



香港城市大學
City University of Hong Kong

專業 創新 胸懷全球
Professional · Creative
For The World

CityU Scholars

Guest editorial cultural issues and It management Looking ahead

Martinsons, Maris G.; Davison, Robert

Published in:
IEEE Transactions on Engineering Management

Published: 01/02/2003

Document Version:
Post-print, also known as Accepted Author Manuscript, Peer-reviewed or Author Final version

Publication record in CityU Scholars:
[Go to record](#)

Published version (DOI):
[10.1109/TEM.2003.808299](https://doi.org/10.1109/TEM.2003.808299)

Publication details:
Martinsons, M. G., & Davison, R. (2003). Guest editorial cultural issues and It management: Looking ahead. *IEEE Transactions on Engineering Management*, 50(1), 113-117. <https://doi.org/10.1109/TEM.2003.808299>

Citing this paper

Please note that where the full-text provided on CityU Scholars is the Post-print version (also known as Accepted Author Manuscript, Peer-reviewed or Author Final version), it may differ from the Final Published version. When citing, ensure that you check and use the publisher's definitive version for pagination and other details.

General rights

Copyright for the publications made accessible via the CityU Scholars portal is retained by the author(s) and/or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights. Users may not further distribute the material or use it for any profit-making activity or commercial gain.

Publisher permission

Permission for previously published items are in accordance with publisher's copyright policies sourced from the SHERPA RoMEO database. Links to full text versions (either Published or Post-print) are only available if corresponding publishers allow open access.

Take down policy

Contact lbscholars@cityu.edu.hk if you believe that this document breaches copyright and provide us with details. We will remove access to the work immediately and investigate your claim.

© 2003 IEEE. Personal use of this material is permitted. Permission from IEEE must be obtained for all other uses, in any current or future media, including reprinting/republishing this material for advertising or promotional purposes, creating new collective works, for resale or redistribution to servers or lists, or reuse of any copyrighted component of this work in other works.

Martinsons, M. G., & Davison, R. (2003). Guest editorial cultural issues and It management: Looking ahead. *IEEE Transactions on Engineering Management*, 50(1), 113-117. <https://doi.org/10.1109/TEM.2003.808299>.

CULTURAL ISSUES AND IT MANAGEMENT: LOOKING AHEAD

Maris G. Martinsons
Dept of Management
City University of Hong Kong
Tat Chee Avenue,
Kowloon, Hong Kong
Tel: +852-2788-7958
Fax: +852-2788-8560
Email: mgmaris@cityu.edu.hk

Robert Davison
Dept of Information Systems
City University of Hong Kong
Tat Chee Avenue,
Kowloon, Hong Kong
Tel: +852-2788-7534
Fax: +852-2788-8694
Email: isrobert@cityu.edu.hk

Our special issue has highlighted a wide array of cultural issues that are evidently important in the management of information technology. The collection of papers here makes a significant contribution to our understanding of how cultural factors affect the planning, implementation and operation of IT applications. While the papers go into the details of different issues, it is also useful to take a broader perspective. After reflecting on the topic, we set out our vision for its future development. Until the present time, cultural issues have tended to be considered as a separate sub-discipline within IT management. We believe that a key objective in the future involves breaking down the boundaries and so integrating these issues into the mainstream of IT management research.

In this summary article, we will first argue for the need to move beyond simple comparative research and show how the papers in this issue make a contribution in that respect, and in other ways. We will then consider the important roles of both theory and rigorous research methods in undertaking the study of cultural issues in IT management. Finally, we offer some general observations on the directions for future research and practice.

COMPARATIVE RESEARCH AND BEYOND

Some of the most influential work in this domain has compared IT application in two (or three) national or societal cultures. For example, Straub [22] has

examined the use of fax and e-mail in the United States and Japan and attributed the differences to cultural factors. Meanwhile, Martinsons and Westwood [14] have interpreted the empirical IS literature using several frameworks of culture in order to explain why the nature of management information systems within Chinese businesses differs fundamentally from that found in the United States.

There is no doubt that the comparative perspective of past work in this field has opened our eyes to the systematic differences across cultures and the culturally-bounded nature of many fundamental theories and prescriptive models. For example, the universality of Western-based theories related to decision support systems has been refuted by studies in China [14][28].

The recognition that cultural diversity is so pervasive has also stimulated researchers from one culture to investigate critical issues associated with people and/or technology in one other culture. In contrast to surveys and other arms-length studies conducted across multiple cultures, this type of research often incorporates intensive fieldwork that owes as much to ethnographic traditions and methods as more familiar approaches. Notable examples include Davies and Nielsen [2] and Orlikowski [17].

It is now generally accepted that IT management practices are far from universal. Similarly, our existing theories have varying degrees of generalisability [12]. By identifying the specific applicability of existing theories, we can then move forward to revise these theories or to create new theories that account for contextual contingencies, such as cultural differences. This is likely to require a combination of extensive, multi-cultural studies and more intensive, single culture studies. Readers will note that the papers in the special issue reflect this diversity of scope.

Those with a long-term interest in the sub-discipline may be surprised at the small number of comparative studies in this special issue. We do not see this as reflecting a declining frequency in such research (at least not yet), but rather as evidence of recent progress in this sub-discipline. Nearly half of the submissions in response to our call for papers featured comparisons of two or more samples drawn from different populations. However, many of these

manuscripts were eventually rejected for the primary reason that, in the eyes of the reviewers, they made a limited contribution to the advancement of knowledge. Significantly, these reviewers themselves were typically selected on the basis of their track records in writing cross-cultural research.

Many of our reviewers noted that simply contrasting the behaviour or attitudes in different cultural contexts no longer provides a substantial contribution. Mere descriptions of differences, even accompanied by speculations on the reasons behind them, have become insufficient. In short, we need to go beyond the *what* and the *where* to understand the *how* and the *why*. For example, why are Western models of e-commerce not directly transferable in China? What characteristics of the Chinese environment are important yet not included in mainstream Western theories? How is the environment changing over time? How can dynamic factors be incorporated into our theorising? How might prescriptions derived in the West be informed by non-Western cultural contexts? This type of probing is evident in both the paper on mono-poly-chronism by Rose and his colleagues and Tan et al.'s report on software projects.

We can also see how the scope of applicability influences the usefulness of a particular research perspective. The papers by Doherty and Doig and by Loch et al. show that for certain purposes it is valuable to adopt an integrative perspective. Such a perspective encourages us to think in terms of a single culture across an organisation or a society.

In other circumstances, it is useful to adopt a differentiation or fragmentation perspective. For example, Huang and colleagues describe the thoughts and actions of different professional or departmental groups primarily in terms of the actor's self-understanding. Their *emic* perspective highlighted the subcultural differences that can arise within a single organisation.

Other articles analyse the core assumptions (or values) of a general concept without specifying any single culture (like Ngwenyama and Nielsen) or draw on numerous cross-cultural examples (like Trauth and Weisinger). Taken together, the articles in this issue demonstrate that the span of a coherent

meaning system, or a culture, can range from a small part of one organisation to one (or more) very large country/ies.

BEYOND THE ATHEORETIC

Meanwhile, the article by Ford and her colleagues suggests that cultural factors will have a greater influence on some aspects of IT management than on others. What we lack are theories to explain and predict the influences of cultural factors on IT management. This deficiency implies that theory building must go hand-in-hand with empirical study.

Fortunately, there is no shortage of emerging candidates as the basis for such theory building. IS researchers have traditionally assumed that an individual living in a particular place and time belongs to a single culture. Such a simplistic classification does seem to be rather naïve in this day and age of mobile work forces and virtual teams collaborating across the world. As a result, Straub et al. [23] have advocated a form of social identity theory. It identifies each individual as being influenced by different cultures - ethnic, organisational, professional, etc. It would then be appropriate to include these different cultures would be included as independent variables in the research design.

Less commonly used methods may also be useful to provide us with a richer understanding of the relevant phenomena. For example, intensive studies would help avoid “the ecological fallacy, where stereotypes are substituted for individualistic and idiosyncratic traits” [23, p. 20].

While social identity theory provides a potentially fruitful path for progress, it must be recognised that it takes one side in a long-standing debate among psychology scholars (see [10]). This theory is firmly embedded in a situational perspective in contrast to a dispositional perspective based on personality traits. Recent theoretical arguments and empirical evidence indicate that in social contexts, disposition and situation tend to evolve interdependently. The study of cultural issues in IT management would now benefit from theory derived from the dispositional perspective of psychology. Such theorising would introduce a *logic of opposition* [21].

The emergence of competing theories should be seen as a healthy sign of development for this sub-discipline and can be expected to spur more systematic data collection and analysis to answer important empirical questions. The true test of alternative paradigms and competing theories will occur as they confront empirical testing.

In a similar vein, Myers and Tan [16] have challenged IS researchers to go beyond existing models of national culture. Following Kahn [8], they perceive culture as contested, temporal and emergent, and consequently suggest adopting a more dynamic view of how cultural factors influence IS and IT-related behaviour.

BRIDGING DISCIPLINARY PERSPECTIVES

Going further, it is noteworthy that even the traditional incompatibility between culture (and humanistic perspectives) and economics (and assumption of ideal rationality) is being bridged. Significantly, Ouchi [18] has argued that strong cultural norms, such as in a "clan" or what Williamson [26] subsequently called a "relational team", represent an effective governance mechanism when both behaviour and performance measurement are ambiguous. Even the father of transaction cost economics has conceded that the "social context in which transactions are embedded - the customs, mores, habits, and so on - have a bearing, and therefore need to be taken into account, when moving from one culture to another." [26, p. 22]

Scholars in various disciplines are already considering how differences in social context influence economic transactions and governance. Within the realm of IT management, the questions that need to be addressed include: how is the nature and level of specific beliefs, such as trust, related to the basic acceptance of or resistance to a new IT application? More specifically, how does trust, in its various forms, influence online behaviour and activities such as web shopping?

There is now a very clear opportunity and also a very important need to undertake research that integrates perspectives from different social sciences,

and especially culture and economics, into a more unified and complete understanding of the various phenomena associated with IT management.

These are among the possible ways to move the sub-discipline forward and we believe that the articles in this issue start building upon some of those suggestions. Nevertheless, we do not wish to understate the difficulty of the task that lies ahead. Developing and testing appropriate and robust theories presents a formidable challenge, one made no easier by the tendency (identified in the introduction to this special issue) of IS and Management professors to dissuade their research students and protégés from investigating cultural issues.

We can only hope that researchers in the future will not find it too risky to venture down this road. We encourage researchers to shake off the sclerotic bonds of established practice by undertaking investigations into topics that challenge politically and culturally correct views, theories and norms. Heretics are essential if we are to avoid the blissful calm of entropy and homogenisation (cf. [27]).

CROSS-CULTURAL RESEARCH METHODS

While theory undoubtedly must play a more prominent role in our research, it is also important to deal with concerns about research methods. Karahanna et al. [9] identify a number of critical issues that need to be addressed in order to ensure that cross-cultural research is designed and conducted in a rigorous manner.

Amongst these are the achievement of cross-cultural equivalence in terms of translation, metrics, and calibration [15]: Do the items mean the same thing? Do respondents react in the same way to the same items? Are scales and scoring mechanisms identical? What happens when one cultural group is predisposed to score in the centre of the scale, whereas another tends to the extremes?

Van de Vijver and Leung [24] refer to construct equivalence (meaning), structural equivalence (operationalisation), measurement unit equivalence (identical instruments) and scalar equivalence (metric). Systematic sampling of

cultures suggests theoretical selection rather than random selection: i.e., why select these countries, beyond convenience? They suggest that it is best to select cultures that are at different points along a theoretical continuum such as a cultural dimension. Thus theory can inform not just the frame of analysis but also the very subjects that are studied [here assuming that the analysis is at the culture level].

Brislin [1] is among those who have considered the translation of items if an instrument is to be delivered in more than one language. His recommendations address issues such as sentence length, complexity, avoiding potentially untranslatable words and colloquialisms, the use of specific rather than general terms, and avoidance of the passive voice.

A reliance on potentially outdated measures of culture is also a problem. In particular, as the article by Ford et al. demonstrates, many researchers over the years have relied on Hofstede's data. This data set was collected back in the 1960s and 1970s. Is it reasonable to assume that each of the countries surveyed by Hofstede would today have similar scores on each of the cultural dimensions?

Even if we accept that cultural values are deeply embedded, the economic development and political changes that have taken place in regions like East Asia and Eastern Europe are likely to have significantly affected the cultural values of the societies living there. This suggests a need to more explicitly determine the cultural values of a sampled group, ideally using direct measurement, rather than assuming that they are representative of the host society (and its historical score on Hofstede's survey).

Not only is IT management not universal, but even the concepts that we use to describe it are not always transferable from one place to another [12]. For example, even before observing or theorising about how online trust may be developed in different cultural contexts, we need to establish whether such trust is a transferable concept. Does the psychological state of trusting someone in Japan mean the same as trusting someone in the Sweden? It is important to explore the meaning and antecedences of trust in order to establish how different groups of people "*understand*" this concept. The assumption that trust is a

universal concept appears to provide a fragile foundation for research. These types of problems undoubtedly complicate scholarship that involves cultural issues and make it challenging, but it does not diminish the importance of conducting such investigations – quite the contrary.

This special issue features eight papers that have taken up the challenge of researching cultural issues as they pertain to IT management in a wide variety of ways. Two of the studies are experiments, another two involve critical analysis with secondary data, one is a survey of conference attendees, and another is a citation analysis. Two others are based on the case study method, one with multiple cases and the other with a single case. What is perhaps remarkable, given our comments above about the value of an intensive, ethnographic approach to the study of culture, is the lack of any such intensive studies. The last two papers come closest to this, with detailed investigations into specific organisations, yet these were nevertheless conducted from the standpoint of an observer, not a participant. None of the papers submitted in response to the call for papers used an overtly interventionist methodology such as action research, even though some previously reported studies have investigated (or at least commented on) cultural issues in Information Systems [cf. 3].

Nevertheless, a single journal issue can only take us so far. Although we believe that it represents an important milestone for the study of cultural issues and IT management, it can only do so much to advance our knowledge. It will now be important to build upon this foundation. Specifically, we need to consider how best to apply our resources in the future in order to integrate the study of cultural issues into the mainstream of IT Management and the Information Systems discipline. We suggest that the increasing global interdependence of economies and peoples creates an imperative for such an integration.

GLOBAL INTERDEPENDENCE AND THE GROWING NEED FOR CULTURAL STUDIES

People from the same cultural and linguistic group may find it difficult to communicate effectively. However, additional problems arise with interactions across cultures. The internationalisation of business and social life, which has been enabled primarily by advances in IT, has undoubtedly increased the

frequency of such interactions. Moreover, the emergence of virtual teams that stretch across countries and continents renders ambiguous the tradition of visitors conforming to the culture of their hosts. In an increasingly interdependent world, where our virtual homes matter more than physical homes, we need to reconsider the old proverb, "When in Rome, do as the Romans do".

These trends clearly increase the probability of inter-cultural difficulties and the potential impact of such difficulties. For example, Evaristo [7] writes about the dysfunctional 'non-consensual negotiation' practices that emerged in the course of writing a multi-partner, multi-country grant proposal. More generally, there seems to be a steady stream of new stories that feature ideological disputes and misinterpreted communications.

Qureshi and Zigurs [20] observe that collaborative technologies enable both the formation and operation of virtual teams. Unfortunately, the cross-cultural problems in such teams don't just go away. DeSanctis et al. [4], in a study of multicultural virtual teams, report that team diversity is a major strength that contributes to the effectiveness of a team. However, such a team can also represent a substantial management challenge.

Virtual teamwork promises considerable benefits, but they are premised on careful selection and application of the technological tools. This in turn depends on careful empirical and theoretically grounded research. In such an environment, researchers must be aware of their own cultural values and positions, since these too will influence the way research is designed and results are analysed. As Dubé and Paré [6, p.71] note, "tolerance, empathy and the desire to discuss potential conflicting situations with an open mind are all necessary for members of a global virtual team to develop an effective level of synergy".

The world is becoming more interdependent and more people could benefit from understanding how culture influences their work. Despite the metaphors used in the business press, such as global village, etc., very few beliefs or behaviours are universal, even among those who lead multinational enterprises [13]. The world is still very heterogeneous, even in terms of IT

management. There is also evidence to suggest that the world is *not* becoming more homogeneous. For example, French, German and British managers working for an American multinational exhibited behaviours that were more French, more German, and more British than those of their compatriots working for local, domestic companies [11].

It seems that exposure to another culture's way of doing things can increase your own consciousness of, if not reinforce, your cultural beliefs and behaviours. Many business leaders are convinced that they need to maintain their distinctive cultural values and identities even as they increase their contact and economic dependence on foreigners [5]. This denial of the fact that we are all dependent on one another, irrespective of our differences, and denial of the right of others to choose how they live, think and behave is truly lamentable. As in virtual teams, traits such as tolerance, empathy and open-mindedness are essential for success.

CONCLUDING COMMENTS

We hope that this issue has not only improved your understanding of different cultural issues in the context of IT management, but also that it has made you more aware of how culture influences your thinking and behaviour. This greater self-awareness is an important foundation for interacting effectively with people from different cultural backgrounds. Most (if not all) of us will, increasingly, need to interact with people from different backgrounds who may think and act differently. We simply cannot expect these people to change their values and behaviours in order to fit our own values and behaviours. We must be open and receptive to a diversity of beliefs in our practice, as well as to a diversity of designs and methods in our research.

REFERENCES

- [1] R. Brislin "The wording and translation of research instruments", in W.J. Lonner & J.W. Berry (Eds.), *Field methods in cross-cultural research*. Newbury Park, CA: Sage, pp. 137-164, 1986.
- [2] L.J. Davies and S. Nielsen "An ethnographic study of configuration management and documentation practices in an information technology centre", in K.E. Kendall, K. Lyytinen and J. De Gross (Eds.), *The impact of computer supported technology on information systems development*. Amsterdam, Elsevier/North Holland, 1992.
- [3] R.M. Davison and D.R. Vogel "Group support systems in Hong Kong: An action research project", *Information Systems Journal*, vol. 10, no. 1, pp. 3-20, 2000.
- [4] G. DeSanctis, M. Wright and L. Jiang "Building a global learning community", *Communications of the ACM*, vol. 44, no. 12, pp.80-82, 2001.
- [5] R.H. Doktor "Asian and American CEOs: A comparative study", *Organizational Dynamics*, vol. 18, no. 3, pp. 49-58, 1990.
- [6] L. Dubé and G. Paré "Global virtual teams", *Communications of the ACM*, vol. 44, no. 12, pp. 71-73, 2001.
- [7] R. Evaristo "Non-consensual negotiation in distributed collaboration", *Communications of the ACM*, vol. 44, no. 12, p. 89, 2001.
- [8] J.S. Kahn "Culture: Demise or resurrection", *Critique of Anthropology*, vol. 9, no. 2, pp. 5-25, 1989.
- [9] E. Karahanna, R. Evaristo and M. Srite "Methodological issues in MIS cross-cultural research", *Journal of Global Information Management*, vol. 10, no. 1, pp. 48-55, 2002.
- [10] D.T. Kendrick and D.C. Funder "Profiting from controversy: Lessons from the person-situation debate", *American Psychologist*, vol. 43, no. 1, pp. 23-34, 1988.

- [11] A. Laurent "The cultural diversity of Western conceptions of management", *International Studies of Management and Organisation*, vol. 13, no. 1-2, pp. 75-96, 1983.
- [12] M.G. Martinsons "Management philosophy and IT application: The East-West divide", *Journal of Technology Management*, vol. 18, pp. 207-218, 1991.
- [13] M.G. Martinsons "Comparing the decision styles of American, Chinese and Japanese business leaders", *Best Paper Proceedings of the Academy of Management Meetings*, Washington, DC, 2001.
- [14] M.G. Martinsons and R.I. Westwood "Management information systems in the Chinese business culture: An explanatory theory", *Information & Management*, vol. 32, no. 5, pp. 215-228, 1997.
- [15] M. Mullen "Diagnosing measurement equivalence in cross-national research", *Journal of International Business Studies*, vol. 26, no. 3, pp. 573-596, 1995.
- [16] M.D. Myers and F.B. Tan "Beyond models of national culture in information systems research", *Journal of Global Information Management*, vol. 10, no. 1, pp. 24-32, 2001.
- [17] W.J. Orlikowski "Integrated information environment or matrix of control? The contradictory implications of information technology", *Accounting, Management and Information Technologies*, vol. 1, no. 1, pp.9-42, 1991.
- [18] W. Ouchi "Markets, hierarchies, and clans", *Administrative Science Quarterly*, vol. 25, pp. 129-141, 1980.
- [19] T.C. Powell and A. Dent-Micallef "Information technology as competitive advantage: The role of human, business, and technology resources", *Strategic Management Journal*, vol. 18, no. 5, pp. 375-405, 1997.
- [20] S. Qureshi and I. Zigurs "Paradoxes and prerogatives in global virtual collaboration", *Communications of the ACM*, vol. 44, no. 12, pp. 85-88, 2001.
- [21] D. Robey & M.-C. Boudreau "Accounting for the contradictory organizational consequences of information technology: Theoretical

- directions and methodological implications", *Information Systems Research*, vol. 10, no. 2, pp. 167-184, 1999.
- [22] D.W. Straub "The effect of culture on IT diffusion: E-mail and fax in Japan and the United States", *Information Systems Research*, vol. 5, no. 1, pp. 23-47, 1994.
- [23] D.W. Straub, K.D. Loch, R. Evaristo, E. Karahanna and M. Srite, "Towards a theory-based measurement of culture", *Journal of Global Information Management*, vol. 10, no. 1, pp. 13-23, 2002.
- [24] F. Van de Vijver and K. Leung *Methods and data analysis for cross-cultural research*, Thousand Oaks, CA: SAGE, 1997.
- [25] R. Watson, T.H. Ho and K.S. Raman "Culture: A fourth dimension of group support systems", *Communications of the ACM*, vol. 37, no. 10, pp. 44-55, 1994.
- [26] O.E. Williamson *The economic institutions of capitalism*, New York: Free Press, 1985.
- [27] Y.I. Zamyatin *We*, London: Penguin, 1972.
- [28] B.X. Zhang and I.O. Angell *Decision support systems in China: A clash of cultures*, London School of Economics and Political Science, Department of Information Systems Working Paper 6, 1989.