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# IDENTITY AND CROSS-CULTURAL MANAGEMENT IN GLOBALLY DISTRIBUTED INFORMATION TECHNOLOGY WORK

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# IDENTITY AND CROSS-CULTURAL MANAGEMENT IN GLOBALLY DISTRIBUTED INFORMATION TECHNOLOGY WORK

*Completed Research Paper*

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## **Abstract**

*An interpretive case study was conducted to examine how team members construct their identities and manage cultural differences in globally distributed information technology work. Research investigating globally distributed information technology work acknowledges the influence of culture on team members and their work activities, but issues of team members' individual identity and agency are under explored. Guided by social identity theory, our research findings suggest four identity categories constructed by global virtual team members, which are affected by societal culture, organizational culture, individual experience, and structure of the globally distributed IT work. They are: national identity, organizational identity, individual identity, and power identity. Manifestation of each identity is discussed along with how the enactment of these identities affects the ways in which global virtual team members manage cultural differences.*

**Keywords:** Virtual teams/geographically dispersed teams, Cross-cultural issues/cultural differences, Social identity, Individual characteristics/individual differences, Global software development

## **Introduction**

Supported by advancements in networking technologies and motivated by the need for global intellectual resources, distributing information technology (IT) work globally using global virtual teams has become increasingly popular in the IT industry. Accompanying this trend, the practices of globally distributed IT work face a number of challenges with respect to communication, coordination, and relationship development due to geographical separation, time zone difference, or/and cultural diversity (Carmel 1999; Carmel and Agarwal 2001; Evaristo et al. 2004; Herbsleb and Moitra 2001; Maznevski and Chudoba 2000; O'Leary and Cummings 2007; Sarker and Sahay 2004).

In this paper, we refer to a global virtual team as a collection of individuals who are globally distributed and culturally diverse, and who communicate and coordinate work activity either asynchronously or in real time primarily through information and communication technologies (ICTs) (Jarvenpaa and Leidner 1999). Cultural diversity of global virtual teams results from team members' diverse national, organizational, and professional cultural backgrounds (Karahanna et al. 2005; Prikladnicki et al. 2003). A number of studies have suggested that culture is a critical influential factor affecting the performance of global virtual teams in terms of: communication (Carmel 1999; Herbsleb and Moitra 2001), coordination (Huang and Trauth 2008), managing relationships (Krishna et al. 2004; Nicholson and Sahay 2001; Sahay et al. 2003), managing conflicts (Damian and Zowghi 2003), building trust (Zolin et al. 2004), preference of computer supported collaborative technologies (Massey et al. 2001), and transferring knowledge (Audy et al. 2004; Baba et al. 2004; Nicholson and Sahay 2004).

In the published literature on global virtual teams and globally distributed IT work, there is extensive research acknowledging the relevance and influence of cultural diversity. But many of these studies focus on the influence of national culture. What is understudied are the multi-level and dynamic aspects of the socio-cultural context of global IT (Davison and Martinsons 2003; Karahanna et al. 2005; Martinsons and Davison 2003; Myers and Tan 2002). There is also a paucity of research that examines the individual agency of global virtual team members and the variation in their identity construction as a result of multiple cultural influences (Straub et al. 2002). Motivated by the need to gain an in-depth understanding of the relationships between cultural influences and individual agency, the objective of this paper is to shed light on how global virtual team members construct their identities and manage cultural differences when engaging in globally distributed IT work.

An interpretive case study of a multinational IT company shows that in globally distributed IT work, global virtual team members not only drew from their national and organizational cultural backgrounds to construct national and organizational identities, but also drew from their individual experiences and the arrangement of global IT work to construct individual and power identities. Our findings suggest that when enacting these identities, global virtual team member may adopt acceptance, adaptation, or integration tactics to manage cultural differences.

This paper is organized as follows. In the next section, we review the relevant literature on cultural influences, identity construction, and cross-cultural management. Then we introduce the research questions and describe the method employed in this research. The paper proceeds by presenting the research findings, and discussing the theoretical and practical implications of the results. The paper concludes by highlighting contributions of the research.

## **Research Background**

### ***The Influence of Culture on Globally Distributed IT Work***

Globally distributed IT work is situated within a multi-level and dynamic socio-cultural context (Dafoulas and Macaulay 2001; Gallivan and Srite 2005; Huang and Trauth 2006; Karahanna et al. 2005; Myers and Tan 2002). While the cultural diversity of global virtual team members can contribute to the knowledge capital of global IT work through augmenting the team creativity, flexibility and problem-solving capability, it can also serve as a detrimental factor to affect communication, coordination, and transferring knowledge (Barrett and Oborn 2007; Carmel 1999; Camel and Tjia 2005; Herbsleb and Moitra 2001; Miroshnik 2002; Trauth et al. 2006). For example, Sarker and Sahay's (2004) research on global virtual teams involving U.S. and Norwegian students suggested that the cultural differences might result in dissimilar communication styles leading to misunderstandings. Several studies indicate that cultural differences in time perceptions and relationship orientations can affect how global virtual team members coordinate activities in systems development projects (Espinosa and Carmel 2003; Huang and

Trauth 2008; Saunders et al. 2004). Nicholson and Sahay (2004) argued that cultural diversity may become a barrier to knowledge sharing and transfer in global IT projects as some knowledge is contextually dependent and culturally contingent.

Quite a few cross-cultural information systems (IS) research studies focus on exploring the influence of national culture on systems development, implementation, or/and adoption. A number of IS scholars have pointed out the importance of recognizing the multi-level character of the socio-cultural context surrounding global IT work, and of taking into account not only the influence of national culture, but also the influence of regional and organizational culture when relevant (Gallivan and Srite 2005; Huang and Trauth 2006; Karahanna et al. 2005; Leidner and Kayworth 2006; Straub et al. 2002; Weisinger and Trauth 2003). For example, Robey et al. (1988) conducted a case study of the implementation of a multinational company's accounting information system at its subsidiaries in two Latin American countries. Their findings show that the significant differences in implementation outcomes were not so much attributed to the cultural and political differences between these two countries as they were to the organizational cultural differences of the two subsidiaries. Barrett and Walsham (1995) studied a global software development project involving a Jamaican insurance company and an Indian software company, and found that both national cultures and organizational cultures played important roles in relationship issues during the project.

### ***Social Identity Theory***

Straub et al. (2002) pointed out that the majority of cross-cultural information systems research assumes a consistent pattern of macro-level behaviors within certain cultural groups, but may overlook the role of individual agency. They suggest the main reason might be that those studies view culture as a one-level structure and hence depict national culture as the main determinant of individuals' cultural identities. Similarly, Gibbs (2009) studied the influence of culture on a global software team and stressed that it was important to recognize the multidimensional nature of team members' cultural identities. Berson, et al. (2004) suggested that individuals working for global companies often evaluate their roles resulting from different identification processes and multiple cultural influences. Gelfand et al. (2007) reviewed recent cross-cultural research on organizational behaviors and pointed out that empirical research is needed to understand how individuals balance different identities and how the enactment of different identities affects individuals negotiating and managing cross-cultural issues, given that individuals can draw on multiple sources of cultural influences.

The social identity theory, developed by Tajfel (1972, 1974, 1978), can be used to study the individual agency of global virtual team members regarding how they construct their identities when interacting with remote team members. According to social identity theory, identity refers to a person's sense of self resulting from a sense of belonging to certain social groups, such as a nation, an ethnic group, and an organization (Gudykunst and Kim 2003; Levina and Kane 2009). Social identity theory proposes that individuals constantly strive to define selves and others regarding the world in which they live, and constantly categorize the ordering of the socio-cultural context in terms of groups in a manner which makes sense to individuals (Gudykunst and Kim 2003; Tajfel 1972, 1974, 1978). Therefore, social categorization and identification are processes that encompass the dynamic relationships between the influence of the complex socio-cultural context and the agency of individuals, and reflect individuals' similarities and differences during social relations and interactions. Straub et al. (2002) indicated that there are two strengths of using social identity theory in globally distributed IS research: the recognition that different levels of culture co-exist and interact in complex ways; and the recognition that how individuals draw on those cultural influences varies. In this research, we concur that in globally distributed IT work, global virtual team members are embedded in and influenced by the dynamic, multi-level socio-cultural contexts, and may compose their own social identities in different ways, which in turn can affect the ways they negotiate and manage cultural differences and conflicts.

### ***Attitudes and Tactics on Cross-cultural Management***

Conflict management is one of the major challenges for virtual teamwork. Conflict usually refers to the awareness of differences, discrepancies, incompatible goals, or irreconcilable desires by various participating parties (Mannix et al. 2002; Paul et al. 2004). Conflict may have both beneficial and detrimental effects on team performance. Task related conflict can facilitate bringing different perspectives and viewpoints together, provide opportunities for exploring different alternatives, and promote creativity and innovation (Jehn and Mannix 2001; Ocker 2005). However, relationship conflict can affect team cohesiveness and have a negative influence on team performance if not managed properly (Griffith et al. 2003). The existing literature outlines five different styles that may be

employed by virtual team members to manage conflicts: avoidance, competition, accommodation, compromise, and collaborative (Griffith et al. 2003; Gudykunst and Kim 2003; Montoya-Weiss et al. 2001; Paul et al. 2004). Individuals who adopt an avoidance style tend to withdraw from the conflict situation; individuals who adopt a competition style tend to enforce their own views and disregard others; individual who adopt an accommodation style tend to smooth the differences by adapting to other views; individual who adopt a compromise style tend to find the common ground among different views; and individuals who adopt a collaborative style tend to focus on integrating different views.

Within the intercultural communication literature, Bennett (1986, 1993) proposed a Developmental Model of Intercultural Sensitivity (DMIS) to classify an individual's sensitivity or attitude towards cultural differences, which include six different attitudes that can be grouped into two main categories. The first category, ethnocentric, views one's own culture as central to reality in some way. Hence, individuals may deny, defend against, or minimize the cultural differences they experience. Denial indicates that individuals may be disinterested in cultural difference when it is brought to their attention. Defending indicates that individuals may be highly critical of other cultures. Minimization signals a tendency to neutralize cultural difference and expect others to make adjustments. The second category, ethnorelative, views one's own culture in the context of other cultures. Consequently, individuals may accept, adapt to, or integrate the cultural differences they encounter. Acceptance suggests that individuals are curious about and respectful toward cultural differences. Adaptation indicates that individuals may intentionally change their own behaviors to suit other cultures. Integration signals that individuals take into account different viewpoints and invent new ways in which these differences can coexist and complement each other.

One common feature shared between the conflict management model of virtual teams and the intercultural sensitivity model of intercultural communication is that they both acknowledge that individuals have different attitudes towards encountered differences (including cultural differences) and consequently manifest different approaches to managing differences. Therefore, they offer conceptual tools that can be used to analyze individuals' reactions to cultural differences when working in global virtual teams. However, it remains questionable as to whether and how the cultural identities of global virtual team member may affect their reactions to cultural differences.

## **Research Questions**

A number of studies have acknowledged that differences in socio-cultural backgrounds of global virtual team members can lead to differences in their values and behaviors, thereby affecting how they communicate with remote team members, coordinate activities, and manage relationships. However, there is a paucity of research that examines how global virtual team members draw on prospective cultural influences to construct their identities, and to manage the cultural differences or conflicts they encounter when working and interacting with globally distributed team members. Drawing upon social identity theory, we argue that global virtual team members draw upon multiple sources of cultural influences to construct their identities when they interact with team members from other countries in globally distributed IT work. Consequently, the ways in which global virtual team members construct their identities can impact attitudes and approaches that they employ to manage cultural differences that arise in work processes. In this research, we sought to investigate two research questions:

- 1) *How do global virtual team members construct their identities in globally distributed IT work?*
- 2) *What are the attitudes and tactics global virtual team members may take to manage cultural differences as a result of their identities?*

## **Research Methodology**

An interpretive epistemology and a case study methodology were employed in this research. We assumed an interpretative epistemological stance because the research objective was to examine the dynamics of identity construction of global virtual team members and their attitudes towards cross-cultural management. This was achieved by assessing the subjective and inter-subjective meanings held by the research participants who were engaged in globally distributed IT work (Walsham 1995, 2006). A case study approach was chosen because we sought to anchor the investigation in a real setting and draw on multiple data resources (Yin 2002).

## **Case Description**

SerTech is a Fortune 500 multinational information technology company that is headquartered in the United States. The business focus of SerTech ranges from hardware and software, to global IT services. SerTech operates in more than 100 countries worldwide. An important perspective of SerTech's global strategy is to develop and utilize its global offshore delivery centers. In SerTech, there are abundant globally distributed IT projects utilizing global virtual teams. This research focused on studying global IT work collaborations within SerTech among three countries, the U.S., China and India. All of these countries are active players in the global IT offshore outsourcing market (Sahay et al. 2003). The research participants from SerTech were mainly involved with three types of IT work: systems research and development (R&D), business solutions, and IT services. In information systems R&D type of projects, the global virtual teams mainly consist of internal SerTech employees, including both research staff and practitioners. The majority of the work is conducted in virtual environments. In the business solution and IT service type of projects, the global virtual teams may consist of SerTech employees distributed among different delivery centers and personnel from client companies as well. SerTech utilizes a global delivery model as the structure to arrange the work across different sites. A global delivery model refers to a service provider utilizing an optimized delivery structure to provide IT services to customers seamlessly by involving skills and resources from several of its global locations (Ang and Inkpen 2008; Chakranarty 2006). In a typical project utilizing a global delivery model, at the initial stage, several team members of offshore units will visit the client and work onsite with both the onshore team and customers for a period of time in order to transfer knowledge. After this knowledge transfer stage, the offshore units will work on solution development or manage the applications for the client remotely, while the onshore team is in charge of the majority of direct client interactions and project coordination.

## **Data Collection**

This research drew on three sources of data – interviews, observation, and document analysis – with interviews being the primary data source. The first author<sup>1</sup> collected on-site data at SerTech's facilities in India and China in May 2006 and at one of its facilities in the United States (U.S.) in March 2007. Fifteen SerTech employees were interviewed in India, ten in China, and thirteen in the U.S. In total, 38 interviews were conducted (as shown in Table 1). A criterion sampling strategy was followed to recruit interviewees who were working at SerTech in India, China, or the U.S., and who had had cross-cultural working experiences with colleagues or clients in China, India, and/or the U.S. on globally distributed IT projects (Patton 2002). The participants we interviewed worked in different teams on various projects that were globally distributed. We also sought to recruit interviewees with different roles and job responsibilities in order to get diverse viewpoints from the participants and gain an in-depth understanding of a variety of experiences. The participants in this research can be grouped into three major categories according to their roles: team members, project and program managers at various levels, and human resource managers (please check Table 1 for detail).

The interviews were semi-structured and typically lasted 45 to 60 minutes. An interview protocol was applied to ensure the specific research interests were brought into focus, and, at the same time, to allow some flexibility for exploring and probing themes emerging from the interviews. The interview protocol consisted of a set of questions to ask interviewees about their backgrounds, the nature of globally distributed projects they have been involved with, some significant incidents related to cultural differences during those projects, the impacts of cultural differences on the processes of those projects and how those differences were managed. All the interviews were recorded and transcribed.

Observations and document analysis served as supplementary data sources in this research. During the field studies, observational data were collected in the form of field notes about the interviewing processes, local work settings, work activities that took place at each site, informal conversations with the local employees, and the local cultural contexts. Document analysis was conducted throughout the research process. Background documents about SerTech's global strategies and local operations were reviewed and analyzed before field site visit. These documents included news releases, annual reports, strategic plans, white papers, and product and business showcases, etc. During the field work, documents that were relevant to company's cross-cultural management were collected and studied if access permission was given.

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<sup>1</sup> The first author is of Chinese nationality and has studied and worked in the U.S. The second author is of American nationality and has extensive experience working and living in other countries.

**Table 1. Summary of Interview Data**

	Number of Interviewees	Positions
India	15	3 Team Members 3 Project Managers 6 Program Managers 3 Human Resource Managers
China	10	5 Team Members 2 Team Leads 1 Project Manager 1 Program Manager 1 Human Resource Manager
U.S.	13	7 Team Members 1 Team Lead 2 Project Managers 3 Program Managers

**Data Analysis**

Data analysis was guided by a qualitative analysis strategy that focused on examining the narratives of the participants, understanding how participants articulated and made sense of the phenomenon, and, at the same time, acknowledging how a researcher’s personal beliefs and experiences shaped the interpretation. The principle of the hermeneutic circle was followed during the analytical process to ensure that the interpretation of parts of the data was dialectically interrelated to constructing meaning of the whole (Klein and Myers 1999; Myers 2004; Trauth and Jessup 2000). More specifically, a set of data analysis techniques were employed in the coding process, including interpretive reading, reflexive reading, open coding, and data triangulation.

First, the interpretive reading and reflexive reading techniques were employed to review the data and generate meaning from the data (Mason 2002; Schultz 2001; Trauth 2000; Trauth and Jessup 2000). During the interpretive reading, we focused on constructing an account of the interviewee’s own articulations and interpretation. During the reflexive reading, we focused on incorporating the field study experiences and reflecting our own roles and perspectives as part of data generation (Klein and Myers 1999; Schultz 2001). Then, through multiple interpretative and reflexive readings of data, we employed an open coding technique to identify, sort, and refine emerging themes that were related to culture and other influential factors associated with the identity construction of global virtual team members, the manifestations of each identity, and the impact of these identities on their attitudes and tactics towards cross-cultural management (Strauss and Corbin 1998). These emerging themes were then analyzed, compared, and grouped into constructs and sub-constructs to be included into the coding schema. During the data analysis, field notes of observations and analysis of relevant documents served as sources for triangulation to ensure the consistency and validity of findings (Trauth and Jessup 2000). For example, it was found from analyzing interview data that a larger percentage of participants from SerTech, India, identified with the company than was the case for participants in the U.S. and China. The field observations noted by the first author corroborated this finding. There were many posters and exhibitions displayed around SerTech’s facilities in India to demonstrate the fast development and significant contributions of SerTech, India. During the interviews and informal interactions, many SerTech IT professionals in India expressed a sense of pride about their hard work and success.

**Research Evaluation**

We employed a set of established evaluative criteria for interpretive information systems research to evaluate the findings, which include contextualization, triangulation, member checking and authenticity (Golden-Biddle and Locke 1993; Klein and Myers 1999, Trauth and Jessup 2000; Walsham and Sahay 1999). To ensure contextualization, we not only analyzed the socio-cultural contexts that surround global virtual teams, but also took into account some unique characteristics of globally distributed IT work. Triangulation was achieved by combining multiple sources of data to ensure that different perspectives were taken into account. We also performed member checking by discussing initial interpretations and emerging findings with participants of this research and with

experts within the research community. To achieve authenticity, we utilized the technique of thick description when presenting research findings with the aim of providing detailed accounts of the socio-cultural contexts of the research setting (Walsham and Sahay 1999).

## Findings

Our research findings show that in the complex socio-cultural context of globally distributed IT work, the ways in which global virtual team members construct their identities are dynamic. The global IT professionals who participated in this research mainly drew on four influential factors to construct their identities: national identity, organizational identity, individual identity, and power identity. Accordingly, global virtual team members adopted acceptance, adaptation, or integration strategies to manage culture differences they encountered in work practices.

### *Societal Culture, National Identity and Cross-cultural Management*

National identity refers to one's sense of belonging to a particular country or societal culture. As the IT industry becomes increasingly global, so does the IT workforce. Among the 38 interviewees participating in this research, nine did not work in their country of origin. Seven out of 13 participants who were interviewed in the U.S. were born and educated in other countries, mainly in India and China. Table 2 shows the country of work and the country of origin of these 38 participants. When articulating the influences of societal culture on their identities, those nine participants who were born and educated in one country, and worked in another country primarily drew on the cultural influences of their country of origin. At the same time, they acknowledged the effects of their individual experiences in their current country of work on how they managed cultural differences.

**Table 2. Country Profiles of the Participants**

Country of Work	Country of Origin			
	U.S.	India	China	Others <sup>2</sup>
U.S. (16)	6	2	4	1 (Europe)
India (16)	0	14	0	1 (Europe)
China (12)	0	0	9	1 (East Asia)
Sub-totals	6	16	13	3
Total	<b>38</b>			

During the process of articulating how cultural factors affect globally distributed IT work, all the research participants drew on their country of origin to define national identity and seek relevant cultural influences. On the one hand, they exploited the influences of national culture in their interactions with other global virtual team members and acknowledged the behavioral differences in communication, coordination, and other work styles. On the other hand, they highlighted some unique characteristics of their national cultures that can be leveraged, in order to adapt to, or integrate cultural differences. Figure 1 illustrates that while all the participants affirmed their national identity, about half of the participants further identified unique characteristics within their own cultures that empowered them to manage cross-cultural or multi-cultural interactions in their work.

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<sup>2</sup> The use of large region instead of specific country here is to ensure the confidentiality of the participants' identity.



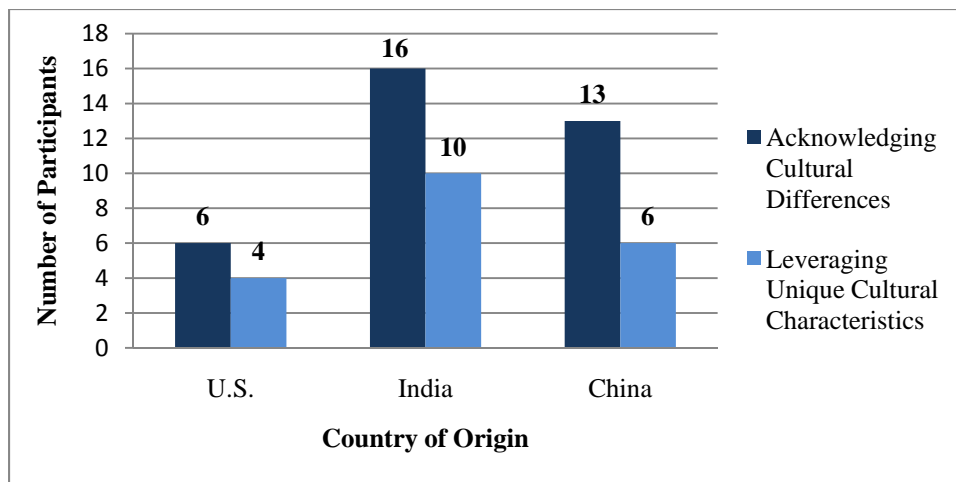


Figure 1. Number of Participants Drawing on National Identity

### Acknowledging Cultural Differences

In this research, all the participants (from China, India, and the U.S. by country of origin) acknowledged the influence of national culture on their values and behaviors. Such acknowledgements sometimes were manifested in their descriptions and articulations of behavioral differences among global virtual team members. For example, Jack (from the U.S.) suggested that he was used to an open and direct communication style, influenced by his American cultural background. During one project in which he worked with several colleagues in India, his Indian colleagues were upset about some work arrangements but he was unaware of it until it was called to his attention by another colleague.

*I remembered [Matt] calling up and saying that the other guys<sup>3</sup> were upset about something. So he contacted me and wanted to let me know... I was surprised they felt that they could not come to me about that... I think us, American are much more open about that, sometimes, probably too much though. [Jack, the U.S.]*

Sometimes the participants explicitly expressed how their identities were shaped by their country of origin. For example, Sunil was a senior program architect working at SerTech in the U.S. He and his family have lived in the U.S. for more than twenty years. He stressed that his Indian heritage was deeply ingrained as a part of his identity.

*I have spent half of my life in India. I have spent about half here. They are both significant pieces. I believe in the cultural values and family values, which my parents, my society, and my country give to me. I respect that. While I have been here for long, I still practice my worship. [Sunil, the U.S.]*

Affirming the national cultural identity and acknowledging the cultural differences help to build a foundation for global virtual team members to articulate the differences that are brought about by different national cultures. The development of such a foundation is essential to fostering the awareness of cultural diversity, in which one's own culture is experienced as one of many different worldviews (Bennett 1986; Lusting and Koester 2003). It is the awareness of cultural variations that leads to openness to cultural diversity, acceptance of and respect for cultural differences (Earley and Mosakowski 2004; Shokef and Erez 2006).

### Leveraging Unique Socio-Cultural Characteristics

Acknowledging cultural differences is one manifestation of IT professionals reinforcing their national identities. Another important manifestation is that IT professionals also actively exploited some unique characteristics of their cultures, which they felt enabled them to be open, inclusive, or to adapt to other cultures. What American IT professionals highlighted was the "melting-pot" character of the country. They suggested that Americans, including

<sup>3</sup> "Other guys" referred to team members in India.

themselves, are immigrants or descendants of immigrants from all over the world. These immigrants have brought their diverse cultural heritages into the U.S.. They believed that, as a result, openness was a unique characteristic of American culture and that also was the attitude and strategy that they held when they interacted with colleagues and clients from different countries. For example, one American IT professional working in the U.S. commented:

*We are very open because we are a nation of immigrants, and many of them are recent. [Jack, the U.S.]*

Indian IT professionals commonly emphasized the fact of India being a very diverse country helped to prepare them to interact with different cultures in the world. India is a multi-ethnic, multicultural, and multilingual society. Different regions have different cultural heritages that have a great impact on the people living there (Das 2002; Panda and Gupta 2004; Sinha 2004). Some Indian IT professionals pointed out that, in their everyday living, they interacted with people from different local cultural backgrounds. These experiences transcended the workplace and empowered them to be open, flexible, and adaptive to different foreign cultures. For example, Arul, an Indian developer asserted that:

*Within India itself, people look different, speak differently, and eat differently. We also have different value systems... We have to make adjustment all the time when we do business in India. This comes across. We are very open. We have the ability to adapt. Our own backgrounds in India grant that. [Arul, India]*

Chinese IT professionals stressed the influence of Confucian philosophy on Chinese society. In particular, they noted that the cultural values of respecting others, accepting differences, and a desire for harmony laid the foundation for them to work with global virtual team members. The Confucian philosophy emphasizes a mutual respect by saying “never impose on others what you would not choose for yourself”. Scholars point out that the “harmony” in Confucian philosophy is not equal to “homogeneity” or “sameness” (Ames 1998; Hooker 2003; Kirkbride, et al. 1991; Leung, et al. 2002; Tjosvold, et al. 2005). Leung et al. (2002) argue that harmony in Confucianism is not about avoiding confrontations and arriving at a uniform view. Instead, in Confucius philosophy, to reach harmony as a whole is to reconcile the differences and make the most of the strengths of each part, in order to pursue mutual benefits under cooperative goals (Ames 1998; Leung, et al. 2002; Tjosvold, et al. 2005). Several Chinese participants of this study suggested they were open and direct with work related concerns, but they would be relatively contained towards relationship related issues. This indicates that they would adopt collaborative or integration tactics to manage task conflicts and an adaptation or compromise style to manage relationship conflicts. For example, Hong, a Chinese IT professional, described her approaches to different types of conflicts.

*If it is related to work or if I have concerns about the work schedule and the project, I will be open and direct. But if you ask me whether I have any opinions about other issues, I probably will hold my thoughts and opinions. [Hong, China]*

Another unique socio-cultural characteristic highlighted by both Chinese and Indian participants was that they had plenty of talented, young IT professionals who were eager to learn. They believed that such human capital was the biggest asset or advantage for China and India to compete in the global IT market in the future. Several Indian IT professionals commented that knowledge and education were highly valued in Indian society and as a result there were a large number of engineering graduates with solid technical skill training available each year in India. Several participants in China argued that it was important for Chinese IT professionals to utilize the opportunities of global IT offshore outsourcing to learn new techniques, accumulate knowledge, and gain more experience, which can facilitate the development of the Chinese software industry and increase China’s competitiveness in global IT market.

*What is unique here is the abundance of talents... There is a huge amount of talents. They have solid skill education such as doing [multiplication] by hand without using a calculator. Knowledge is considered as a gift. [Our] respect for knowledge is culturally engrained. [Karthik, India]*

*We are smart. But we are in the developing stage. We need to gradually accumulate our knowledge and build up our competency in the learning process. [Chun, China]*

### **Organizational Culture, Organizational Identity and Cross-cultural Management**

Organizational identity refers to one’s sense of belongingness to an organization (Puusa and Tolvanen 2006). Twenty-one of the 38 participants demonstrated a strong sense of belonging to the company. More specifically, they spoke favorably about the global and diverse aspects of SerTech, suggesting that this provided them with a wide variety of learning opportunities to manage cultural differences. At SerTech, they had opportunities to interact with

colleagues and customers from different countries and ethnic backgrounds. It was through these learning opportunities that they gained the experiences and developed the skills to manage the cultural differences they encountered in their global IT work. They emphasized that these learning opportunities were not only beneficial to their work, but also helped their personal career development. Sania stated that she had worked for an Indian company and another western based multinational company before she joined SerTech. She compared her experiences with these three companies, and pointed out that she appreciated her SerTech experiences more than the others because it truly valued diversity.

*Once I came to [SerTech], the [SerTech] culture definitely influences me a lot. [SerTech] has this focus on diversity, creating diversity workforce, and how to deal with diversity. And all the management training is excellent. They create opportunities of working with people from so many different parts of the world. [Sania, India]*

Ankur had worked for SerTech for ten years. He mentioned that during those ten years, he was assigned to work in the UK, Germany, and the U.S. for various periods of time. His most recent job responsibility was mainly to work with colleagues and customers in the U.S. Ankur pointed out that he learned a great deal through these assignments and projects, understanding and becoming more aware of what cultural differences might exist and how to handle them. He stressed that, more importantly, these experiences helped him develop the attitude and strategy of being open, sensitive, and adaptive to differences.

*[SerTech] is a good example of truly globalized companies. I have been with [SerTech] for ten years... [SerTech] has a history of valuing diversity. Diversity has been a focus of [SerTech] a longtime, [such as] gender diversity and culture diversity. We look like our customers. If we as a company don't look like customers, the customers will not hire us. [Ankur, India]*

Hong worked for SerTech, China, which was her first job after graduating from college. She mentioned that she had friends working for other multinational companies or state-owned Chinese companies, and they talked about their working experiences very often. Hong indicated that working for SerTech provided her with many different learning opportunities.

*As a new college graduate, [SerTech] culture affects me a lot. I think it is better to work for a global company like [SerTech]. You will learn a lot through work, such as work styles, professionalism, and how to deal with differences. Unlike some state-run Chinese companies, you may have limited opportunity and exposure. Their culture and style is very different. [Hong, China]*

In SerTech, India, a larger percentage of participants expressed a sense belonging to the company than was the case for participants in the U.S. and China. Figure 2 illustrates the percentages of SerTech participants who enacted their organizational identity in the U.S., India, and China. Six out of 13 participants (46.2%) from the U.S. recognized the important influences of the organizational culture on their work. In India, 11 out of 15 SerTech participants (73.3%) expressed their sense of belonging to the company. While in China, four out of ten SerTech participants (40%) acknowledged similar affiliations. SerTech has invested a significant amount of money and resources in developing and expanding their development and delivery capacity in India. Currently, India is SerTech's largest development and services delivery base outside the U.S. During the interviews, many SerTech IT professionals in India shared a strong sense of pride that they were at the center stage of SerTech development plan and that their work greatly contributed to capacity development and growth of the company. At the same time, the company also constantly acknowledged the important roles of SerTech, India. These factors helped to strengthen the employee's identification and affiliation with the company.

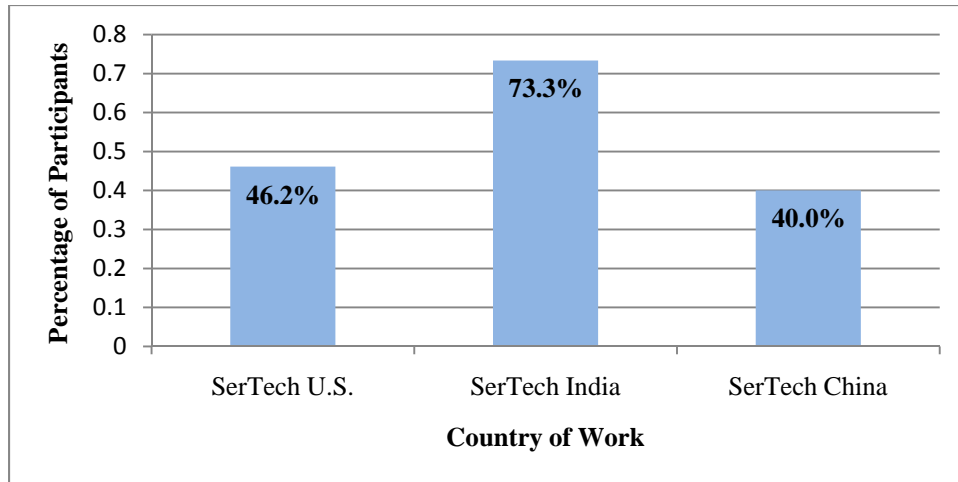


Figure 2. Comparison of Organizational Identity among SerTech’s Employees

*Individual Experiences, Individual Identity, and Cross-cultural Management*

Individual identity in this study refers to participants drawing on personal experiences as resources to help in managing cross-cultural differences at work. There are three major sources that could contribute to the affirmation of individual identity. The first source is personal cross-cultural experience. The second source is family influence. And the third source is individual motivation. The research findings show that eight out of 13 IT professionals interviewed in the U.S. mentioned the influence of their individual experience; five out of 15 IT professionals interviewed in India suggested the relevance of their individual identity; and three out of ten research participants in China also articulated the formation of their individual identity (as shown in Figure 3).

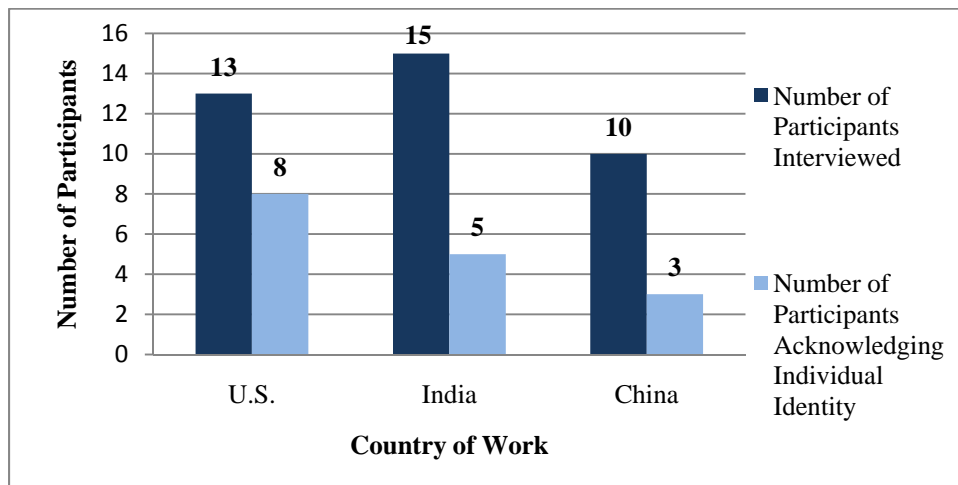


Figure 3. Number of Participants Drawing on Individual Identity

One major source of personal experience was studying or working in another country for an extended period of time. Some participants said that through their personal cross-cultural experiences they developed an appreciation for different cultures. Moreover, they learned the importance of being open and respectful when dealing with cross-cultural differences. Some of these participants pointed out that their understanding of two different cultures enabled them to bridge the cross-cultural differences between their collocated team members and the remote team members. Jian worked for SerTech, the U.S. He was from China originally. During the interview, Jian spoke about his

experience when he first came to the U.S. as a student. At first, he had difficulties with language, which was a barrier to his communicating with others. In the classroom, he was surprised to see how open his American classmates were, because coming from a traditional Chinese background he was taught that being outspoken was disrespectful. Gradually he realized that encouraging different opinions and exploring different ideas was a good way of learning. Jian indicated that his approach to managing cross-cultural differences was a combination of these two influences: being respectful, something he learned from his Chinese cultural background, and being open, something he learned from his American cultural experience. Jian also talked about being able to utilize his cross-cultural experience and bilingual skills to resolve the differences between his collocated American team members and remote Chinese team member in some globally distributed IT projects.

Another source of individual experiences that were employed by the participants to construct their individual identity was family influence. Keith worked for SerTech, the U.S. His was a first generation of American family from Europe. Keith indicated that his parents taught him to be respectful of differences. He also said that while growing up in a Chicago neighborhood he had many friends from different ethnic backgrounds. It was through those personal experiences that he learned about differences in multiple cultures.

*I attribute the majority of that to growing up in Chicago, a very multicultural city. Growing up I had a lot of friends from many different countries. My experiences with different cultures taught me how to be respectful... My parents have also taught me to be very respectful. I am the first generation of [European]-American. It has a strong influence on me and how I interact with people. [Keith, China]*

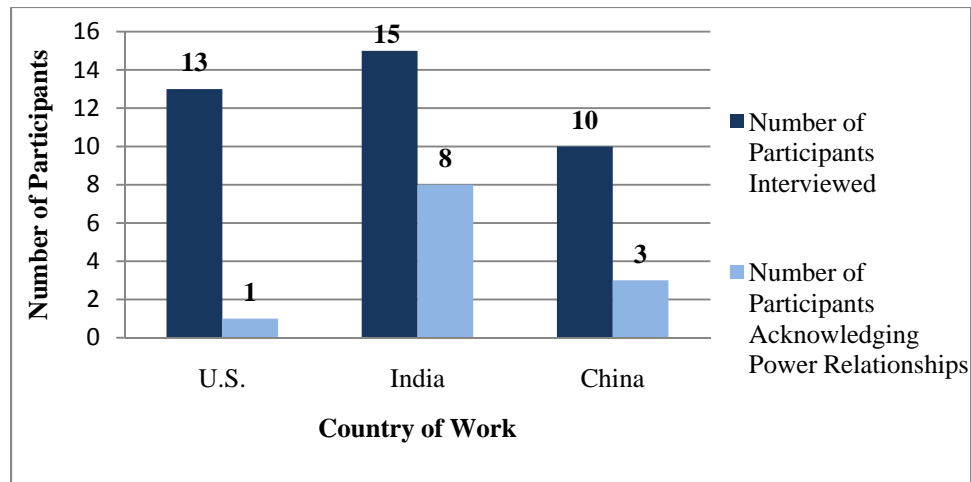
Some IT professionals indicated that they were personally motivated to proactively explore and develop an understanding of different cultures. Ted was originally from Europe. He had worked for SerTech, the U.S. for a while. He was working at SerTech, India when I interviewed him. Ted mentioned that experiencing and learning about different cultures was exciting and rewarding for him.

*I am motivated by being international. I think it is exciting. The world is our playground, to see and experience different cultures. That's what is driving me from Europe to America and from America to here. It is fascinating to observe different cultures and find out how things work differently in different cultures. It is quite rewarding when you can break the code and start to understand the local culture. [Ted, India]*

### ***Structure of Globally Distributed IT Work, Power Identity, and Cross-cultural Management***

The findings of this research indicate that some global IT professionals draw on power relationships to construct their identity when handling cross-cultural differences. The dynamic of power is embedded in the structure of IT offshore outsourcing and globally distributed IT work. The dyads of outsourcer-outsourcee, customer-service provider, and headquarter-subsidary all entail a certain degree of power dynamics. When there is a difference or conflict between the two parties in a power relationship, the party with less power usually adapts to or compromises with the party with more power. Figure 4 illustrates that one American, eight Indian, and three Chinese IT professionals acknowledged the influence of power relationships on their interactions with global virtual team members.

It was found that the participants mainly drew on three power identities. The first was the power relationship between the core team (i.e. onshore team) and its support teams (i.e. offshore teams). A core team is a part of a large project team that is in charge of or works closely with customers (onshore with customers), developing architecture and specifications, delegating the development work to the supporting teams and coordinating their development activities, integrating different system components, and delivering the finished products or services to customers. A support team is usually only in charge of part of the development work such as coding or testing the codes. The participants suggested the teams in India and China usually played a supporting role in the globally distributed IT projects to assist the core team in the U.S. or Europe. The core team was in the leadership role holding the resources and knowledge about the entire project. When such a power relationship came into play, the support team was the one that adapted to and complied with the core team.



**Figure 4. Number of Participants Drawing on Power Identity**

*Those guys sitting in the U.S. are closer to the customers. Instead of equal relationship, you tend to have an uneven relationship. We are lacking ownership here. [Nazar, India]*

*The core team is our internal customer. They pay us. They cover our expenses. They are the one holding the upper hand, relatively speaking. If we have conflicts, we are the side that needs to compromise. [Hong, China]*

The second type was the power relationship between the outsourcer and its outsourcee. Some participants pointed out that a company's move to outsourcing usually was accompanied with people losing their jobs in that company. When they worked with employees in the client company to transfer knowledge, they might encounter reluctance. Sania suggested that as the outsourcee party of this power relationship, they needed to be extra sensitive to differences and conflicts.

*Unfortunately the knowledge transfer usually means taking away someone's job from there. People lose their jobs because of outsourcing. It is a sensitive situation. We need to educate our employees to be extra sensitive. [Sania, India]*

The participants indicated that the power relationship between the outsourcer and outsourcee could lean towards either way. Sometimes the outsourcer had more power while sometimes the outsourcee had more power. Shilpa (India) pointed out sometimes the client company was skeptical about outsourcing and did not trust people in India and China to do the job. The client company sometimes positioned itself in a superior role and demanded that the teams in India and China followed its orders. She suggested that it usually happened when the client had no prior experience in outsourcing work. As a result, the service delivering teams in India and China had to be more flexible and make compromises. Sania also suggested that usually the client company would readjust its position during the process when they received quality products or satisfactory services and developed a trust relationship with the vendor.

*As soon as India or China is into the picture, or as soon as the word 'outsourcing' is into the picture, some kind of superiority comes into the play: "I am the boss. You are the vendor. I tell what to do..." Most of the time, we do see that attitude from people who haven't dealt with outsourcing vendors before. They start with the attitude of superiority and want to call all the shots... However, once they see good results from us, they will change... So we need to anticipate some level of skepticism from the people who are doing it for the first time. We need to be more patient and flexible. [Shilpa, India]*

On the other hand, some participants argued that the outsourcee or the vendor had more power over the client. In some cases, Raj said, the client companies chose to outsource because they did not have the internal expertise or skills for the project, or they had to reduce costs. For these companies, outsourcing might be their best option. In those situations, the outsourcee or the vendor would have more power, and the client had to comply with the vendor.

*Sometimes they also have to adapt to us because we are cheap and we do a good job. Why with all the differences and challenges, people still come to India – to take the benefit of low cost delivery center, high*

*quality job, and the availability of people. They need to learn how to work with us and adapt to us as well.*  
[Raj, India]

The third type was the power relationship between the customer and the service provider. Design and delivering IT services for customers is a major category of globally distributed IT work, which is customer-centric and emphasizes customer satisfaction (Rust and Miu 2006). The participants indicated that within this power relationship, the customer was the party with more power and they, as the service provider, had to satisfy the customer's needs.

*Customer cannot be expected to change or adapt your style. Customer is the king. So we need to take an extra step and adapt to them.* [Sachin, India]

Scholars point out that power dynamics are embedded in an outsourced relationship, resulting from different access to resources, such as economic, intellectual, social, and symbolic resources (Allen et al. 2002; Carlile 2004; Levina and Vaast 2008; Nicholson et al. 2006). Due to the structure of globally distributed IT work and offshore outsourcing, the three power dynamics identified in this study can be attributed to the uneven access to or share of available resources. The power relationship between the core team (or the onshore team) and its support teams emerges as the core team has more access to technology and monetary resources, has the ownership of project information and special knowledge and expertise (i.e. system analysis, architecture design, and system integration), and holds more social resources (i.e. close relationship with onshore customers) and symbolic resources (i.e. higher status and more authority). The power relationship between outsourcers (clients) and outsourcees (vendors) emerges because on the one hand the outsourcer has the ownership of domain knowledge (intellectual resources) and holds more economic capital and symbolic resources; on the other hand, the outsourcee has the professional expertise and skills (intellectual resources) and access to technology at a lower cost (economic resources). The power relationship between customers and service providers emerges as customers hold more symbolic resources.

*To a large extent, most of the technical competence such as the architect piece and the solution piece is done onsite... The sophisticated skills are resident in those countries such as the U.S... They are taking a small piece and give it to India. We don't know how it influences other components. We don't have the visibility of the entire project.* [Nada, India]

The adoption of a power identity can become an obstacle to effective collaboration and knowledge sharing between clients and vendors, or between onshore teams and offshore teams (Levina and Vaast 2008; Moteiro et al. 2007). Power dynamics may further widen the existing geographical, temporal, and cultural distance among globally distributed team members. Instead of attempting to integrate different perspectives to create synergy, global virtual team members who draw on power relationships might adopt a one-sided, compromising strategy when they negotiate and manage cultural differences.

## **Discussion**

The research framework presented in Figure 5 illustrates the relationship between the influential factors (including cultural influences) and identities of global virtual team members, and between their identities and the ways in which global virtual team members manage cultural differences. With respect to the influential factors, this framework includes four major sources of influential factors identified in the research findings. It also highlights four different identities constructed by the research participants as a result of these influential factors. Furthermore, it summarizes three different ways that global virtual team members manage cultural differences, given their identities. This research framework facilitates understanding the research findings in the following way. With respect to the first research question, the findings show that global virtual team members may draw on societal culture, organizational culture, individual experience and motivation, and the structure of globally distributed IT work to construct their national, organizational, individual, and power identities. Regarding the second research question, our findings show that depending on which identity is enacted by global virtual team members, their attitudes and tactics with respect to cross-cultural management may vary from acceptance, to adaptation, to integration.

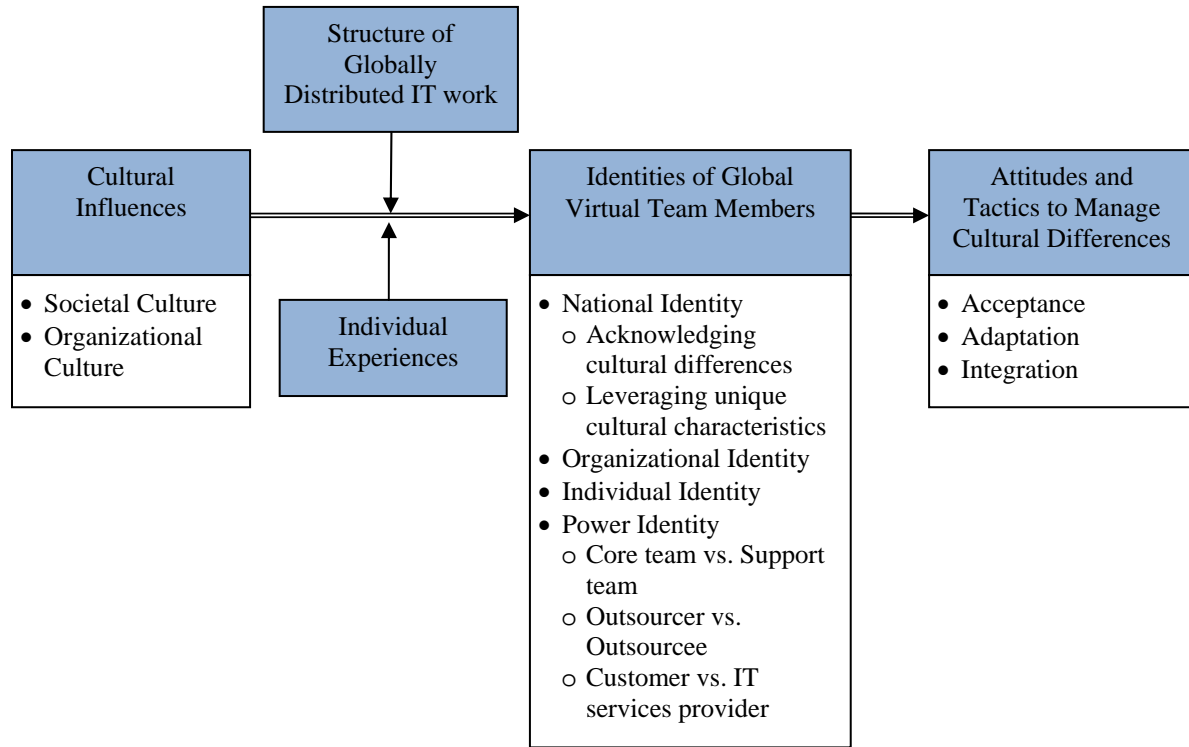


Figure 5. Research Framework

### *Implications for Theory and Practice*

In this research, we found empirical evidence to support social identity theory by identifying four major categories of identities drawn upon by global virtual team members when they articulated the influences of culture on their work, indicating the complexity of the socio-cultural context of globally distributed information technology work. In addition to national identity and organizational identity, which resulted from the influence of societal culture and organizational culture, respectively, it was found that individual experience and the structure of globally distributed IT work also played influential roles in shaping the identities of global virtual team members, which in turn affected how they managed cultural differences. One research findings show that national culture was not the only influential factor drawn upon by globally distributed team members to articulate and manage cultural differences in their global IT work. Our research findings also demonstrate how the power dynamics resulting from the structure of globally distributed IT work could contribute to the formation of several power identities. Another important implication of the research findings is that global IT professionals act on individual agency and construct their own identities in various ways. It was found that while some participants drew upon one primary identity when they articulated cultural differences, other participants elicited more than one source of identity when they examined their cultural identities.

The research findings suggest that the national identity of global IT professionals can have two components: acknowledging cultural differences and leveraging unique cultural characteristics. Our research findings provide rich insights about the nature of these unique cultural characteristics in the contexts of India, China, and the U.S., and how they could be leveraged in cross-cultural management. The first component, acknowledging cultural differences, can serve as the basis for global virtual team members to articulate cultural differences and develop an understanding of their own culture and the culture of others. The second component, leveraging unique cultural characteristics, can serve as the motivation for global virtual team members to be open, inclusive, and respectful of cultural differences, and to be flexible when adapting to or integrating cultural differences. This research finding has important implications for both theory and practice. First, it indicates the agency of global virtual team members in that they actively exploited the unique characteristics of their culture in composing their identities and managing



cultural differences. Second, it highlights the value of cultural diversity, which can be utilized in organizational cross-cultural management.

It was found that global virtual team members also drew on their personal attributes as enabling sources to facilitate cross-cultural negotiation and management. These personal attributes could include a priori cross-cultural experiences such as studying and working abroad, ethnic background, life experience, and self-motivation. This finding again asserts the individual agency of global IT professionals. This finding also has implications for human resource management. It is important for the company to discover and value the cultural intelligence of employees. Earley and Ang (2003) defined cultural intelligence as an individual's capability to function and manage effectively in culturally diverse settings. The ability of global virtual team members drawing on their cross-cultural experiences and motivations represents the cognitive and motivational aspects of their cultural intelligence, and hence is an important asset of organizations.

Another important finding about identity is that global IT professionals, especially Indian and Chinese IT professionals, tend to draw on power identity when interacting with remote team members and clients. It is suggested that power dynamics are embedded in the structure of globally distributed IT work, as a result of uneven access to economic, intellectual, social, and symbolic resources (Allen et al. 2002; Carlile 2004; Levina and Vaast 2008; Nicholson et al. 2006). Three power dynamics were identified in this study, including core team/support team, outsourcer/outsourcee, and customer/service provider. Influenced by power identity, the party with less power makes compromises or adapts to the party with more power during cross-cultural interactions. Since the enactment of power identity can have a negative influence on global IT collaboration, it is important for the company to be aware of the power relationships and take some action to mediate the negative effects.

### ***Practical Recommendations***

Several studies emphasize the importance of developing a third culture (Adair et al. 2006), a global identity (Gelfand et al. 2007; Levina and Kane 2009), or a shared team identity (Hakonen and Lipponen 2007) within global virtual teams. Erez and Gati (2004) pointed out that as a result of exposure to the global work environment, individuals may develop a global identity and maintain their local identity at the same time, and a fit between the global and local identities can facilitate effective adaptation to both environments. The findings of this research indicate that leveraging the unique cultural characteristics, strengthening a shared organizational identity, and taking advantage of individual identity such as individual cross-cultural experience and motivation can serve as boundary spanning mechanisms and contribute to the emergence of a global identity. In addition, the research findings about power identities suggest that in addition to national cultural differences, power relationships can also become barriers to effective collaborations in globally distributed information technology work. Based on our research findings, a set of recommendations can be drawn to inform practice.

#### **Strengthen the Organizational Identity and Value the Local Diversity**

For multinational companies, a shared organizational culture can mediate some cross-cultural differences across different locations. However, the extent to which the organizational culture can have an effect depends on the strength of employees' organizational identities. When global IT professionals have a strong sense of belonging to the organization, they will be more enculturated by the organizational values and norms. Therefore, it is important for managers to develop strategies to strengthen the organizational identities of local employees. At the same time, some unique characteristics of different local cultures should be leveraged and integrated with the organizational identity at different locations (Martinsons and Davison 2010). The research findings suggest that converging values and attitudes exist in different local cultures. These converging values and attitudes are part of the national identity of global IT professionals and can become a valuable asset for the company. This indicates that valuing the local diversity and strengthening the organizational identity can be two complementary approaches to cross-cultural management.

#### **Cultivate a Multicultural Asset**

For many global IT companies, the diverse workforces at different locations are their biggest human capital asset. Many global IT professionals may have cross-cultural backgrounds or cross-cultural experiences. The research findings suggest the individual agency of global IT professionals, drawing on their individual identity, can be used

for managing cross-cultural differences (Erez and Gati 2004). Therefore it is important for companies to cultivate such a multicultural asset.

### **Emphasize Relationship Building**

An important implication of this research is the power relationship that may exist between the onshore teams and offshore teams. As a result of uneven access to project information and customer contacts, sometimes the offshore teams feel they are under or not valued. This power identity can hinder relationship building. Three managerial practices may help to mediate the negative effects resulting from the power relationship. The first practice is to develop a sense of shared success by acknowledging the contributions of offshore team members. The second practice is to increase the share of project information and updates, and involve the project managers of the offshore teams in some direct customer contacts. The third practice is to arrange face-to-face meetings at offshore locations and invite the customer to join, as well, in order to establish a trust relationship (Oshri et al. 2008; Rottman and Lacity 2008).

### **Conclusion**

This paper contributes to the literature of global virtual teams and globally distributed IT work by providing empirical evidence to illustrate the ways in which global virtual team members exert agency to construct their identities and manage cultural differences in globally distributed IT work. This study identifies four major influences that were employed by global IT professionals to construct national, organizational, individual and power identity. This research contributes to the development of theory by confirming the applicability of social identity theory in this context and by demonstrating that global virtual team members may actively enact different influences to construct their identities. This research further contributes to theoretical development by shedding light, in particular, on how global virtual team members construct their identities when facing challenges from cultural differences. It was found that when the participants articulated their national identity, not only did they acknowledge the differences in their national cultural backgrounds, but also they signified some unique characteristics in their national cultural backgrounds that facilitated the management of cross-cultural differences. Organizational identity resulting from the organizational cultural influences could have positive influences on cross-cultural management. The participants also placed value on their personal experiences and indicated that their prior cross-cultural experiences were beneficial to global IT work. In addition to national identity, organizational identity, and individual identity, three types of power identity are revealed, which reflects the embedded power structure of globally distributed IT work. Finally, this paper contributes to practice by suggesting several managerial strategies for leveraging the individual agency of global virtual team members in cross-cultural management.

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