to take some initial risk.

Incremental resource commitments on the part of all organizations may also be a relevant strategy when risk and uncertainty levels are high (Bowman and Hurry, 1993). Structures, processes and routines can then create a stable context that constrains risk to management levels so that interpersonal trust can develop and persist (Zaheer et al., 1998). A member of Team Europe Connect said this about the importance of a structure that works:

When we got down to the nitty gritty of the work - the details of development of concepts. The communication broke, there was kind of a drop in the levels that people have to work together. What finally end up happening is that we split the project up into chunks so that people could work on it in separate countries, in order to try to find what they were supposed to be looking for.

Institutional factors can act as broad supports for the critical mass of trust that sustains further risk taking and trust behavior. These supports can exist at the organizational level, in the form of teamwork culture (Whitener et. al., 1998), and at the societal level, through such cultural supports as legal systems that protect individual rights and property (Fukuyama, 1995). The caveat here is that too much control, or legal barriers that are difficult to interpret and/or are applied haphazardly can be highly counter productive to developing trust. Managers of virtual collaborative efforts need to simultaneously consider costs of control mechanisms, costs of failing to reach minimal levels of trust, and costs of trust building; a higher level of trust does not automatically dictate a lowering of the control level, and vice versa. All it means is more confidence in cooperation among members of the various organizations.

For example, certain members of Team Europe Connect based their definition of trust on the skills and capabilities of project members. One stated, “I trust certain partners because they have the skills. I’m not sure we’re trusted.” One solution to this problem, cited by a member of Team Europe Connect, would have been to increase the stability of the team. In her words,

Other projects always have priority and so I think that people get pulled off the project and a lot of people get dumped on the project...so a key problem has been the constant turnover of members on the team.

In a similar vein, a member of Aerospace Alliance said:

I had some built-in credibility because I worked with these guys before. Trust had developed between us – credibility and belief in the honesty of the other person. Does he know what he is talking about? Will he tell me the truth? If I’ve worked with him in the past, there is more of a chance I will believe this.

Another solution is to increase the strength and clarity of leadership. As one member of Team Europe Connect stated,

I think that the problem with [Team Europe Connect] in the first year is that there wasn’t a real leader of the project because they tried to give us as much freedom as possible. For some of the partners this might have been a problem because this freedom might have been too much and we didn’t have any help in where to go. But I think that in the second

year, [one of the partners] fulfilled their task as leader better than in the first year. In the first year it was a problem that [Team Europe Connect] was more or less leaderless.

Providing a positive example of the trust building power of clear leadership, the U.S. leadership representative in Auto Unification stated:

If [my German leadership counter part] and I had not hit it off as well as we did, we would not be able to do what we did. We respect each other and we determined very early on that neither one of us had a hidden agenda...[my counterpart] and I are providing the example...and they are following it. The key is just learn from each other in a non-threatening way.

CONCLUSIONS

In conclusion, our findings should not be interpreted as discouraging intercultural teaming. In fact, it should be emphasized that several of the teams in our study were highly effective, or at least effective in obtaining some portion of their outcomes, because they were able to overcome barriers to trust. For example, one member of Team Europe Connect stated,

If you look at the outcome, the products or concepts coming out of it, it is not very high. If you look at the outcome of the project, what is the network in Europe developing, how are the people interconnecting, then the outcome is very high. People are learning very much about each other and different cultures and how people deal with problems. And,

I'm not entirely sure, but I think it must be one of the reasons that these projects even happen. Because these kinds of findings are valuable.

Rather, it should make virtual team participants aware of challenges that they may face through intercultural teaming and should compel future research to further explore how to best overcome diversity and utilize the strengths that initiated the partnering of the cultures. We briefly summarize a few of these below:

SUMMARY OF GUIDELINES FOR PRACTICE

Implications for Virtual Team Members

- Develop a supportive communication climate by:
 - Using active listening techniques to overcome differences in high context versus low context organizations
 - Using listening for ideas to overcome differences in implicit versus explicit cultures
 - Using framing techniques to overcome differences in communal versus rational cultures
 - Using following-up techniques to overcome differences in emphasis on hierarchy and chain of command

Implications for Virtual Team Developers

- Reduce risk and increase interdependence during the development process by:
 - establishing communication norms
 - developing templates for using technology
 - creating knowledge management systems

Implications for Virtual Team Managers

- Establish appropriate hierarchy and leadership that instills a sense of procedural justice
- Manage risk through careful selection of organizations for virtual team membership and incremental resource commitments
- Develop interdependence through stable structures arranged by flexible but explicit contracts

ENDNOTES

Note 4.1. In each team, structured interviews with a sample of team members, team sponsor and/or leader, and 2-3 internal customers (stakeholders) were conducted. A majority of the interviews were conducted face-to-face, but supplemented by telephone. The questions relative to this research appear in Appendix 4.A, but included questions such as “How much trust is there on the team?” “How do you know?” and “How did the team develop trust among its members?” All interviews were taped and transcribed. Archival data available about the teams was also collected. This included background information about the organizations, e-mail or other electronic transcripts, previous evaluations of the teams, project plans, and written mission statements. All of this information was compiled into an electronic textual database and we then used computer facilitated qualitative data analysis (CQDA) (for recent examples of the more comprehensive procedures see Mohrman, Gibson and Mohrman, 2001; Gibson and Zellmer-Bruhn, 2001). CDQA aids in reviewing, categorizing, comparing and discerning relationships within text by using search, retrieval, and collation routines. To examine evidence of trust, we needed to identify interview excerpts which contained this evidence. Following previous research, a category of key words pertaining to trust was then created based on a comprehensive list of trust words compiled from various trust survey instruments, the research articles referenced in this chapter regarding trust, and using dictionaries and thesauruses to identify synonyms. A final test of the intercultural applicability of this list was conducted by asking a panel of experts representing all of the countries included in the three teams to review the list and add any additional terms that might imply trust or a lack of trust. The final list of trust words appears in Appendix 4.B. We then searched for any word in this category in the three text data

bases. Three excerpt files were then created containing only interview excerpts that held evidence of trust. Next, two independent raters coded the excerpts. One of three codes as assigned to each excerpt: (NA) irrelevant, (1) indicating trust among team members, or (0) indicating a lack of trust among team members. Any excerpts deemed irrelevant by either of the raters was eliminated from the excerpt pool. Of the 595 excerpts retrieved by TACT, 377 were maintained as relating to trust. An initial estimate of inter-rater reliability among the two raters was .84. Any discrepancies between positive and negative codes were discussed and reconciled. A spreadsheet was generated from the results of the qualitative analysis consisting of information for each team member indicating the number of positive and negative expressions articulated by each virtual team member. This data was then entered into the SPSS statistical analysis program, along with basic statistics about each team member (national background, organization, function) to determine the statistical relationships in the data.

APPENDIX 4.A: SAMPLE INTERVIEW QUESTIONS

1. On a scale of 1 to 10 (1 very low and 10 very high) how much trust is there on the team?
How do you know?
2. How much do you trust others?
3. How much do others trust you?
4. If there are any discrepancies, why?
5. How much trust is there that time and money will be used in the best interest of the team?
That they will be used in a fair and equitable way?
6. Do people trust each other to contribute worthwhile ideas?
7. Do people trust each other to do what they say they will do?
8. How did the team develop trust among its members? What factors hinder trust?
9. How do differences in culture, discipline, home organization, or other) influence the way
members work together?
10. Do problems occur because of these differences? If so, how do you resolve them?
11. Do individuals act as “interpreters” or “translators” between different functional areas?
12. Do members of the team have similar work values?

APPENDIX 4.B: TRUST WORDS

Able	Confidence	Presumptive
Ability	Confident	Presumptuous
Abilities	Confidential	Reliable
Arrogant	Confidentiality	Reliability
Arrogance	Contemplative	Reliant
Assume	Credible	Rely
Assumed	Credibility	Relying
Assuming	Depend	Respect
Assumption	Dependent	Respected
Assumptions	Depending	Respectful
Belief	Depends	Respective
Beliefs	Disagree	Respond
Believe	Disagreed	Responding
Believes	Disagreement	Response
Believing	Disagreements	Responses
Benevolent	Disagrees	Responsible
Benevolence	Disbelieve	Responsibilities
Care	Disdainful	Responsibility
Cared	Distrust	Responsible
Careful	Distrusting	Responsive
Carefully	Distrustful	Responsiveness
Carefulness	Egotistical	Selfish
Caring	Expert	Selfishness
Caution	Expertise	Sensible
Cautious	Experts	Sensitive
Cautious	Faith	Sensitivity
Cohesion	Fight	Share
Cohesive	Fighting	Shared
Collaborate	Flighty	Sharing
Collaboration	Friction	Sincere
Collaborative	Genuine	Sincerity
Collaboratively	Genuinely	Suspect
Compatible	Harmony	Suspecting
Compete	Honest	Suspicion
Competence	Honesty	Trust
Competencies	Honored	Trustable
Competency	Insecure	Trusted
Competent	Insecurity	Trustful
Competing	Insecurities	Trusting
Competition	Insensitive	Trusts
Competitive	Insolent	Trustworthy
Compatibility	Integrity	Trustworthiness
Compete	Loyal	Unbelievable
Competing	Loyalty	Unreliable
Competitors	Mistrust	Unreliability
Conceited	Overbearing	Vulnerable
Contemptuous	Overconfident	Vulnerabilities
Confide	Overconfidence	

TABLE 4.1

COMPARISON OF NEGATIVE TRUST EXCERPTS PER TEAM

	Mean Number of Individual Negative Expressions of Trust	Std. Deviation
Europe Connect	10.88	5.38
Aerospace Alliance	2.88	2.52
Auto Unification	2.00	1.67
Total	4.39	4.69

TABLE 4.2

ANALYSIS OF VARIANCE ^A

Negative Expressions of Trust	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	437.916	2	218.958	21.722	.000
Within Groups	332.640	33	10.080		
Total	770.556	35			

^a Similar results were obtained with an analysis covariance using number of words per interview as the covariate.

TABLE 4.3

MULTIPLE COMPARISONS (TAMHANE)

MEAN NUMBER OF INDIVIDUAL NEGATIVE EXPRESSIONS OF TRUST

(I) TEAM	(J) TEAM	Mean Difference (I-J)	Std. Error	Sig.
Europe Connect	Aerospace Alliance	*7.9926	1.361	.011
	Auto Unification	*8.8750	1.475	.006
Aerospace Alliance	Europe Connect	*-7.9926	1.361	.011
	Auto Unification	.8824	1.229	.620
Auto Unification	Europe Connect	*-8.8750	1.475	.006
	Aerospace Alliance	-.8824	1.229	.620

* The mean difference is significant at the .05 level.