Cross-Cultural Understanding of Construction Project Managers' Conceptions of Their Work

Ping Chen[1]; David Partington[2]; and Maoshan Qiang[3]

Abstract: In recent reforms of the Chinese construction industry, significant efforts have been made toward the introduction of Western project management theories and practices. However, little is known about the extent to which Western project management concepts have been supported by the Chinese culture. Because of certain differences between the two cultures, Chinese managers' conceptions of their work are likely to be different from their Western counterparts. This paper reports an interpretive comparison of Chinese and U.K. construction project managers' conceptions of their work. The findings reveal three of the most similar and five of the most different aspects between the two cultural sets of conceptions. The identified similarities reflect some key characteristics inherent in the construction project management profession. Two of the identified differences, namely Chinese emphasis on commercial awareness and U.K. emphasis on health and safety, arise from social structural differences in the two nations, whereas the other three differences, namely Chinese attention to relationships, Chinese concern for their company, and U.K. attention to project contract, are due to the cultural differences between the two nations.

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Introduction

Originated in the Western aerospace and defense sectors in the late 1950s and 1960s, the professional discipline of project management became more dispersed in the 1970s, most notably in the construction-related work and has since been well established in the Western business world. Until recently China has been relatively isolated from the influence of Western management practices, and there has, in China, been no comparable parallel development of the profession of project management (Qiu 2001). However, since the Chinese economic reforms of the 1980s, project management theories and practices have been transferred into China and have become increasingly recognized, particularly in the construction industry.

The construction industry in China is vast and important. It employed about 40 million people and contributed about 10% to the gross domestic product in 2006 (MoC 2007). It performed quite poorly under China's prereform central-planning system. Since the 1980s, it has undergone major reforms toward adopting a commercial approach, including the introduction of Western project management concepts, which recalls the need for caution in transferring management theories and practices across cultures. Not only are there a number of well-known contrasts between Chinese and Western cultural values that shape management beliefs and practices in important ways. Evidence also shows that the cross-cultural transfer of management theories and practices, in general, is not always successful. It is therefore worth examining the extent to which the basic conceptions underlying Western project management theories and practices have been supported by the Chinese culture.

Although there have been ample China-related studies and some of these studies have touched on cultural factors that affect management styles and practices in China (Easterby-Smith et al. 1995; Lockett 1988; Tang et al. 2006), empirical cross-cultural understanding of Chinese and Western practicing managers' conceptions of their work, particularly in the context of construction project management, remain limited. Methodologically, current Chinese versus Western cross-cultural management studies are dominated by quantitative approaches based on questionnaire surveys (Egri and Ralston 2004; Huff and Kelley 2003; Smith et al. 1996), which may not be appropriate for studies aimed at exploring and comparing meanings and conceptions individual practicing managers in different cultures attached to their work.

This paper reports an empirical research to explore and compare the similarities and differences between Chinese and Western construction project managers' conceptions of their work. In order to explore and compare such managerial conceptions of work in two different cultures without bias from any prior framework, an interpretive research approach, known as phenomenography, was adopted for its potential to reveal people's different conceptions of a given phenomenon (Marton 1986; Sandberg 2000). The given phenomenon in this research is the construction project management work.

Following this introduction, the second section of the paper presents a review of the relevant literature highlighting the theoretical background and methodological orientation of the re-

[1]Postdoctoral Research Fellow, Dept. of Construction Management, State Key Laboratory of Hydroscience and Engineering, Tsinghua Univ., Beijing 100084, PR China (corresponding author). E-mail: pchen@tsinghua.edu.cn or pchenchen@yahoo.com

[2]Senior Lecturer, Cranfield School of Management, Cranfield, Bedford MK43 0AL, U.K. E-mail: d.partington@cranfield.ac.uk

[3]Professor, Dept. of Construction Management, Tsinghua Univ., Beijing 100084, PR China. E-mail: qiangms@tsinghua.edu.cn

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search. The third section describes the research method including sample selection, data collection, and data analysis. The fourth section presents the findings. The fifth section discusses the reasons for the identified similarities and differences in conceptions between the two cultures. The paper ends with a conclusion on implications of the findings for management practice, limitations of this research, and implications for future research.

Literature Review

Apparent Differences between Chinese and Western Cultures

Culture, consisting essentially of people's collective deep-held values and beliefs, is a critical factor in shaping people's conceptions of the world around them (Earley and Erez 1997). The cross-cultural literature is dominated by a variety of models of comparative dimensions derived from anthropological and psychological studies by authors such as Hofstede (1980), Trompenaars (1993), and Schwartz (1994). The important cultural dimensions identified from these models have been widely quoted and used in current cross-cultural comparative management studies (Jackson 2001; Pheng and Leong 2000). Three such models are reviewed below in detail in order to identify the apparent areas of dimensional difference between Chinese and Western cultures. For the sake of comparison, the United States and the United Kingdom are taken to represent the West, because first, the project management profession has been mainly developed in these two nations, and second, they are in the same cultural cluster of Anglo and have both been classified as typical developed Western nations (Ashkanasy et al. 2002; Ronen and Shenkar 1985).

Hofstede's Model

Hofstede (1980) identified four dimensions of culture, labeled *power distance* (PD), *individualism versus collectivism* (ID), *masculinity versus femininity* (MA), and *uncertainty avoidance* (UA). These dimensions were detected through a comparison of the values of matched samples of employees and managers similar in all respects except nationality working in 53 national subsidiaries of IBM Corporation. A fifth dimension, *long-term versus short-term orientation* (LT) was added based on a study of students in 23 countries using a questionnaire prepared by the Chinese Value Survey in Hong Kong (Hofstede and Bond 1988; The Chinese Culture Connection 1987). The data suggest that China is somewhat different from the United States and the United Kingdom on dimensions MA and UA, and more distinctly different on dimensions PD, ID and LT.

Trompenaars' Model

Trompenaars' (1993) study of 30 companies in 50 different countries identified seven dimensions of culture. Five of these, placed under the broad heading of *relationships with people*, are *universalism versus particularism, individualism versus communitarianism, neutral versus emotional, specific versus diffuse*, and *achievement versus ascription*. The sixth dimension concerns *attitudes to time (linear and sequential time versus circular and synchronic time)*, and the seventh *attitudes to the environment (inner-directed versus outer-directed)*. Trompenaars' seven dimensions have been described as conceptually related to some of Hofstede's dimensions and as such can be interpreted as supportive of Hofstede's model (Gatley et al. 1996). For example, Trompenaars' dimension *attitudes to time* is related to Hofstede's dimensions of ID and LT in that individualist cultures such as the United States and the United Kingdom, with a sequential view of time, commonly have shorter-term orientation, whereas collectivist cultures such as China, with a synchronous view of time, typically have longer-term orientation (Trompenaars 1993).

Table 1. Apparent Dimensional Differences between Chinese and Western Cultures

Chinese culture	Western culture[a]
Collectivism	Individualism
Large power distance	Small power distance
Strong uncertainty avoidance	Weak uncertainty avoidance
Long-term orientation	Short-term orientation
Outerdirected	Innerdirected
Relationship	Contractual
Conservatism, tension between hierarchy and harmony	Autonomy, tension between mastery and egalitarian commitment/harmony

Note: Based on Hofstede (1980), Trompenaars (1993), and Schwartz (1994).

[a]United Kingdom and United States.

Schwartz's Model

Drawing on findings from his individual-level study of the content and structure of values, Schwartz (1994) proposed a continuum of cultural values representing the relationship between personality and cultural factors. His model drew on Hofstede's (1980) work and was tested using data collected from respondents in 38 nations. The two basic dimensions in Schwartz's model are *conservatism versus autonomy (affective and intellectual)* and *self-enhancement (hierarchy and mastery) versus self-transcendence (egalitarian commitment and harmony)*. Because it arranges value types and broad dimensions into a continuum, Schwartz's model is regarded as a refinement of Hofstede's work. According to the model, the two broad cultural archetypes of societies with different assumptions about life and work can be categorized as *contractual cultures* and *relationship cultures*. The former, like the United States, adopts autonomous values along with value tensions between mastery (in terms of self-enhancement) and egalitarian commitment/harmony (in terms of self-transcendence). The latter, like China, adopts more conservative values and accommodate value tensions between hierarchy and harmony.

In sum, although these dimensional studies carry the danger of stereotyping entire cultures, they have nevertheless provided useful tools for cross-cultural studies (Osland and Bird 2000), and have helped greater cultural understanding, in particular of the meanings that people of different cultures attribute to work (Schwartz 1999). Together, the three models provide a framework of contrasting dimensions that demonstrate the fundamental differences between Chinese and Western cultures. Taking into account conceptual overlap among the three models, a summary of important dimensional differences between the two cultures is shown in Table 1.

Implications of Cultural Differences for Managerial Conceptions

Management practices are supported and shaped by cultural values and beliefs (Earley and Erez 1997; Chan and Tse 2003). Many

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cross-cultural studies have illustrated that different cultures support different sets of management beliefs and practices, particularly when those cultures reflect fundamentally different conceptions of reality. For example, Laurent (1983) revealed significant cultural diversity among managers from ten European countries in relation to their conceptions of the function of management, where, e.g., Swedish managers expressed little reluctance in bypassing the hierarchical line, whereas Italian managers considered that by-passing the hierarchical line to be a serious breach of protocol warranting either reprimanding the employee or redesigning the hierarchical structure. Pant et al. (1996) found that matrix organizational structures do not work as well in Nepal as they do in the West, due to the greater bureaucratic orientation of Nepalese managers. Easterby-Smith et al. (1995) concluded that Chinese concerns for relationships, group harmony and "face" limit the adoption in China of established aspects of Western human resource management practices. A survey by Neelankavil et al. (2000) showed that Chinese and American middle managers have quite different beliefs as to what makes better leadership.

Building on studies such as these and considering the apparent cultural differences between Chinese and Western cultures as summarized in Table 1, it is argued that, in theory, because of certain established differences between the two cultures, Chinese construction project managers' conceptions of their work are likely to be different from their Western counterparts.

Need for Cross-Cultural Understanding of Chinese and Western Construction Project Managers' Conceptions of Their Work

The economic reforms in China over the past two decades have made China the largest emerging economy in the world, which has consequently made China a fascinating context for management and organizational research. On one hand, China presents great challenges to management and organization theories that are largely derived from research in the West, whereas on the other hand, China provides a fertile ground for examining the boundaries and validity of existing theories and developing new ones (Peng et al. 2001). In order to understand how and why Chinese practicing managers' conceptions depart from the principles underlying the Western originated management theories, in-depth cross-cultural comparative studies are needed.

Although there have been ample China-related studies, the majority of them focus on important topics within the Chinese context only. Such prominent topics have included: (1) the reforms of the state-owned enterprises (Boisot and Child 1996; Luo et al. 1998); (2) issues relevant to international joint ventures and multinational corporations (Davidson 1987; Shore et al. 1993; Yan and Child 2002); and (3) the social and political changes brought about by the economic reforms and the "open-door" policy (Cooke 2004; Walder 1995). Although some of these studies have touched on cultural factors that affect management styles and practices in China, culture and comparison have not been their primary focus. In contrast to the increasing numbers of China-related studies, empirical cross-cultural comparisons of Chinese and Western practicing managers' conceptions of their work, particularly in the context of construction management, remain limited.

Need for Interpretive Approach

Apart from its limited numbers, current literature on Chinese and Western cross-cultural comparative research has suffered from certain methodological limitations.

First, university students of business and management have been frequently used as samples in current Chinese and Western cross-cultural management studies (Harris and Nibler 1998; Yang et al. 2000). Such student samples are often not representative of the population of interest in these studies (Bigoness and Blakely 1996). Second, current literature on Chinese versus Western cross-cultural studies has been dominated by quantitative approaches based on questionnaire surveys. All the China-related cross-national comparative studies cited previously used quantitative surveys except for the study by Easterby-Smith et al. (1995), which took a case study approach. One possible explanation for the dominance of the survey approach could be the time and language constraints in accessing adequate individuals face to face in different countries, as required in qualitative studies (Adler 1984).

Therefore, there is a clear opportunity for qualitative comparative studies sampling from practicing managers. In particular, for this research to explore and compare meanings and conceptions that individual project managers in different cultures attach to their work without bias from any prior framework, the interpretive tradition of management research is considered to be more appropriate (Pavlica and Thorpe 1998).

Interpretive Approach—Phenomenography

Originally developed by an educational research team in Sweden in the 1970s, phenomenography is defined as a research approach "for mapping the qualitatively different ways in which people experience, conceptualize, perceive, and understand various aspects of, and phenomena in, the world around them" (Marton 1986, p. 31). The Swedish team's earlier phenomenographic studies (Prosser and Millar 1989; Säljö 1975) revealed that when a group of students learned the same concept or principle, such as motion involving reducing velocity in physics, they understood it in a limited number of different ways, which could be clearly arranged by researchers into categories of description (Marton 1986). It was also found from the studies that there was a strong relationship between students' different conceptions of a phenomenon and their approaches to learning. The outcome of a phenomenographic study is a set of categories of conceptions.

A large number of educational studies have been conducted in accordance with this research direction. Some dealt with students' conceptions of content and act of learning (Boulton-Lewis et al. 2000), wheras others focused on teachers' conceptions of teaching that were related to students' learning (Dall'Alba 1991; Samuelowicz and Bain 1992). As a consequence of the phenomenographic studies undertaken in the educational context, it was proposed that if students and teachers had a finite number of different conceptions of learning and teaching, then it was reasonable to expect that people hold finite numbers of different conceptions of all kinds of phenomena (Marton and Booth 1997).

Marton and Booth's (1997) hypothesis has received considerable support from the findings of subsequent phenomenographic studies outside of the educational domain. For example, Barnard et al.'s (1999) study in health care found that nurses held eight different conceptions of technology in contemporary surgical nursing, which were integrated in a conceptual order depicted as a hierarchy of four incremental levels of understanding. McMahon

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and Bruce (2002) identified five qualitatively different conceptions of information literacy needs within the development context. Similarly, Stewart's (2002) study showed variations in conception of leadership in both the information technology (IT) community and the business community, wheras Sandberg's (2000) study of competence at work revealed three qualitatively different conceptions of engine optimization work that constitute three levels of competence.

Reasons for Choosing Phenomenography for This Research

First, as an interpretive approach, phenomenography focuses on the internal relation between a person and the world rather than focusing on either the person or their world separately (Marton 1986). This has the potential to provide a direct and full description of project managers' conceptions of their work.

Second, within phenomenography, the term *conception* means "people's ways of experiencing or making sense of their world" (Sandberg 2000; p. 12). Having a clear definition for key term in a cross-cultural study is particularly necessary to avoid confusion. Moreover, this phenomenographic definition of the term *conception* reflects exactly what this research intends to explore, namely, what are Chinese project managers' understandings of the Western originated project management theories and how do they use and experience these theories in their practical work.

Third, compared to other interpretive approaches, the established phenomenographic approaches to data collection and analysis, described in the next section of the paper, are easier to grasp and follow. This is important to enhance the validity and reliability of this cross-cultural research, which involves in-depth interviews in different languages with very busy construction project managers working in the two countries.

Fourth, although it is based on conceptions at the individual level, the phenomenographic approach does not ultimately focus on the individuals, but rather on the collective ways of understanding and experiencing, namely, conceptions (Marton and Booth 1997). It involves a second-level analysis that seeks to develop categories of description, grouping together people's similar conceptions of a particular phenomenon, such as construction project management work in this research (Bowden 2000; Chen and Partington 2006). This makes it possible to go further than the individual case and to recognize common ground in different construction project managers' conceptions of their work, both within one nation and across the two cultures, which matches the purpose of this research.

Research Method

Sample Selection

The sample of this research consisted of 30 Chinese and 30 U.K. project managers, selected from 10 Chinese and 12 U.K. construction firms, respectively. In order to highlight the cultural influences on construction project managers' conceptions of their work, the Chinese and U.K. samples were matched as far as possible in terms of their experience and the nature and content of their work. The main criteria for selecting samples included:

- They were from construction firms in China and the United Kingdom that were usually main contractors;
- They were responsible for delivering the current project according to the main contract conditions signed between their firm and the client/owner of the project under construction;
- They were working on the site together with a project team, with subcontractors and suppliers usually employed for accomplishing the project; and
- The projects they were working on were not too large or complex or novel or involving high technology.

These criteria were considered in selecting all samples both in China and the United Kingdom. They have offered to provide a more stable context for capturing and comparing Chinese and U.K. construction project managers' conceptions of their work. Table 2 lists a summary of the samples' demographic information.

Table 2. Summary of Samples' Demographic Information

Samples' demographics		Chinese sample ($n=30$, from 10 firms)	U.K. sample ($n=30$, from 12 firms)
Age	Range	28-45	29-55
	Mean	37.7	42.6
No. of years in CI	Range	6-24	6-38
	Mean	15.9	21.1
No. of years as PM	Range	1-14	1-24
	Mean	7.4	10.9
Types of projects	Building	23	24
	Road/bridge	3	0
	Utilities/facilities	4	6

The sample size was determined by the achievement of theoretical saturation, whereby the emergent consistency of conception among respondents led to no significant new conceptual attributes being discovered (Glaser and Strauss 1967). Similar to previous phenomenographic studies, the theoretical saturation in this study was reached after about 20 interviews in each country, and confirmed with a high degree of confidence with the additional 10.

Data Collection

Following the phenomenographic approach, data were collected by in-depth open-ended interviews. The phenomenographic interview focuses on revealing respondents' ways of understanding and experiencing a given phenomenon rather than limiting their answers to aspects of the phenomenon predefined by researchers (Bowden 2000; Marton 1986). The interview guide was developed in both English and Chinese, which are equivalent in meanings and approaches (Adler 1984). Below is a list of the English interview questions used in this study:

1. Warm-up questions:
   - Could you please talk me through your career to date?
   - Could you tell me a little further about your work on this project?
2. Principal questions:
   - What does project management work mean to you?
   - What is a good project manager to you?
3. Follow-up questions:
   - Could you give me an example?
   - Could you explain that further?
   - How did you deal with that?
4. Alternative questions:
   - What are the most important aspects of project management work?
   - What is the most important task of a project manager?
   - If you are now involved in recruiting a new project man-

ager for your company, what are the most important criteria you will look at?
- What aspects of the project have been successful? What made them successful?

5. End questions:
   - What do you enjoy most about your work? Why?
   - What do you enjoy least about your work? Why?
   - Is there anything else you would like to say about your work?

The principal questions were asked in order to understand *what* the respondents conceived as construction project management work, and the follow-up questions invited respondents to elaborate and demonstrate what their statements meant in practical situations, in other words, how they conceived it. The follow-up questions were used throughout each interview, following up not only the principal or alternative questions, but also exploring the meaning of various statements or descriptions given by respondents. This constant questioning of the respondents' descriptions serves to elicit underlying meanings and check the validity of statements in ongoing communication. The alternative questions were used when the respondents provided little response to the principal questions or found it difficult to give examples and further explanations. The end questions allowed the respondents to reflect once again on their conceptions of the work.

All the project managers were interviewed on the construction site of their current project. Each interview lasted between 1 and 2 hours. All interviews were audiotaped and observational notes were made both during and after each interview.

Data Analysis

All interviews were transcribed word-for-word. The subsequent analysis of the two sets of Chinese and British interview transcripts included two aspects: first to identify project managers' conceptions of their work in each culture, and then to compare them. The identification of the conceptions in each culture followed the principles of the phenomenographic approach, which involved an ongoing iterative process alternating between *what* the project managers conceived of their work and how they conceived of that work, described in the following (Marton 1986; Walsh 2000).

First, each transcript was read several times for the researchers to get familiar with the transcript and to grasp each project manager's general conception. The project managers were then grouped initially according to their general conceptions. For example, in analyzing the Chinese transcripts in this phase, two general conceptions emerged: one focusing on dealing with resources on site, another focusing on relationships with those involved in the project.

Second, all the transcripts were read again to systematically search for *what* each project manager conceived of their work focusing not only on the statements concerning essential aspects of their work, but also on the meaning of a particular statement in relation to its embedded context. Following this initial interpretation of each transcript, the analysis was shifted from individual project managers, and conceptions were compared across project managers, first within and then between the groups established in the first phase of the analysis. This process led to some regrouping. For example, the comparison within the Chinese group focusing on relationships with those involved in the project led to its division into two new groups: one focusing on coordinating relationships, another focusing on both coordinating and developing new relationships.

Third, all the transcripts were analyzed again, but in terms of *how* each project manager conceived their work. The primary focus now was on how the project managers delimited and organized what they conceived as their work. Again, this process resulted in some project managers being moved from one group to another. The individuals were grouped and regrouped by progressively identifying their main focus and how they utilized what they conceived as important in accomplishing their work. For example, one Chinese respondent who was initially in the group of coordinating relationships was moved to the group of planning and controlling site work, as it became more evident that his main focus was on work details and the construction process on site. Although he stated that keeping a good relationship with the client was important, in his further explanations on *how* this be achieved, he emphasized that the company's head office would deal with relationships with the client and his role was to control the work on site.

Finally, to cross-check and further stabilize the identified conceptions, all the transcripts were analyzed once again, focusing simultaneously on *what* each project manager conceived and *how* they conceived their work.

The above-mentioned process of analysis was carried out first for Chinese then for British transcripts, which resulted in three Chinese and three British conceptions of construction project management work. The subsequent comparison between the two cultural sets of conceptions involved some repetition of the second and third phases of the process described previously, but specifically focusing on the meanings Chinese and British respondents attached to their statements. *Contextual analysis* was used to guide the identification of the meaning of a particular statement in relation to its context of the surrounding statements and the whole transcript (Svensson 1989). In contrast to the style of content analysis that focuses on the particular statements themselves, the basic principle in contextual analysis is the construction of internal relations between the statements and the context in which they are embedded (Sandberg 2000).

Research Findings

From the earlier analysis of interview transcripts, three categories of Chinese and three categories of U.K. conceptions of construction project management work emerged. The project managers expressing each conception differed from each other through their ways of experiencing and accomplishing their work. They delimited and organized project management work in terms of certain essential attributes, but with a different focus, forming different features characteristic of each conception. The main feature of each conception in the two nations and the comparison between the two cultural sets of conceptions are described in the following, supported by typical examples of statements in the data.

Chinese Conceptions

Conception C1: Project Management as Planning and Controlling

The most characteristic feature of this conception was that individuals expressing it delimited and organized project management work in terms of essential attributes focusing on the construction work process and details of work on site. The key attributes con-

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stituting this conception included: ability to plan, knowledge of construction work, knowledge of commercial management, ability to communicate, and ability to manage team.

Project managers expressing this conception planned the work sequence and produced a master plan showing all the important milestones. They then prepared detailed monthly and weekly plans, according to which they organized the work on site and controlled the progress and cost of the project. This was the fundamental aspect that also required and depended on the other aspects of this conception. In order to plan the work and ensure the implementation of the work without delay, they needed to understand the construction process and to be aware of the technical requirements for each work task. They also understood the fundamental business rules and practices, so that they could arrange the procurement of resources and get the required resources delivered to the site as planned. In order to check and control the work progress, they communicated with people on site. Meanwhile, they cared about people working with them, and tried to keep up personal communication to get people united and work closely as a team. Therefore, it can been seen that the meanings of the five key attributes within this conception were internally related to each other and centered around *planning and controlling the work on site*, forming a distinctive structure of conception of construction project management work in China. As the following example illustrated:

> I think the most important thing is to plan and then to ensure the implementation of the plan on site. Without a good plan, the project manager would be blind, and it is therefore impossible for him to manage the project properly. (Could you explain that a little further?) Well, for example, the first thing I did here for this project was to produce an overall plan, which must be done as early as possible. You need to know the kinds of people and other resources needed, then you can plan the procurement of these resources and the subcontracting of certain tasks. For example, how many tower cranes are needed? One or two? For how long? And from when? These may look trivial, but you must understand the fact that if they are not planned and organized properly, any of these small things could cause a big delay to the work progress and could cost a lot more money in the end. You see this is the master plan [hanging on the wall in his office] showing the work sequence and all the important milestones, and I have also monthly and weekly plans showing all the details. As project manager, you need to plan for all these details then you can control the whole project based on the plan.

Conception C2: Project Management as Coordinating Relationships

The main focus of project managers holding this conception was on the relationships of all people relevant to the project, particularly those who were carrying out different types and parts of the work on site. Although these project managers still agreed with the importance of planning for good project management, it was not a central attribute. The key attributes constituting C2 included: knowledge of construction work, knowledge of commercial management, ability to communicate, ability to manage team, and ability to coordinate. Compared with C1, these project managers expressed a new attribute: *ability to coordinate*, namely, the ability to coordinate relationships of everyone relevant to the project. C2 project managers understood people and could communicate with different people. They tried to manage and coordinate relationships so that the project could progress without delay and be accomplished in a good environment. As the following respondent expressed:

> Basically most of my time is spent on coordinating relationships, both internal and external relationships. The control of the work on site depends mainly on my team… (What do you mean by "internal" and "external" here?) "Internal" usually refers to our own company and site team, and "external" may refer to the client, subcontractors, suppliers, as well as the relevant local authorities. So, I mean all those involved in the project. The project manager must be able to communicate with them, manage and coordinate relationships with them, and try to maintain a good environment for the project to be accomplished without delay.

Conception C3: Project Management as Developing Relationships

As with C2, the main focus of C3 was also on relationships, but in a way that was more future oriented. The most essential aspect of C3 project managers' work was being able to build and develop new relationships, reflected by a new attribute in this conception, the *ability to build new relationships*. The key attributes constituting C3 included: knowledge of construction work, knowledge of commercial management, ability to communicate, ability to manage team, ability to coordinate, and ability to build new relationships.

C3 project managers considered building and maintaining good relationships to be essential for accomplishing the current project and gaining resources and advantages for the company to win more projects in the future.

> You can learn from those training courses [to be certified as a Class I project manager] the techniques and methods of how to manage a project, but you cannot learn how to be a good project manager. Because being a good project manager, you need the kind of skills and ability to build and maintain good relationships with the client, the local authorities and so forth.

U.K. Conceptions

Conception U1: Project Management as Planning and Controlling

This conception was characterized by its main focus on the construction work process and individual subcontractors. The key attributes constituting U1 included: ability to plan, knowledge of construction work, ability to communicate, and ability to manage team.

Project managers expressing this conception planned the work sequence and produced a master work program, which, with their knowledge of the technical requirement, checked and approved each subcontractor's program and construction methods, and controlled the work process on site. Meanwhile, in order to control the work, they allocated the management work tasks to team members, and then chased and helped people to implement their work. Thus, they must have a full understanding of the construction process and a better general knowledge of construction work than others. In order to keep the work schedule updated and control the implementation of work on site, they held regular meet-

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ings with relevant parties. Therefore, it can been seen that the meanings of the four key attributes within U1 were internally related to each other, centred around the planning and controlling of work on site, forming a distinctive structure of conception of construction project management work in the United Kingdom.

> It is the sort of planning and controlling of a job. The key thing is really on the job site; you should plan the job properly, and I think if you can plan properly you will have a better chance of controlling everything, everybody and all the subcontractors. (How do you plan the job then?) There are a number of things to do. First, when you plan the job, you produce such a program on a computer with start and finish dates of each task. All these dates are completed first and they all need to be sequenced. They need to be in good sequence. That is important. You need to work on that. The control of the site you start with every subcontractor's work schedule and their methods…

Conception U2: Project Management as Organizing and Coordinating

This conception saw project management work as organizing everything together and coordinating interfaces of work tasks. Its main focus was not only on the construction work process, but also on the work interfaces involving multiple liaisons of subcontractors. Compared with U1, these project managers expressed two further attributes: *knowledge of commercial management and ability to coordinate*. They understood the interfaces between subcontractors' work both technically and commercially, so that they could manage and coordinate properly not only to make sure the project work could progress in the right sequence, but also to avoid inefficiency and disruption to subcontractors' work. Meanwhile, although these project managers still agreed with the importance of planning for good project management, they did not consider it to be a central attribute. The key attributes constituting U2 included: knowledge of construction work, ability to communicate, ability to manage team, knowledge of commercial management, and ability to coordinate.

> The most important aspect of my work is the coordination of everything on site, just making sure that things happen in sequence and on the dates you want them to happen, and making sure that everybody complies with what you want them to do… So as a manager you need to have a program in place and really you have to coordinate well. It is wrong to set dates and to push for the completion of work on those dates. You cannot just push and push, because you are working with so many subcontractors in so many areas and pushing doesn't work.

Another respondent said

> There are a lot of interfaces which need coordination from us, because subcontractors have difficulties in seeing the big picture outside their own trade… You have to explain to them that once they finish, that is not the end of the job, but only the release of work for the following trades. You have to try to educate them on what they need to produce in order for others also to produce results.

Conception U3: Project Management as Predicting and Managing Potential Problems

The main focus of U3 was on potential risks and problems facing the project. Project managers with U3 needed a broad vision and foresight, understanding where the construction industry is going. The most essential aspect of these managers' work was being able to predict and manage potential problems, reflected by a new attribute, *ability to deal with problems*. The key attributes constituting this conception included: knowledge of construction work, ability to communicate, ability to manage team, knowledge of commercial management, ability to coordinate, and ability to deal with problems.

> A good project manager is somebody with a broad vision and foresight, being able to identify a problem before it occurs, and being able to take actions to solve the problem, somebody who is a good motivator and team builder, somebody who has got good leadership skills, and somebody who understands construction and the client's requirements.
>
> An understanding of the construction industry including its history, its development, and where it is going is very important. Because we are in a changing market full of risks and opportunities, new technology and new materials are coming up all the time, so it is very important to have a background within the construction industry.

Another respondent said

> The fact is that every single building you built is different… and therefore the problems are different. You would have got all sorts of problems in there that you have not encountered before. They are there to make it more complicated for you and you have to be able to resolve them and be prepared to sort them out and to get the project built.

Chinese versus U.K. Conceptions

A comparison between and across each of the above-identified Chinese and U.K. conceptions demonstrated three of the most-similar aspects and five of the most-different aspects of Chinese and U.K. construction project managers' conceptions of their work, represented by S and D, respectively, described in the following.

Similarities (S)

- S1: Both the Chinese and the U.K. respondents expressed three forms of conception, namely, C1–C3 in Chinese conceptions, and U1–U3 in U.K. conceptions. As illustrated previously, the main focus of both C1 and U1 was on the construction process and work details, which then moved to the interactions of either different people as in C2 (to coordinate relationships) or different tasks as in U2 (to coordinate work interfaces). In Conceptions C3 and U3, the main focus in both moved further to care more about the development of the company as in C3 and future development direction of the construction industry as in U3. Thus, it can be concluded that in both cultures, construction project managers' conceptions of their work varied. In the variations of their different conceptions, there appeared a relation formed in a similar way in the two cultures, moving from focusing on work details on site to interactions/interfaces of either people or work, and further to be more future oriented.
- S2: All the Chinese and the U.K. conceptions covered the *ability to plan* the work and then control the work process on site so as to ensure that the project is completed on time, in

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budget and within scope. It can be seen that the fundamental triangle of project management was appreciated in both cultures. This was in line with the fact that all the Chinese and the U.K. respondents in the sample had been trained on project management basic theories and tools. But in the meantime, in both cultures, only those respondents holding conception C1 and U1 considered the attribute *ability to plan* as key in their work. Others agreed this was important for good project management, but considered it being the key job of team members rather than the project manager's own work focus.

- S3: All the Chinese and the U.K. conceptions included three key attributes: *knowledge of construction work, ability to communicate and ability to manage team*. This showed that in both cultures the fundamental requirements for being a good construction project manager were similar. First, they all needed to have basic knowledge of the construction work on site and the technical requirements for the job. This was in line with the fact that all the Chinese and U.K. respondents in the sample had at least 6 years work experience in the construction industry when being interviewed (see Table 2). Although they might not have had formal education relevant to construction work, they had certain experiences in the industry from which they had learned and been trained. Second, in both cultures, the ability to communicate with people and the ability to manage teams were considered to be important to good project management work.

Differences (D)

- D1: Compared with their U.K. counterparts, the Chinese respondents paid more attention to the commercial aspect of their work. This was demonstrated particularly by Chinese respondents' emphasis on controlling the project cost through managing and controlling the procurement of the needed resources for the project. All the Chinese respondents included *knowledge of commercial management* in the key attributes of their work, whilst U.K. respondents only with U2 and U3 considered commercial management to be a key aspect of their work.
- D2: Compared with their Chinese counterparts, the U.K. respondents placed more emphasis on health and safety issues. This was demonstrated particularly by U.K. respondents' emphasis on how they could, or should arrange their people to, educate, check, and approve the suitability of the subcontractors' construction methods in order to meet the health and safety requirements on site.
- D3: In contrast with the U.K. conceptions, the Chinese conceptions were dominated by attention to relationships. In their efforts to build and maintain good relationships with people involved in their work, such as the client, subcontractors, and their own team, Chinese project managers usually attached more personal affection. For example, they all considered their team as their own family.
- D4: Compared with their U.K. counterparts, the Chinese respondents expressed greater concern for the consequences of their work actions for the company they were working for. In particular, the C3 project managers considered that they should try to build new relationships through the current project so as to contribute to the future development of the company.
- D5: Compared with their Chinese counterparts, the U.K. respondents attended more to utilizing the project contract in their work. Although most respondents in both cultures considered the awareness of relevant commercial constraints in the contract to be necessary in their work, the U.K. respondents also placed emphasis on using the contract to resolve conflicts and to manage variations and changes to the project when necessary.

Discussion on Findings

There were many similarities between Chinese and U.K. construction project managers' conceptions of their work. In particular, the above-mentioned three most-similar aspects of conceptions in the two cultures illustrated certain fundamentals in construction project management work. These similarities were due to the commonalities in the nature and contents of the construction management work in the two nations, reflecting some key characteristics inherent in the construction project management profession.

Meanwhile, a further analysis on the five most-different aspects of conceptions in the two nations showed that the first two of them, D1 and D2, were due to the social structural differences, whereas the other three, namely D3, D4, and D5, were due to the cultural differences between the two nations, discussed next.

Social Structural Differences—D1 and D2

From the data, it is clear that D1 (Chinese emphasis on commercial awareness), and D2 (U.K. emphasis on health and safety issues), arose from social structural differences in the two nations.

First, for D1, because in China project resources, such as labor, materials, and equipment are usually procured separately, project managers need to be more involved in commercial activities and more concerned about the cost and delivery time of the procured resources. By contrast, in the United Kingdom resources are usually procured as part of the subcontract package, with subcontractors then procuring and organizing the delivery of materials and/or equipment needed for their part of the work.

Second, for D2, it can be easily identified from their further explanation and real work examples that U.K. project managers' emphasis on health and safety issues was due to the comparatively strict health and safety legislation in the United Kingdom. When asked, Chinese respondents also expressed the importance of health and safety in their work, but this did not appear to be the main focus in their conceptions as it was for their U.K. counterparts.

Cultural Differences—D3, D4, and D5

The other three aspects of differences, namely, D3 (Chinese attention to relationships), D4 (Chinese concern for their company), and D5 (U.K. attention to utilizing the project contract), were due to the cultural differences between the two nations.

Chinese Attention to Relationships—D3

Compared with their U.K. counterparts, Chinese attention to relationships with people involved in the project and their ways of emphasis on personal affection in maintaining and building good relationships have confirmed the different dimensions between the two cultures (see Table 1), such as *individualism–collectivism, contractual–relationship, hierarchy/harmony–mastery, long term–short term orientation*, and *power distance*.

In *collectivist* China, group solidarity, sharing, duties, and obligations are encouraged, and individuals within a collective are bound by affection and loyalty to one another (Hui and Triandis 1985). The relationship between subordinates and superiors is

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more morally based and the management of personal relationships is more important than the work. In the *individualist* United Kingdom, people can more easily be moved around as individuals. Emphasis is placed on individual freedom and preferences, and the relationship between subordinates and superiors is more contractually based (Erez and Earley 1993). Meanwhile, in contrast to Western *contractual culture*, Chinese *relationship* culture emphasizes *hierarchy* and the need to maintain *harmony*, valuing *long-term* cooperation for mutual benefits. Specifically, Chinese project managers valued long-term cooperation with the client, subcontractors and they preferred existing and stable project team. The dimension of *power distance* has a bearing on leadership style, also providing certain explanations for the D3 aspect of difference.

Chinese Concern for their Company—D4

Compared with their U.K. counterparts, the Chinese respondents expressed more concerns for their company, which have also confirmed the different cultural dimensions, particularly *individualism–collectivism*.

In *collectivist* China, employees' personal interests and goals are subordinate to the interests and goals of the collective organization. Because their self-identity derives from and is enhanced by their group membership (Newman and Nollen 1996), their concern for the consequences of their actions for the company arguably leads to greater emotional dependence on the company. Whereas in the *individualist* United Kingdom, individual and collective interests and goals are distinguished, priority is usually given to self-interests over those of the collective. Individual self-identity derives from and is enhanced by self-sufficiency and self-pursuit of goals. Therefore, the Chinese project managers expressed greater concern for their collective company and they had a stronger feeling of being a company employee with their career development being dependent on the company's collective development. In contrast, the U.K. managers saw themselves more as the individual manager of their current project. This difference was also reflected by the fact that none of the Chinese in the sample had changed company since the start of their career in the construction industry, whereas all the U.K. respondents had changed companies at least once, most several times.

U.K. Attention to Utilizing Project Contract—D5

Compared with their Chinese counterparts, the U.K. respondents' greater attention to utilizing the project contract in their work has also confirmed the identified differences between the two cultures.

Specifically, Chinese *collectivism, relationship, harmony*, and *outer-directed* culture led to Chinese project managers' greater attention to group harmony, maintaining face, and relationships with all involved when resolving conflicts. They tried to avoid direct debate or claim and always tried to get through conflicts quietly by utilizing good relationships (Hoon-Halbauer 1999). Even though in modern China people sign contracts for business activities, the residual manifestation of deep-rooted cultural values makes the underlying relationship more important than the contract (Lee 1996; Wong and Chan 1999). At the same time the tendering and contract awarding procedures enforced in China's construction industry today tend to form a hierarchy between the client, contractor, and subcontractors which may then enhance the Chinese relationship culture.

In contrast, U.K. project managers encouraged open and impersonal discussion on disagreements and conflicts based on project contract and relevant legislations. They considered the placing of claims as normal project management practice that should be brought into play when necessary. Accordingly, for U.K. project managers, a good contract and being familiar with the contract conditions were absolutely necessary.

Conclusion

This paper starts by questioning the considerable recent efforts to introduce Western project management concepts and practices across cultures into the Chinese construction industry. An examination of current literature on apparent areas of differences between Chinese and Western cultures and their implications for managerial conceptions highlights the need for empirical research exploring and comparing Chinese and Western construction project managers' conceptions of their work. Following the phenomenographic approach, the findings of this research reveal three categories of Chinese and three categories of U.K. conceptions, and in the meantime, identify three of the most similar and five of the most different aspects between these two cultural sets of conceptions, which have implications for both management practice and future research.

Implications for Management Practice

The similarities and differences identified in this research have certain implications for construction management practice, summarized below:

- The three most similar aspects of conceptions in the two cultures illustrate certain fundamentals in construction management work reflecting some key characteristics inherent in the construction project management profession, which may have implications for the human resource management practices in construction organizations. More specifically: (1) The similar structure of the variations in construction project managers' conceptions of their work suggests that organizations need to understand individual managers' different ways of experiencing and accomplishing their work so as to select appropriate managers for different projects and set up reasonable performance evaluation criteria. (2) The changing scene of the fundamental role of planning and controlling reflects the development of the profession of project management, moving from focusing on various tools and techniques toward becoming more management oriented. Both project managers and organizations should realize this trend in their career and profession development. (3) Having basic knowledge of construction work, the ability to communicate and the ability to manage team appear to be the three most-important aspects for being a good construction project manager, which provides insights for organizations to select and train good construction project managers.
- Two of the five most-different aspects of conceptions in the two cultures are caused by the social structural differences between the two nations. The social structural differences, such as the relevant laws and regulations, may change over time and their impact on managerial conceptions can be easily identified. Nevertheless, when doing cross-cultural construction management, the organizations need to be informed of all the relevant laws and regulations in advance.
- Three of the five most-different aspects of conceptions in the two cultures are caused by the apparent cultural differences between the two nations. Although both Chinese and Western cultures are undergoing change (Chen 1995; Ralston et al.

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1999), the dominant deep-rooted cultural values and beliefs are not easily left behind, but rather are being revived and enhanced (Sheridan 1999). Even in the modern world these cultural values and beliefs, such as collectivism, attention to relationships, and harmony are still guiding and shaping people's conceptions of the world around them. When adopting Western management concepts and practices, Chinese organizations need to understand how the different cultural values and beliefs may impact management practices. Specifically, the culturally based differences in conceptions of construction management work found in this study provide important insights for the introduction and development of the Western-oriented project management in China, particularly in the construction industry.

- When negotiating and managing joint venture projects both Chinese and Western organizations need to pay attention to cultural differences between managers' conceptions of their work, in order to adapt practices and foster successful collaboration. More specifically, Westerners need to be aware that Chinese conceptions are dominated by attention to relationships. In their efforts to build and maintain long-term good relationships with people involved in the project, the Chinese always attach personal feelings. On the other hand, the Chinese need to understand Western ways of separating work and personal relations, and the Western greater emphasis on contract conditions and utilizing contracts in conflict resolution. Meanwhile, Western organizations need to understand Chinese greater concern about and dependence on their company.
- In order for Chinese and Western organizations to gain mutual understanding and achieve effective collaboration, training on cross-cultural issues is necessary. Such training should be based on conceptual frameworks that are both up-to-date and relevant.

Limitations and Implications for Future Research

This research contributes to the construction management and cross cultural management literature. In particular, the identified culturally based differences between Chinese and U.K. construction project managers' conceptions provide empirical evidence for the apparent dimensional differences between the two cultures in existing literature (see Table 1). However, it has several limitations that may offer implications for future research:

- The research findings are based on data from the construction sector. Caution should be exercised in generalizing the findings to other industry sectors. Future research may examine and compare project managers' conceptions of their work activities in other sectors such as heavy industry and IT.
- The research findings are limited to the context of ordinary construction projects (see Table 2 for detailed project types). This has helped in recruiting adequate samples and providing a stable context for highlighting the cultural influences on project managers' conceptions. Future research may sample from more large and complex projects.
- The research findings are limited to the Chinese samples in the Beijing area and U.K. samples in central England. To some extent this has served to minimize the domestic cultural variations within each nation, but has, at the same time, limited the applied implications of the research findings. Future research may sample in wider areas and domains of Chinese and Western culture, such as in southern areas of China and in the United States, so as to enhance the findings of this study.
- The research findings are based on data from in-depth interviews with construction project managers only. This has not been a problem for generating and comparing conceptions, because features of the phenomenographic approach have largely ensured the reliability and validity of the study. Nevertheless, future research may strive to collect wider data from project managers' superiors, peers, subordinates, and clients so as to further validate the research findings.

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