Glocal Challenges in Digitally-Mediated Intangible Cultural Heritage (ICH) Documentation: Configuring a Research Agenda

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The Hilali Network

The Hilali Network is a transnational collaboration which transcends geographic and conceptual borders to merge current reform in UK and Egyptian higher education and local community-led digital preservation and protection of Intangible Cultural Heritage. The project aims at developing an Intangible Cultural Heritage (ICH) Living Curriculum in the first instance with a focus on intangible cultural heritage and computing science, in partnership with established Higher Education and HCI organisations in UK and Egypt.

Tackling infrastructures for participatory technology design in ICH

During 2017-18 at the Hilali Network, we have been concentrating in tackling long-standing challenges in a manifold of interrelated fields: higher education, technology design and intangible cultural heritage (ICH). In this endeavour, our approach is focused on finding a common thread in the latest developments in these disciplines to select effective methodologies and principles for safeguarding living cultural heritage via design in higher education.

One of our most important attempts was to facilitate an infrastructure for participatory technology design for the documentation of the ICH of several tribes of Bedouins living in North-Central Egypt. In doing so, we tried to overcome several barriers that might generally affect most

attempts to engage ICH gate keepers in digitally-mediated and heritage-oriented projects.

The community: The Bedouins of North-Central Egypt

The Bedouins of North-Central Egypt are going through a transitional period. After having been nomadic for centuries, they have become settled communities with far-reaching consequences in terms of social structure and cultural practices. This community is well aware of the trade-off they are going through. Some traditions and customs related to a more traditional and nomadic lifestyle are disappearing are they embrace more urban and modern habits.

For instance, the skills necessary for desert life – such as their mastery of transportation by camels and trace tracking – are no longer practiced. Besides, having settle also means that other cultures (such as the Salafi's and the wider Egyptian's) have a stronger influence, which in manifesting in the length of marriage celebrations becoming shorter, improvising singing skills held by the women fading away, the culinary traditions linked to the use of a bonfire being abandoned, and other customs such as face tattooing and traditional clothing being replaced more modern dressing styles.

However, all these practices hold an unchanged cultural relevance for the community in defining and shaping Bedouin identity. In fact, the Bedouins look with nostalgia at what "being a Bedouin" meant compared to the fading defining culture of present days.

For these reasons, many members of this community recognise the necessity of stepping up in taking care of their ICH.

The setting: the 2017 Hilali Summer School

The Bedouins warmly welcomed our attempt to explore Bedouin ICH and our subsequent proposition to collaborate

in the design of four mobile apps for ICH self-documentation.

Meeting Bedouins of North-Central Egypt

The technology design took place within the 2017 Hilali Summer School held at the City of Scientific Research and Technological Application (SRTA-City) in August 2017. Although this experience represented a unique opportunity for the Bedouins to explore a technological framework to document their heritage, many challenges were embedded in this attempt.

Despite their willingness to participate, the engagement practices had to be planned in a way that did not make the Bedouins feel challenged by the proposed tasks. This is because early fieldwork revealed a non-exploratory mind-set and the reluctance to partake in activities they did not fully understand. Besides these behavioural aspects, there were further challenges more specifically linked with ICH.

The Bedouins hold a great pride in their culture, and they are fastidious about any extent of mistake they may find in digital representations of heritage. This last trait was addressed by a great involvement of the Bedouins in the

aesthetic features of the apps so to generate final prototypes to which they could identify more easily.

Shaimaa Lazem with students from the 2017 Hilali Summer School

The mobile application design attempted to also respond to their concern that young family members know less about their heritage as they started going to schools and interacting with modern technologies. The resulting generational gap – which, in cultural terms, is common to many cultures across the world – in terms of who knows old Bedouin traditions and who has enough digital literacy to document them was bridged by the proposition of a prototype that could capture the interest of the youngest generations through a gaming approach.

Outcomes from the Hilali summer school
Overall, all these challenges were overcome brilliantly by the students-designers we partnered with for the purposes of digitally documenting Bedouin ICH. Along the road, we learned three main lessons that may contribute to the increasing worldwide proposition of ICT deployment for heritage purposes. Firstly, user-friendliness is not enough to foster participation. The ethos of our approach was putting the benefits for the community before the tool. The benefits were identified by the community, who saw in

designing the apps to counteract an atavistic misrepresentation that the members lamented.

Secondly, we soon realised that three further and interrelated factors we needed to promote in order to enact the participation of the Bedouins: motivation (by focusing on the motivations for them), ownership (by consistently including them in the decision-making process), and authenticity (by co-designing a framework in which to juxtapose the misrepresentation that they feel is occurring in mainstream heritage).

Thirdly, the entire project (including the mapping of heritage, the investigation, and the technology design) was localised, therefore, the potential cultural and linguistic barriers between designers and heritage keepers were limited.

Future-facing digitalism in ICH documentation
Our investigations about the challenges around digitalism and ICH documentation and safeguarding did not end there.

SELF-DOCUMENTATION FOR INTANGIBLE CULTURE HERITAGE: FROM SMART PHONE APPLICATIONS TO CLOUD COMPUTING'
In November 2017, under the auspices of Prof. Khaled Abd El Ghaffar, the Minister of Higher Education and Scientific Research, the City of Scientific Research and Technology Applications (SRTA-City), and Alexandria University, we were invited to participate in the workshop 'Self-Documentation for Intangible Culture Heritage: From Smart Phone Applications to Cloud Computing'.

The workshop sparked discussions around community-led technologies, and the role of research institutes, universities, and the ICT industry in driving its development. The two-day event brought together stakeholders from Egypt and UK representing government, research and education institutes, technology industry, and community organizations to discuss sustainable models for

designing technologies to serve local communities. Its objectives were to explore the opportunities for the ICT industry to design for local communities and the potential role for research institutes to enable such link through interdisciplinary research expertise. It was also a space to discuss the barriers and challenges for involving communities in technology design processes, and to showcase the Hilali model of engaging engineering students with the Borg El-Arab Bedouin community.

Hilali Network Associate partner Sam Elkington addresses the audience at the workshop in Alexandria, November 2017.

The keynote speakers of the event were Professor Peter Stone OBE, UNESCO Chair in Cultural Property Protection and Peace, School of Arts and Cultures, Newcastle University, UK and Dr Samuel Elkington, Academic Lead, Assessment/Feedback & Flexible Learning, Advance HE, UK. Prof Stone and Dr Elkington provided insights respectively about the value of tangible and intangible cultural heritage to the present and future and flexible learning and the possibilities for a 21st century Higher Education. There also were three additional presentations: Dr Shaimaa Lazem presented The Hilali Network, Dr Salma Abu Hafsa introduced the Bedouin community, and two students from the Hilali Summer School reported their experiences.

The panel focused on the challenges and opportunities related to the use of technology for the self-documentation of intangible cultural heritage. Moderated by Hilali Network lead in Egypt Dr Lazem, the panel saw the participation of Prof Stone, Prof Walaa Sheta, Dr Danilo Giglitto, and two industrial leaders such as Eng. Youssef Aly, CEO of Espace, and Eng. Mohamed El Dallal, co-founder and CEO of Innovideas LLC. for marketing and advertising and co-founder of Dcodes LLC. for software solutions.

The attendees included the students for the Hilali Summer School, other engineering students from Alexandria University, academics from the same institute, press representatives, and the general public. The Hilali students benefited from the interaction with the industrial leaders, which provided feedback on the prototypes and advice on how to potentially market them. More generally, the audience had the chance to listen to first-hand information about the Bedouins and, in doing so, clarify a few misconceptions and misrepresentation affecting the Borg El-Arab Bedouin community.

BUILDING A LIVING CURRICULUM FOR CULTURAL HERITAGE AND STEM

In May 2018, we invited international UK based policy makers, educators, students, practitioners and researchers to participate in our UK workshop called Building a Living Curriculum for Cultural Heritage and Science, Technology, Engineering and Maths (STEM). This provided a further lens, this time from the perspective of learning design, to examine participatory technology processes in ICH.

This workshop introduced participants through practice-based research approaches to the merging of ideas from intangible cultural heritage, STEM and Education. It had the aim of providing a cross-disciplinary space for the co-creation of tools, ideas and projects in Cultural Heritage and STEM.

It was based on the premise that as communities across the world become increasingly concerned about safeguarding and protecting their heritage, local educational systems, and the people who teach and learn in them, can adapt their existing curricula and create new experiences to address this challenge.

Guidelines for engagement and technology design dimensions

Through the productive dialogue produced before and during the UK-based international workshop, we identified the following additional (and complementary) "ingredients" whose presence could determine the success of a digitally-mediated and community-based ICH projects and form the basis for the kinds of curricula which can support digitally mediated ICH education:

Resilience Durability (or lack thereof) of heritage platforms is a real issue. As funding is temporary by definition, many projects may suffer from dependency on injection of money. It is, therefore, crucial that a sustainable long-term strategy is developed altogether with the technology.

Hilali network UK lead and PI Anne Preston promotes debate and discussion at the UK event

Accessibility It is extremely important to be sensitive towards different level of digital literacy in order not to obtain fragmented contributions in a tool.

"challenges usually stem from accessing communities, identifying them and subsequently adapting the training to their needs and to the particular scope of each project" Eirini Gallou, PhD Student Institute for Sustainable Heritage, University College London.
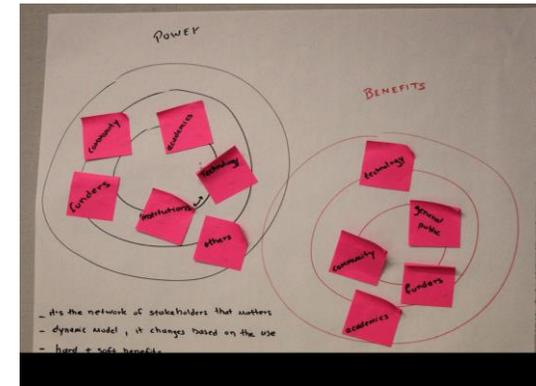
Exploring the dynamics of power and benefits in Digitally-Mediated ICH

Interpretation As heritage is contested, a heritage digital project should try to bring within the digital environment the process of symbolic interpretation and meaning negotiation that happens between ICH keepers offline.

"some aspects of cultural heritage will be better examined, or expressed manually/physically rather than digitally using different technologies. However, this doesn't mean that the use of technology to support such projects is not beneficial" Youssef El Hana, Postgraduate student in Education, Kingston University.

Application This refers to the necessity of grounding the usefulness of the technology to address real-life heritage problems.

"If we provide a context to 'intangible cultural heritage', and we are not from that same culture, we may also be documenting our own values and perceptions, exposing the research to unconscious bias and changing something genuine" Leonor Silva de Mattos, Senior Lecturer of Economics, University of Hertfordshire.

Customisation As ICH may change over time (together with how it is interpreted by a community), a technology should be customisable in that it could be adapted to new forms of contributions to also enhance its future-proof capabilities. The customisable aspects should also regard different age groups or group of interests.

"Technologies are being advanced rapidly rendering their sustainability and maintenance challenging" Kalliopi Fouseki, course director for the MSc Sustainable Heritage, University College London.

Infrastructure The technology design and subsequent development of software should be in line with the hardware components and network capabilities of the potential group of users.

"the most genuine elements of cultural heritage can sometimes be located in places without proper internet connection and/or electricity" Leonor Silva de Mattos, Senior Lecturer of Economics, University of Hertfordshire.

Transparency The motivations of academics, researchers, students and designers affiliated with the project and technology proposition should be clearly stated to the heritage keepers involved.

"The main challenge to technologically mediated cultural heritage work includes: Cultural literacy, Empathy,

toleration & respect, Transparency & openness, Accountability, Recognition and acknowledgment. As teachers, designers & citizens we will be creating technological resources celebrating diversity, multiculturalism and we must be prepared to defend them." Mark Passera, Senior lecturer in the Department of Creative & Cultural Industries,Kingston University.

Attitudes to technology The perceived role of technology and attitudes towards it within a community should be carefully explored, possibly as one of the earliest stages of a digital heritage project.

"when trying to meet students' needs in a heritage-technology project, there are challenges in addressing students' attitudes or perception on the use of technology for learning e.g they lack the skills or fear of technology" Karen Trimarchi, Head of Online, University of Hertfordshire.

Interim Conclusions
The road towards solving the issues around community engagement in ICH-based digital platforms is far from straightforward. The reflections of the Hilali Network point towards potentially successful directions and the basis for a future research agenda where the aforementioned guidelines for engagement and technology design dimensions are carefully explored.

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Two Weeks in Pyramid – Hilali Network student blog

Explore our publications
Giglitto, D., Lazem, S., & Preston, A. (2018). In the eye of the student: "An intangible cultural heritage Experience,

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