



# Cultural Issues in Information Systems Research: A Review of Current Literature and Directions for Future Research (Research-in-Progress)

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## INTRODUCTION

Cultural factors influence information systems in a variety of ways. At the national level, for example, culture influences IS management practices in different countries (Harris and Davison 1999; Ford, Connelly and Meister 2003). At the organizational level, several studies propose that organizational culture directly relates to success of IT implementation (Zammuto and O'Connor 1992; Fedrick 2001; Harper and Utley 2001; Doherty and Doig 2003; Harrington and Guimaraes 2005). Despite the potential importance of culture in IS field, very little discussion has been conducted on the topic.

Culture has been studied on a limited number of occasions in IS literature, yet there has been no effort to comprehensively evaluate current state of culture research. The purpose of this meta-analytic study is to explore and critically evaluate research on cultural issues in information systems field. Based on the evaluation, we will synthesize research findings of existing literature and present areas for further research. In short, the purpose of this study is to initiate a discussion of culture within the conversation of information systems research. In this article, we provide an overview of the topic field, discuss about the need for a meta-analysis on the area, and report on the current status of this research.

## Defining Culture

Culture is commonly regarded as difficult to define (Davison and Martinsons 2003). Different authors use a variety of categories to describe culture, such as observed behavioral regularities, group norms, values, philosophy, climate, shared meanings, formal rituals and celebrations (Schein 2004). Although a precise definition for culture is always controversial, most scholars commonly agree on a few general principles: 1. Culture is shared among a group of people; 2. Culture is defined by a pattern of values, beliefs, and behaviors; 3. Culture is socially acquired through the group's development over a period of time (Davison and Martinsons 2003; Schein 2004). In this article, we define culture as "a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein 2004).

## OVERVIEW OF THE AREA AND NEED FOR A META-ANALYTIC STUDY

In recent years the issue of culture is drawing more and more attention from IS researchers. A search of keywords "culture" and "information systems" for peer-reviewed publications in ABI/INFORM database resulted in 194 peer-reviewed articles<sup>1</sup>. The development of research is very promising in that more studies are being carried out on the topic area. As indicated in figure 1, the number of academic publications has been on the increase over the past years.

As culture is drawing increasing attention from IS researchers and more studies are conducted on the topic, it is valuable to pause and reflect on the state of the research area. The benefits of undertaking such a study are numerous. First, we will be able to synthesize research findings from a number of studies that have looked at culture and information systems. Second, we will be able to evaluate whether certain research findings are consistent across studies, and identify the areas where additional research is necessary.

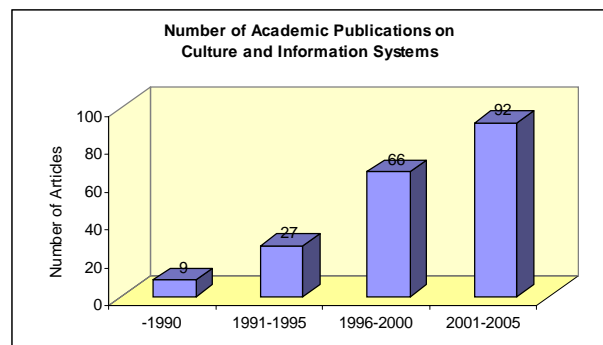
## PRELIMINARY ANALYSIS

A preliminary analysis showed that research in the area of culture and information systems can be divided into two types: research on organizational culture, and research on national culture. These two categories of research are based on the units of analysis used in the evaluation of culture: organizational or national. Research that considered national culture can again be divided into studies that considered cultural issues related to one nation or country and those that compared information systems in cross-cultural settings. Our initial work in the area has identified studies that either investigate the effect of culture on information systems or vice versa. Culture in these studies is considered to be the independent or dependent variable. There are other studies that control for culture or compare a phenomenon across nations; these studies are primarily cross-cultural in nature. We report on some preliminary observations in the present status

## CURRENT PROGRESS AND PRELIMINARY RESULTS

We have collected literature on the topic area and we are in the process of reviewing the literature and developing our research model. Here are some preliminary observations from the qualitative classification phase of this study:

Figure 1. Number of academic publications on culture and information systems



- Most studies admit that culture is an important factor in the implementation of information systems, at both national level and organizational level.
- Some studies conclude that culture will affect information systems implementation and information systems, in turn, will change culture and behavior.
- Measurement of culture is controversial. Different scholars hold divergent opinions on whether culture can be measured and how to measure culture.

## REFERENCES

- Davison, R. and Martinsons, M. G. (2003). "Guest editorial cultural issues and it management: past and present." *IEEE Transactions on Engineering Management* 50(1): 3-7.
- Doherty, N. F. and Doig, G. (2003). "An analysis of the anticipated cultural impacts of the implementation of data warehouses." *IEEE Transactions on Engineering Management* 50(1): 78.
- Fedrick, M. A. C. (2001). The relationship between organizational culture and the processes for implementing technology at selected private liberal arts colleges, The Pennsylvania State University.
- Ford, D. P., Connelly, C. E. and Meister, D. B. (2003). "Information systems research and Hofstede's culture's consequences: an uneasy and incomplete partnership." *IEEE Transactions on Engineering Management* 50(1): 8-25.
- Harper, G. R. and Utley, D. R. (2001). "Organizational culture and successful information technology implementation." *Engineering Management Journal* 13(2): 11.
- Harrington, S. J. and Guimaraes, T. (2005). "Corporate culture, absorptive capacity and IT success." *Information and Organization* 15: 39-63.
- Harris, R. and Davison, R. (1999). "Anxiety and involvement: Cultural dimensions of attitudes toward computers in developing societies." *Journal of Global Information Management* 7(1): 26.
- Schein, E. H. (2004). *Organizational culture and leadership*, San Francisco: Jossey-Bass.
- Zammuto, R. F. and O'Connor, E. J. (1992). "Gaining Advanced Manufacturing Technologies' Benefits: The Roles of Organization Design and Culture." *Academy of Management. The Academy of Management Review* 17(4): 701-728.

## ENDNOTE

- <sup>1</sup> Search conducted on October 1, 2005.

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