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EDITORIAL

Reframing HCI Through Local and Indigenous Perspectives

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BACKGROUND FOR THIS SPECIAL ISSUE

The mission of the International Journal of Human–Computer Interaction (IJHCI) special issue on reframing human–computer interaction (HCI) through local and indigenous perspectives is to further our understanding of these issues and lead to practical recommendations for people researching and implementing HCI from an explicit local and/or indigenous perspective.

The articles in this issue unfold under three big themes:

1. What is meant by local and indigenous HCI and why this is important for the research and practitioner communities?
2. What are the ethical issues in researching culture and HCI?
3. What are the power relations and scripts embedded in this process?
4. How do we approach and study the interpretive frames used locally and/or from an indigenous perspective to make sense of the current body of knowledge and tools in HCI?

One of the current challenges for HCI as a discipline is addressing the tensions created between local cultures and the assumptions, priorities, and values embedded in the HCI as a discipline. The objective of a special issue on this topic is to further our understanding of these issues and lead to practical recommendations for people researching and implementing HCI from an explicit local and/or indigenous perspective.

Translating local knowledge into valid and useful HCI tools is not a simple problem, but one that requires redefining and renegotiating disciplinary boundaries (and connections) and the subject and object of the interaction design. Focusing on local or indigenous awareness and practices in design pushes the envelope in a very exciting way. For instance, the democratic values of equal participation driving user-centered design are not necessarily shared by local communities that prioritize respecting the views of their leaders. Addressing these gaps requires a fresh look at how diverse disciplines and professions explore and conceptualize the relation between users, designers, and other stakeholders.

Although the global HCI community has well-defined conceptual and methodological frameworks, there is little research about how local HCI professionals experience, adapt, and implement this knowledge, or how to locate HCI so that it is locally accountable (Suchman, 2002). To progress this research we must start by better understanding relationships between HCI concepts and methods and their meanings to local and indigenous groups. Universal perspectives on HCI like ethnology and ethnography, for example, technomethodology (Button & Dourish, 1996), and national culture models (Hofstede, 2001) and activity theory (Kaptelinin & Nardi, 2006), have all had an impact in the design of interactive systems for culturally different users, but the potential contribution of explicitly local or indigenous perspectives, approaches, and experiences with HCI (see, e.g., Kurosu et al., 2004) have not become so clear and uniform. Furthermore, the idea of what constitutes a useful and usable system in different cultural contexts remains partially explored at the very least. It is hoped this special issue will further our understanding of these issues and lead to practical recommendations for people researching and implementing HCI at global and local levels.

Two workshops on this topic ran in 2011 (one in IWIPS in Kuching and one at IFIP INTERACT in Lisbon) with the aim of presenting different local and indigenous perspectives from around the world trying to lead into an international dialogue on reframing concepts and models in HCI/Interaction Design. The target audience was HCI researchers and practitioners who have experience with working with culture and HCI, for example, participants in IWIPS, ACM ICIC conference, IFIP TC 13 SIG on Interaction Design and International Development, and more.

The workshops unfolded under three big themes, which are addressed to different extents in this special issue:

- What is meant by local and indigenous HCI and why this is important for the research and practitioner communities?
• What are the ethical issues in researching culture and HCI? What are the power relations and scripts embedded in this process?
• How do we approach and study the interpretive frames used locally and/or from an indigenous perspective to make sense of the current body of knowledge and tools in HCI?

We believe that successful intercultural HCI design goes far beyond a regular design process by taking into account different mentalities, thought patterns, and problem-solving strategies that are anchored in different cultures, for example, having contrasting attitudes toward authority or social etiquette. However, problems in intercultural communication, particularly those in requirement analysis, inhibit good usability and user experience for system design. Taking into account local and indigenous perspectives in HCI means to research basic cultural differences by enabling a common conversation code while discussing and adapting well-known methods for their usage in intercultural design. However, even if some evidence and rules have been obtained to narrow the challenges in analyzing local and indigenous perspectives relevant for HCI, the final analysis of the intercultural HCI design process and its relating cultural differences is still outstanding.

REVIEW PROCESS

We sourced papers for this special issue from two different channels: (a) the workshops held in Kuching and Lisbon and (b) and a public call for papers inviting submissions on the topic. Following the completion of each workshop, the coeditors of this issue identified authors of position papers deemed to have potential to be developed into full articles for this journal. In September 2011, an external call for papers was distributed in relevant online groups with a view to have a richer selection of research and experiences from different domains and countries. As a result of the workshops and the calls for papers, 14 candidate papers were preselected for inclusion in the journal special issue. Thirty reviewers were invited to participate in the production of the special issue, and the coeditors acted as metareviewer. Where one of the coeditors of the issue was also a coauthor of one of the preselected papers, we assigned a different metareviewer to coordinate the review process in such a way that all parties involved remained anonymous.

We believe that in particular for an emerging topic like this—indigenous and local HCI—review criteria should focus on the paper’s importance, relevance, and potential for encouraging other researchers to study this topic. HCI journals and conferences tend to have a predominant engineering paradigm in their selection criteria. However, as a field, HCI, and in particular the topic of this issue, is becoming less multidisciplinary and increasingly interdisciplinary. This assumes that peer reviewing of written work in this field should incorporate a flexible epistemological position more reflective of the needs and perspectives of authors’ domain and cultures and the communities they serve with their research. As metareviewers of papers we tried to maintain this perspective and briefed the reviewers accordingly before engaging with submissions.

The time line for our special issue of IJHCI on Reframing HCI Through Local and Indigenous Perspectives was as follows:

• Invitations to prospective authors of papers for the IJHCI special issue: All out by end of September 2011.
• Potential participants from Namibia, Malaysia, Japan, India, Bolivia, Mexico, Denmark, United Kingdom, Australia, South Africa, China.
• First IJHCI submission due; papers go out to two reviewers selected by special issue editors and one IJHCI guest coeditor. 5th of January 2012
• Reviews due. 31st of March 2012
• Notification of review outcome. 7th of April 2012
• First revision due: 1st of June 2012
• Second reviews due (as needed). 15th of July 2012
• Notification of review outcome and guest coeditors’ comments to authors for final revision. 15th of August 2012
• Final revision due. 31st of October 2012
• Submission of complete IJHCI special issue per the guidelines provided by the IJHCI editor. 14th of December 2012

As shown in the time line, the papers in this issue went through two rounds of reviews and three revisions. An exception from this review process was the sixth paper, which went through only one round of reviews and which was added late in the review process to provide a much needed example of a scripted approach to HCI design in local contexts. We believe the final set of seven papers reflect them through interesting set of experiences and discussions on local and indigenous perspectives on HCI.

ABOUT THE ARTICLES IN THIS ISSUE

The seven articles in this special issue report on local perspectives and experiences from Europe, the Middle East, Africa, Asia, and rural United States. In them we can find a mix of practice-led and practice-based research. For the former type, we can find research leading to inform practice, and for the latter type artifacts in the form of prototypes and adaptations are presented as contributions to knowledge. The articles all to some extent answer the four questions about local and indigenous HCI:

• How do we approach and study the interpretive frames used locally and/or from an indigenous perspective to make sense of the current body of knowledge and tools in HCI?
• What is meant by local and indigenous HCI and why this is important for the research and practitioner communities?
• What are the ethical issues in researching culture and HCI?
• What are the power relations and scripts embedded in this process?

Beginning with the issue of how we from a local or indigenous perspective approach the current body of knowledge and tools in HCI, the first article, by Rüdiger Heimgärtner, presents a practitioner’s view of the challenges of the design process as an intercultural encounter and set of interactions. He presents a mode aimed supporting culturally influenced HCI. He investigates correlations adopted theoretically between cultural dimensions and variables for HCI design. The usefulness and validity of this model is presented with evidence by using interactions of Chinese and German users to illustrate the different issues that can emerge in communication. Although we can accept the model presented is in many ways work in progress, it is still valuable for this special issue, as it shows a comprehensive attempt to offer designers and engineers real handles to approach cultural requirements gathering and analysis. The descriptive intercultural model for HCI design serves to inspire HCI engineers in the requirement analysis phase as well as HCI designers in the design phase. Finally some implications for practitioners are shown.

In the same vein, the second article in this issue adds to our knowledge of how to use existing tools and theories from a local perspective by presenting and comparing two case studies on mobile usability from Iran and Turkey. This article reports how Aryana and Clemmensen evaluated the use of different applications including music player, social networking, and the management of personal contacts. According to Aryana and Clemmensen, very little research on cultural aspects of HCI in the Middle East has been reported. Their research adds to this body of knowledge and at the same time helps to augment design-relevant local cultural understanding. Their local perspective on context and culture helps to avoid the bias in design created by stereotypes emerged in uncritical use of national culture models such as Hofstede’s (2001). Their findings highlight complexities for these markets moderated not only by ethnic and religious factors but also by features endemic to both Iran and Turkey. The insights provided in information architecture for Iran and Turkey go beyond mobile HCI to the wider domain of the design of information appliances and websites.

What is meant by local and indigenous HCI and why this is important for the research and practitioner communities is central for this special issue. The third article, by Winschiers-Theophilus and Bidwell, touches on this central theme of the special issue, as it searches for new epistemological positions in reframing HCI, in this case from an African perspective. They reveal and problematize the “scripts” and “assumptions” embedded in traditional HCI concepts, methods, and tools and the tensions these create with an indigenous perspective. The authors propose a critical research agenda with a redefined indigenous epistemology unfolded under, what they call an Afrocentric paradigm. In their own words, “the Afrocentric paradigm really teaches us as designers from elsewhere to become part and parcel of the ‘collective’ rather than emphasizing a ‘critically distant’ self that describes local collectivist practices.” They illustrate it with different design experiences in South Africa in which they have been involved. One of the interesting takeaways from this article is highlighting the need to redefine the role of the interaction designer as an articulator of community-based knowledge and interaction, in contrast to that of a recorder of interaction and attitudinal data generated by individual users. Under this new epistemology it becomes clear that localizing interactive systems is not only about customizing user interface widgets and behaviors but also about understanding how their usefulness is socially constructed. Authors argue for the recognition of power relations and the implication for participatory design while engaging with these communities.

The same topic, that of what is meant by local and indigenous HCI, is approached from a different angle in the fourth article of this collection: a survey of studies of website usability in Asia, presented by Nawaz and Clemmensen. The key feature of this study is that all papers included in the survey have been published by authors with affiliations in Asian universities. This provides, as the authors claim, a view “from within.” The survey of paper yields different insights to the local perspectives of Asian scholars and researchers in while studying website usability and, more interesting, their localized motivations to engage in such research. China was the country with most publications, followed by Japan and Malaysia, and studies were mostly focused on e-commerce websites and tourism websites. Of interest, we can see that in most cases the methods used to understand website usability in their own contexts rely on quantitative approaches underpinned by more universal psychological theories instead of cultural models or frameworks. These approaches included frequent use of labs as testing environments, and university students as surrogate users. Therefore, we can see that the need for indigenous perspectives in HCI is not only for designers and users but also for local researchers. Authors highlight the need for a greater sensitivity to what is “local” and “from within” in HCI research and what this can add to the existing literature on website usability.

Finally, the fifth, sixth, and seventh articles in this special issue touch upon the question of the ethical issues, power relations, and scripts that are embedded in researching culture and HCI. The fifth article, by Kavanaugh, Puckett, and Tatar, presents a small case study from the South Appalachian Mountains in rural Virginia, USA. The value of this article for indigenous HCI lies not in the size and validity of the data gathered but in the illustration of the importance of local interpretive frames of low information technology literacy groups in bridging the use of more advanced technologies for a better life. There are similarities with the m-pesa (Wyche et al., 2012)
experience in South Africa where the use of mobile phones was used as the main driver in the adoption of electronic payments. In this case, the use of mobile phones was a scaffold toward the adoption of desktop computers for people on low income. The authors’ exploratory work falls into the area of determining interpretive frames used by local populations and is intended to help design larger studies leading to interface design and computer learning strategies and materials that are culturally and cognitively sensitive to frame bridging theoretical approaches. The sixth article by Camera and Abdelnour-Nocéra is an attempt to rationalise and validate a particular participatory sociotechnical design tool, the sociotechnical evaluation matrix, in a specific African context. The article reports on how to deal with issues related to multidisciplinarity and multiculturality in the collaborative design and development of technology for Kenyan farmers. The final article, by van der Velden, presents a reflective design exercise for Wikipedia as a potential digital repository of indigenous knowledge. Through a postcolonial lens she is able to think of ways of reorganizing and re-presenting content from an indigenous perspective. The conceptual cornerstone of her work is based around the notion of “decentering the database.” In this way she is able to examine and question the intricate relations between designer-as-users and Wikipedia’s current design and the challenges for decen-tering what is presented as truly collaborative and democratic endeavor. Contrasting examples of locally developed and collaboratively created digital knowledge repositories in Australia and Africa are presented as evidence of design under different epistemologies and ontologies.

In what ways will the reading of these articles contribute to answering the question of how HCI can be reframed from indigenous and local perspectives? The focus on local interpretive frames is key (Kavanaugh). However, for engineers and designer to access and reflect on these frames, models such as Rudiger’s and tools such as the sociotechnical evaluation matrix (Camara and Abdelnour-Nocéra) are required. These models and tools augment points of convergence and divergence and potential communication breakdowns between producers and users, and the different disciplines and cultures implicated in designing usability and user experience. In addition to these models, critical epistemological postures that re-define the role of interaction designers with the communities they serve are an important element of any attempt at defining indigenous HCI (van der Velden; Winschier and Bidwell). The case studies from Iran and Turkey highlight the limitations of simple national culture models to address cultural, religious, and endemic aspects of different user groups. Reframing HCI necessarily involves being sensitive to the local perspectives of users as people by using not only the right methods but also a different paradigmatic vision of how we design interaction.

Two articles in this issue help to contextualize the ongoing efforts on transforming HCI from an indigenous perspective: Nawas and Clemmensen highlight the irony that, despite an increasing interest by Asian institutions to research website usability, we can still see the predominant use of lab protocols and methodologies that reinforce traditional HCI frames with faceless users; Kavanaugh et al. present an example of how indigenous HCI is not only a need for developing countries but applicable to communities in any part of the world.

Overall, this collection of articles provides an opportunity to encounter a body of research that is still very young and offers a number of interesting challenges for HCI as a rich and multidimensional discipline. There is no silver bullet to solve the problems highlighted here, but the authors of this collection make a good job in trying to provide solutions through their firsthand experiences and proposed tools and frameworks. We hope that this special issue stimulates you to keep exploring these challenges either as a practitioner or as a researcher. We certainly enjoyed bringing this issue to fruition.

REFERENCES


