SHORT PAPERS

Hot Stones and Cool Digitals: Sustainable Contact Zones for Intangible Cultural Heritage in Finland

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ABSTRACT

A combination of community participation and ICT (Information and Communications Technology) could be an effective way of promoting communities as on-site contexts for intangible cultural heritage (ICH). James Clifford's *Museums as Contact Zones* (1997) serves as a theoretical and practical basis for this approach. Two community-based museum projects were conducted in Finland between 2012 and 2014: a community-based digitisation project with the Gallen-Kallela Museum in Espoo, and a museum installation in the Hakaniemi Market Square in Helsinki to which members of the local community were the major contributors. Both projects demonstrated that it is possible for a community to foster ICH through participation, collaboration, borrowing from museum practices and by the application of emerging digital technologies.

Keywords
Community participation, 'Contact zone', Archives, Digitisation, Digital technology, Energy consumption, Finland, Helsinki, Espoo, Gallen-Kallela Museum, Hakaniemi Market Square

A contact zone for Intangible Cultural Heritage

Museums are on the move. They are increasingly playing a leading role in technological innovation in the application of advanced ICTs, especially in the areas of digitisation, cloud collections, media installations and digitally-embedded museum spaces.[1] The *2013 American Association of Museums Report* details innovations that range from robotic digitisation, gallery sensors, 3-D printing for teaching purposes, and networked artefacts, to indoor GPS.[2] These are aimed at enriching the social links between a museum's collection and its community to draw in a larger audience and to

sustain itself as a relevant custodian of cultural content. Cultural heritage can now be accessed by new and remote communities beyond the confines of the museum building. The expanded audience that results from sharing living cultural heritage material on the internet can have myriad advantages for both the practitioners and the community, as points of contact, 'spaces of empathy' and opportunities for support and networking.[3] It can be added to and complemented by both past and contemporary intangible heritage. As a result, museums are gradually moving towards an increased engagement with their user-communities.

There is also a growing need for a more intense dialogue between local communities, museums and regional institutions to build an open, interactive process, and for the operation of collecting, preserving and exhibiting ICH online. This would not only offer educational value to existing heritage collections, but also foster a significant element of local and contemporary ICH. Museums today realise the need for participatory museum planning outside the walls of the museum building that could involve the community in creating an ideal, local, educational and intellectual experience.[4] Increased engagement with the community will also lead to new sustainable approaches, processes and methodologies towards the understanding and exhibition of ICH.

James Clifford in his essay *Museums as Contact Zones* proposes that the museum can become a space and a framework for action that benefits both itself and the cultures whose artefacts it shows. In Clifford's model, cultures can exploit the museum as much as the museum exploits them.[5] He says that there is a 'give and take' in museums where a *substantial amount of social mechanisms and culture is embedded in the objects themselves.*[6] The artefacts of the community should not be seen in isolation, nor out of their social context. If these artefacts were placed back in the community, or were in continuous use, they would be more relevant and helpful to the growth and evolution of the community.

How can Clifford's 'contact zones' be adapted for the future? How could a community emerge as a contact zone for ICH? Can community serve as a framework for action to negotiate ICH? How can technology, community and collections help? Could we take the museum to the street by inspiring communities to participate and share heritage and memories? How can we build a common

ground that would catalyse interaction and engagement with museum collections? How could communities become stakeholders for heritage, alongside heritage institutions, within a sustainable framework? To answer these questions it is imperative that we analyse and understand how communities can learn from museum practice, and how museums could learn from communities in the context of ICH.

The UNESCO directive of 2003 says that ICH is:

Traditional, contemporary and living at the same time: intangible cultural heritage does not only represent inherited traditions from the past but also contemporary rural and urban practices in which diverse cultural groups take part.[7] It is 'inclusive' in that we may share expressions of ICH that are similar to those practised by others. It contributes to social cohesion, encouraging a sense of identity and responsibility which helps individuals to feel part of one or more communities, and to feel part of society at large. It is 'representative' in that intangible cultural heritage is not merely valued as a 'cultural good', on a comparative basis, for its exclusivity or its exceptional value. It thrives on its basis in communities and depends on those whose knowledge of traditions, skills and customs are passed on to the rest of the community, from generation to generation, or to other communities. Finally it is 'community-based' which implies that ICH can only be heritage when it is recognised as such by the communities, groups or individuals that create, maintain and transmit it, and without their recognition, nobody else can decide for them that a given expression or practice is their heritage.

Building a common space, a 'contact zone', that is inclusive, representative and community-based as per the UNESCO directive is a challenge. Yet, following those principles, two community-based museum projects were conducted in Finland between 2012 and 2014: a community-participation digitisation project with the Gallen-Kallela Museum in Espoo, and a museum installation in the Hakaniemi Market Square in Helsinki to which members of the community were major contributors. Both projects demonstrated that, by borrowing from museum practices, and by utilising emerging digital technology, a community can foster

contemporary ICH. In the projects described below, we show that participation, collaboration and technology can be used effectively to promote communities and museums as on-site contexts for ICH, and to enable the community to emerge as a 'contact zone'.

Light is History: a contact zone for energy and well-being

An image of an illuminated world globe, lent by a participant in the *Light is History* project, hangs in the project's public installation in Hakaniemi Market Square, Helsinki, Finland. It is accompanied by a personal narrative. This describes the owner's apprehension about future energy crises and how these might affect the participant's travelling plans:

This globe is a gift from one of our dear friends, who knew that both of us like globes. He found it in a flea market. For us, it is a symbol of travelling, which is our most cherished hobby. This great hobby will become less of a delight when cheap oil runs out. In addition, the globe and its warm 80s-style lighting brings back memories of our childhood.

In addition to the globe, the participant donated one week of her energy savings to the installation. Her savings, along with the energy savings from fifteen other participants, were used to power and light up the installation in the public square. The light from the lamps was designed to simulate the bright therapy lamps that

are prevalent in the darkness of the Finnish winter as a cure for seasonal affective disorder (SAD).[8] [Plate 1]

The world globe is one of the sixteen artefacts displayed in the installation. Participants and people from the market square are gathered around the installation. The discussion is on energy use in domestic households, energy-consuming appliances people use and the stories behind them. An informal space has thus been created in a public zone to discuss such contemporary matters. The installation in its entirety serves as a research object in the Market Square. It explores the topics of participation, domestic energy consumption, and the application of new digital technologies in displaying energy artefacts and narratives from the immediate community neighbourhood of Kallio. Here, anonymous community participants exhibited information about their domestic energy artefacts, their personal stories, and shared their energy use data for the general wellbeing.

The project was complex in the making but turned out to be effective in its implementation. At the beginning of 2012, sixteen families from the community were interviewed to enable us to understand and analyse their domestic energy footprints.[9] They agreed to participate in the installation and to donate a domestic electrical item for public display. Mapping the community participants' energy use was a pre-cursor to the installation. Interviews were conducted to document the participants' homes in the context of their energy consumption, the energy-consuming appliances they used, and their associated well-being. They also

Plate 1
Participants and audience gathered in the *Light is History* 'contact zone' in Hakaniemi Market Square, Helsinki.
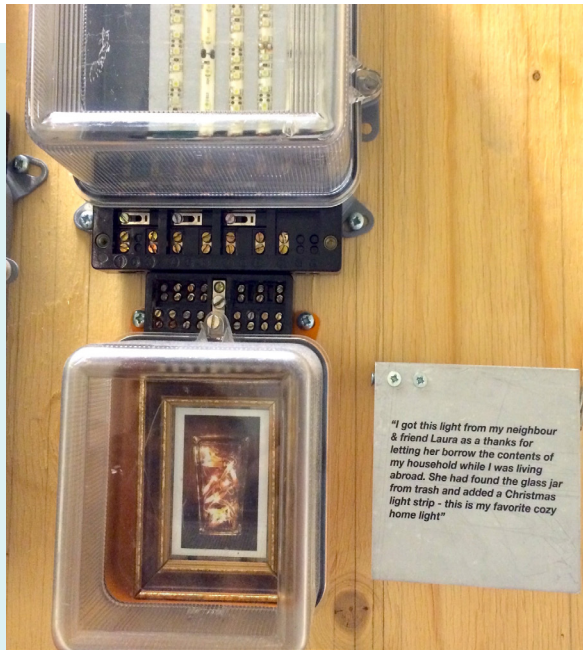Photo: Kukka Suonio, 2012.

Plate 2
An artefact accompanied by a personal narrative.
Photo: Samir Bhowmik, 2012.

"I got this light from my neighbour & friend Laura as a thanks for letting her borrow the contents of my household while I was living abroad. She had found the glass jar from trash and added a Christmas light strip - this is my favorite cozy home light"

participated in the design and operation of the installation, the online process of reporting energy data from the power company's online portal, and publishing the data through an online portal.

The installation utilised recycled electric meters salvaged from a local metering company to build lamps and display cases. The meters were emptied of their contents and bright light emitting diode (LED) fixtures were installed inside. These lamps simulated the intensity of therapy lamps for well-being, with intensities of 10,000 lux. Half of the meters were set aside for the displays. These were then mounted onto a box constructed from recycled wood. The lamps and cases were wired to a micro-chip controller and a central onsite computer. The chip was programmed to receive daily energy data from the participants and to relay them to the light fixtures and the artefact display cases. The displays acted as makeshift museum vitrines that housed the energy artefacts, and each was accompanied by the personal narrative of the owner.

The digital tools applied in the installation consisted of a smart phone application that channelled the local community's energy data. The application allowed

remote access to the installation and for recording the daily energy data of the participants. A digital repository was also initiated to document the community's artefacts and personal narratives.[10] Participants in the project were requested to publish their daily energy use data for one week onto the project portal. The goal was to simulate the community residents' energy use through the lamps and their artefacts and personal narratives in the market square. The accompanying narratives, together with the artefacts, dealt with the participant's relationship to energy-use, the well-being they derived from it, and what role it played in their lives. [Plate 2]

One of the artefacts, in the installation, contributed by an anonymous participant, was an electric sauna. This is a common household appliance in a Finnish home, but it also has deep links to Finnish culture and history and is considered a form of community heritage. The sauna is featured in films, novels, dance and historical sites, all connected with stories and narratives. The stories associated with the sauna could be seen as ICH but this has not been extensively documented. At the installation itself, the participant described her own thoughts about the artefacts:

> I have cried, laughed, loved, broken up, been quiet, thought aloud, partied, been alone and among people, sung, told secrets, composed poems and music in the sauna. When the stove says 'tsssh' the mind says 'tsssh'. The steam is hot and the stones are beautiful … sauna is my thing.

Similar statements could also be made by other members of the surrounding community who derive well-being from this common energy-consuming artefact. It is narrative-evidence about an energy-consuming artefact that has an undeniable presence in the contemporary lives of the local community.

An old radio, an 'Orthoperspecta', was submitted by another participant. Here is its associated narrative:

> My father purchased this piece of high-tech equipment, a Salora Orthoperspecta Radio with speakers, in the early 1970s. I got it for my personal use at age 6, some fifteen years later. As a child, and as a young girl in Rovaniemi, my radio launched a world of events, stories, and especially music into my room. I still see a big speaker, the sound of the radio is big, its controls

Plate 3
Students visiting the *Light is History* 'contact zone' in
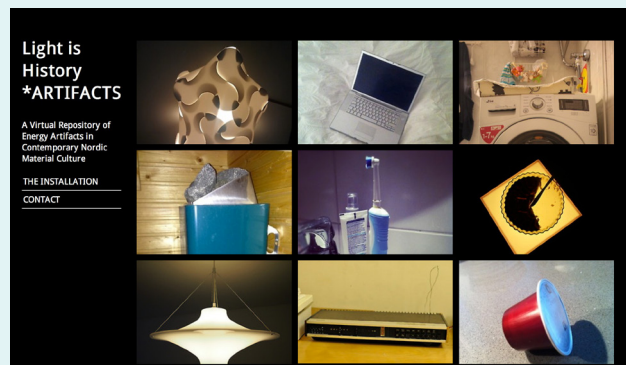Hakaniemi Market Square, Helsinki.
Photo: Samir Bhowmik, 2012.

Plate 4
Archive of contemporary artefacts from the community,
accompanied by personal narratives.
Source: Screenshot by Samir Bhowmik, 2014.

clear. The radio has been serviced several times already. Faults occur from time to time: the scrolling controls to the frequencies are too close together. It has a soul. This device is still in daily use at home.

Light is History was installed and exhibited in the Hakaniemi Market Square from November 25 to December 1, 2012 as a co-created 'contact zone'. The community participants were invited to be present around the installation between 17:00 and 19:00 in the evening when the lights were switched on. Coffee and *Glögi*, a traditional Finnish Christmas drink, were served. Here, the anonymous participants and the general public were able to interact through the donated energy of the lights and the electrical appliances. The identities of the participants were anonymised. The therapy lamps, combined with the display cases and narratives, represented their identities. The installation constructed an interactive experience in the public square in which the public and the participants inhabited the installation space, the 'contact zone', to engage in conversation.[11] [Plate 3]

During the week, discussions were initiated about energy use in daily life, public light therapy, well-being, museums, and acts of community participation. Conversations centred on the open publishing of energy data, the feel-good aspects of energy saving, the use of energy-hungry appliances and the emotions associated with using them. Non-participating members of the local community, visiting researchers and academics also participated in the conversations. During the day,

schoolchildren, accompanied by their teachers, visited the installation several times and received information and lessons about energy use and saving. Local residents, the elderly, and passers-by during business hours also often stopped and engaged in conversation with the participants. Thus, for seven days and seven nights, *Light is History* created a 'contact zone' in the local community around a display of light and material artefacts in a public and visible square in Helsinki. [Plate 4]

The *Light is History* project was designed as a public installation to curate Finnish energy appliances from the local community, artefacts that did not belong to any museum collection. The project showed that new practices of community engagement with ICH could be explored with the use of emerging media technologies in a public space. By representing a diverse collection of curated electrical artefacts as part of the ICH of a local community, it attempted to discuss publicly the current state of energy use and the environment. Well-being was promoted in the public space through the ICH on display and the effect of the bright therapy lamps. Thus, a shared 'contact zone' was created outside the museum walls that was community-sourced, that harnessed contemporary ICH, and that created awareness about fostering community and sustainability. Following the UNESCO directive, the project was 'inclusive', 'representative' and 'community-based'. The project also demonstrated that a collaborative installation that mimics a museum could be constructed outside the museum walls to exhibit ICH.[12]

Haloo Akseli: a 'contact zone' for community participation in a digitisation project

Seven year old Ramzi uses the digitisation robot in the exhibition gallery of the Gallen-Kallela Museum to scan his new creation. It is a sketch of J. J. Tikkanen, Finland's first Art History professor, and a close colleague of Finnish national artist, Akseli Gallen-Kallela. Ramzi is assisted by a project team member to place his sketch on the input tray, initiate the robot user interface and scan his picture. The motors start turning and the robot swivels and lowers itself to pick up Ramzi's sketch. Then it places the sketch on the scanner bed as the fluorescent head scans the image. The scan appears on the desktop after a few minutes and is immediately uploaded to *Haloo Akseli*, the recently-implemented online digital archive of the Gallen-Kallela Museum. Other children also sketch their favorite people from the digital archive and are helped to digitise them.

In another gallery of the museum, a participant recounts a story about his personal relationship with Akseli Gallen-Kallela's multiple paintings of Lake Keitele. He writes it all down on a specially designed form. The museum documents his narrative and adds it to its collection as ICH. Local memories of the Tarvaspää area around the museum are also gathered from the local community. A children's workshop, *My Places*, allows the young audience to make their own maps based on their memories of the museum and its collections. Outside, on the museum lawn, the staff have organised a 're-mixing'

stand, with reproductions of old photographs of Gallen-Kallela and his friends from the museum's collections. Paints and brushes are made available. Children are invited to paint over the old photographs and add their own interpretations of historic events. [Plate 5]

The event is part of Aalto University's DigGLAM (Digitising Galleries, Libraries, Archives and Museums) project in Finland.[13] Supported by this initiative, in 2014 three such community theme days were designed and organised at the Gallen-Kallela Museum to initiate community outreach, community-sourcing and to engage the museum audience in digitisation workshops. The main aims of these theme days were to create a 'contact space' within the museum, to gather the museum's user communities together and to encourage them to get involved with the museum's heritage collections. As part of this goal, the project attempted to engage the community in recording and digitising ICH related to Akseli Gallen-Kallela.

During the theme days in the museum's studio gallery and exhibition hall, digitisation workshop stations and heritage donation desks were set up. Donation forms that contained a detailed description of the Creative Commons license were specially prepared for these events. 'Participation forms' allowed the community to submit their heritage artefacts and ICH about Akseli Gallen-Kallela. A digital archive *Haloo Akseli*, based on Akseli Gallen-Kallela's 1920s phonebook, was designed and implemented as a digital platform for community

Plate 5
Children and community participants at a digitisation workshop at the Gallen-Kallela Museum.
Photo: Samir Bhowmik, 2014.

Plate 6
A member of the community submitting a personal history associated with Akseli Gallen-Kallela.
Photo: Samir Bhowmik, 2014.

engagement.[14] The archive is there to host the micro-histories of the artist's network of friends and their artistic works, and also to allow the museum's community to add ICH to the collection. [Plate 6]

Lectures and panel discussions were organised in the studio gallery of the museum around the theme of *Arts, Archives and Commons*. Here, the critical topics of open knowledge, public domain and commons in the building of cultural heritage archives were explained to the community participants.[15] Discussions focused on such questions as: What is the value of Open GLAM principles in cultural heritage, some of which is ICH?[16] How does digital media technology affect the fostering of cultural heritage? How could museums and audiences get involved and contribute? Through these discussions, the project attempted to examine the factors involved in audience participation in the context of the museum and to explore whether it was possible to build a common contact space for ICH.

As part of the digitisation workshops, the project also tested the viability of a scanning robot by allowing the audience to use the robot in the scanning and tagging of their own historical materials. Open-source software was used and an energy-efficient robotic scanner was assembled to automate the digitisation process.[17] A user-interface was designed so the robot could help community members to easily scan, tag and digitise. The robot software is open-source and its hardware design has a Creative Commons CC BY-SA 3.0 license.[18]

Thus, in the first half of 2014, the three community theme days at the Gallen-Kallela Museum collected historical artefacts, including ICH from the museum's participating communities. During this time, the museum became a 'contact zone', in effect becoming a space and place of action that benefitted both itself and the communities whose artefacts it gathered. Here, the community was engaged in multiple museological activities during the theme days. They co-curated digital works from the public domain online, documented and donated their own historical artefacts and stories to be uploaded to the digital archive, took part in lectures and discussions and, most significantly, participated in the digitisation workshops. During these theme days, the museum designated curators and collections managers to be readily available to assist community members in recording their personal narratives. Donors of artefacts were assisted in using the digitising robot to scan them. They were guided to use the robot interface, start new digitisation workflows, tag their artefacts and run the scanner. This allowed them to understand the various steps and methods that comprise the digitisation of cultural heritage. [Plate 7]

According to Clifford, *when museums are seen as contact zones, their organizing structure as a collection becomes an ongoing historical, political, moral relationship - a powered charged set of exchanges, of push and pull … A center and a periphery are assumed: the center a point of gathering, the periphery an area of discovery*. The project was successful in gathering the

Plate 7
A panel discussion about heritage archives in progress during a community theme day.
Photo: Anna Virtanen, 2014.

user communities to a contact zone at the Gallen-Kallela Museum. This gathering acted as a 'centre' in the digitisation process, the core being the 'theme days' around which other activities were organised. Three hundred and twenty-nine members of the museum audience participated in the project. The theme days collected eighteen artefacts of heritage value. These consisted of historical photographs, letters, ephemera and ICH. Several members of the audience submitted personal stories and narratives related to the paintings of Gallen-Kallela. This ICH has been gathered and documented to be published in the *Haloo Akseli* digital archive.[19] [Plate 8]

The project demonstrated that community participation, museum practices and digital technology can be utilised to engage the museum audience and foster the community's heritage. This would be especially useful for museums with small staffs and limited budgets as the processes could be applied to harness the user communities' ICH. Such activities could lead to increased numbers of visitors and could provide discovery, access, and the revitalisation of dormant museum and community ICH collections. The most significant outcome of creating a contact zone around digitisation processes has been the re-activation of some of the museum collections associated with newly submitted ICH. According to the Gallen-Kallela museum, the most tangible results have been renewed interest in Akseli Gallen-Kallela's social network and the emerging discovery of associated artworks and heritage.

The next 'contact zone' for sustainability and ICH

Clifford defines the term 'contact zone' as *an attempt to invoke the spatial and temporal co-presence of subjects previously separated by geographic and historical disjunctures, and whose trajectories now intersect.*[20] Certainly, both projects created this space within the museum and in the public space, where
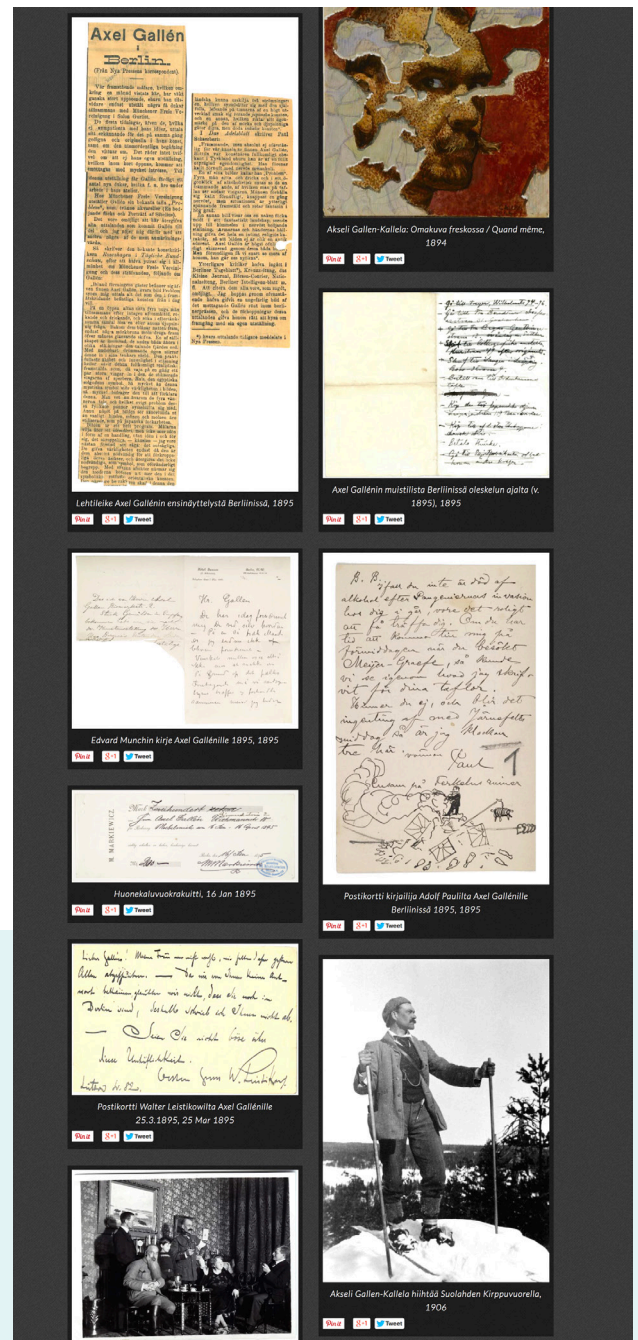

Plate 8
Artefacts, ephemera and ICH on the *Haloo Akseli* digital archive.
Source: Screenshot by Samir Bhowmik, 2016.

unrelated individuals from the communities came together in a common zone to share their memories. They also demonstrated that it is feasible for a community to emerge as a 'contact zone' and that it can foster its ICH through participation, collaboration, adopting selective museum practices, and by utilising emerging digital technologies. The projects also employed methodologies and mechanisms for user communities as a framework for action by which they could chronicle and administer their own heritage, with or without the participation of heritage institutions.

Participative systems can be deeply engaging and can fundamentally challenge and broaden notions of audience.[21] The concept of the 'contact zone' relies on community participation. In both the projects, participation was built into the system. The project at Gallen-Kallela Museum constructed a participative system in which all the components served to build an engaging community 'contact zone' within the walls of the museum. In the *Light is History* project, the participative system served to challenge and broaden the scope of contemporary issues in the public space.

The projects showed that community-participation systems have their own unique methodologies and organisation, and when applied in conjunction with museum practices, new ways of operating could emerge. Museums thus need to learn from the community by letting its members participate in the process of 'museum-building' and vice-versa. Since, communities are themselves dynamic by nature, and are sites of the constant articulation and refinement of history and culture, a museum that is based on the workings of local communities would be authentic, resilient and contemporary. This is because changes at the social and community level would have a direct impact on community museum prototypes. This could lead to long-term and sustainable models of heritage custodianship.

We place far too narrow a focus on our present day user-groups and the current 'experience' economy. *Our projects, however short-term and brief they may be, should always relate to and actively contribute to our long term and future activities as archives, libraries and museums.*[22] In the future, local venues, community installations and mobile museums that have community outreach could emerge as alternatives that are 'audience-based' and are reliant on participation and emerging digital technologies. They could function outside institutional frameworks since they would be driven by social and environmental agendas and for the well-being of the community. A new model of the museum at the community and local level could thus simulate the relationships, functioning and manners of the community to actually help re-invigorate those communities from within.

Acknowledgements

ENDNOTES

1. Johnson, Larry, Adams Becker, Samantha, Freeman, Alexander, 2013. *NMC Horizon Report: 2013 Museum Edition*, Austin, Texas: The New Media Consortium, 2013, http://redarchive.nmc.org/publications/2013-horizon-report-museum (consulted 11 February 2016).
2. Merritt, Elizabeth E. and Katz, Philip M., 2013. *TrendsWatch 2013: Back to the Future* (Center for the Future of Museums, American Alliance of Museums, 2013), pp. 24-29, http://aam-us.org/ docs/center-for-the-future-of-museums/trendswatch2013.pdf (consulted 11 February 2016).
3. Solanilla, Laura, 2008. 'The Internet as a Tool for Communicating Life Stories: A New Challenge for Memory Institutions' in *International Journal for Intangible Heritage* 3: pp. 103-116.
4. Simon, Nina, 2008. *The Participatory Museum*. Santa Cruz, CA: Museum 2.0: pp. 1-32.
5. Clifford, James, 1997. 'Museums as Contact Zones' in *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, MA: Harvard University Press: pp. 188-219.
6. Gere, Charlie, 1997. *Museums, Contact Zones and the Internet*. Paper presented at the Fourth International Conference on *Hypermedia and Interactivity in Museums*, 1-5 September 1997, Le Louvre, Paris, France.
7. UNESCO, 2003. *Convention for the safeguarding of intangible cultural heritage*-'What is intangible cultural heritage?' See: http://www.unesco.org/culture/ich/en/what-is-intangible-heritage-00003 (consulted 27 March 2016).
8. Kurlansik, Stuart L. and Ibay, Annamarie D., 2012. 'Seasonal Affective Disorder' in *Am Fam Physician* 2012, 86(11): pp. 1037-1041, http://medind.nic.in/iaa/t13/i12/iaat13i12p607.pdf (consulted 27 March 2016).
9. Acharya, Karthikeya, Bhowmik, Samir and Mikkonen, Jussi, 2013. 'Light is History' in the *Proceedings of the Fifth Nordic Design Research Conference*. Nordes, Experiments in Design Research, Copenhagen, Denmark, 9-12 June, http://www.nordes.org/nordes2013/pictures/Nordes2013Proceedings.pdf (consulted 29 March 2016).
10. See: *Light is History Artifacts*, http://lightishistory.tumblr.com/ (consulted 29 March 2016).
11. See: *Light is History*, http://designresearch.aalto.fi/projects/lih/ (consulted 29 March 2016).
12. Bhowmik, Samir, Acharya, Karthikeya and Díaz-Kommonen, Lily, 2013. 'Light is History: A Community Participated Museum Installation in Helsinki' in *The International Journal of the Inclusive Museum* 6, no. 1: pp. 145-157.
13. DigGLAM is a collaborative, energy-efficient and low-cost initiative for digitising the collections of small museums, libraries, archives and galleries with the help of user communities. See project website: http://sysrep.aalto.fi/digglam/ (consulted 29 March 2016).
14. Drupal, an open-source, content-management software, was configured and adapted to design the collections management systems of the digital archive. See https://www.drupal.org (consulted 29 March 2016).
15. See Open Knowledge Foundation's principles: https://okfn.org/opendata/ (consulted 29 March 2016).
16. See Open GLAM principles: http://openglam.org/principles/ (consulted 29 March 2016).
17. 'Gado2', a prototype built initially by Project Gado of Johns Hopkins University, Baltimore, was further enhanced at the Media Lab of Aalto University. Since 2010, Project Gado has worked with the Afro-American Newspapers to digitise, distribute and monetise their historical photo archives which include 1.5 million photographs dating back to 1892. See http://projectgado.org (consulted 15 January 2014).
18. See Creative Commons CC BY-SA 3.0 license: https://creativecommons.org/licenses/by-sa/3.0/ (consulted 29 March 2016).
19. See *Haloo Akseli*, halooakseli.fi (consulted 29 March 2016).
20. Clifford, op cit: pp. 188-219.
21. Graham, Beryl and Cook, Sarah. 'Participative Systems' in *Rethinking Curating: Art after New Media*. Cambridge, MA: MIT Press: pp. 111-144.
22. Wang, Jacob, 2014. 'Digital Cultural Heritage: Long Perspectives and Sustainability' in *Sharing is Caring*, edited by Sanderhoff, Merete. Copenhagen: Statens Museum for Kunst: pp. 178-185.