“Le geste retrouvé” a 3D storytelling of stone tools
Laura Longo (#101)

Author keywords: Collections, Microscope, 3D Digital storytelling

The paper deals with an innovative approach to the identification and characterization of function on grinding stones used to processed plant in order to get staple food at the dawn of modern humans colonization of Eurasia. The items are part of the archaeological and anthropological collections of the Kunstkamera Museum in S. Petersburg (Russia). The first achievements is “bringing to life” museum collection forgotten since “long time” (excavations dates back to the early XX century) by using innovative, non invasive analytical techniques like the potential contribution of 3D investigation, at various levels of detail and resolution, to the identification of such traces and residues. The second goal is the reconstruction of ancient dietary habits of humans at a crucial stage of human evolution. The third purpose is to demonstrate how present diseases related to food might find interesting explanation by investigating the roots of dietary breadth within museum archaeological collection. The reconstruction of old gestures and the related behavior by means of cultural heritage study can contribute to place museum collections under differ light, playing an actual social role.

The paper is reporting functional analysis demonstrating compound technologies related to the systematic use of grinding stones in order to process plant resources since the Aurignacian (early Upper Palaeolithic).

The issue of processing plants like USOs, fruits and seeds, to get highly energetic staple food might be of interest in seeking for behavioural strategies carried out by Anatomically Modern Humans during the first waves of Europe colonization. Analysing the stone tools comes be one of the direct investigations on behavioural modernity of the new species with evident positive feed-backs on their nutritional capacity and hence on the demographic performance.

Methodology

The functional analysis includes wear-traces, experimental reproduction and residues analysis of the working surfaces of the grinding tools. Portable scientific equipment - brought in by the Cyprus Institute team – had been used for noninvasive, non-destructive analytical techniques, a laser-scanner for 3D measurement of the micro-topography, and a digital microscope for investigation of microscopic traces.

The identification and description of use-wear traces was carried out by means of the innovative application to wear-traces analysis of the combined potential of the Digital Microscope (Hirox KH-8700) and Electron Scanning Microscope (SEM, FESEM). Both lower magnification stereomicroscope (macro MX-G 5040 Z) and metallographic microscope (OL – 140 II) optics and functions were used during museum selection of the samples.

Evaluation Study of a Snack Box for Children Designed to Prompt Discussion about Natural Heritage at Museums
Laura Gottlieb and Xinglin Sun (#114)

Author keywords: evaluation study, prototype design, natural heritage, natural history museum, museum café
Using food in a museum café to engage visitors with its content is a relatively unexplored area for museums. A specially designed snack box could create a suitable context for discussion about natural heritage for school children in museum settings. The prototype Snackbox was designed and produced for children with the aim to teach them about a natural history topic. An evaluation study of the Snackbox consisting of four group sessions with children (age 6) was conducted together with a session facilitator at a preschool. The study looked at whether a) the learning activity in the snack box stimulated discussion about the chosen natural heritage topic. b) the activity needed a facilitator to drive the discussion and engage the children with the topic. Lastly, it looked at the benefits and limitations of using food in combination with a learning activity. The Snackbox created a social environment for the children to discuss the questions and answers of the learning activity. The facilitator played an important role in bringing focus to the natural heritage during the discussion.

**Between scents and memory: three exhibition design case studies experimenting with the olfactory dimension**

Laura Miotto (#83)

Author keywords: Olfaction, Museum, Exhibition design, Intangible heritage, Memory

Olfactory experiences are powerful triggers of personal memories and can play an important role in connecting audiences to intangible heritage. This is recognized by museums seeking to move beyond the dominant visuo-centric exhibition paradigm, broadening the spectrum of sensorial stimuli on offer. However, the delivery of olfactory experiences in a museum presents important and unique challenges, largely related to the odorant’s physical nature, which impose constraints to the design of experiences that can reach the visitor with impact and efficacy. Here, we present an olfactory delivery device designed to address these issues, which was prototyped and implemented over a 10-year period as an integral element of a display dedicated to the culinary heritage of Singapore. The device was also utilized in two other exhibitions, with radically different purposes: in one case as an element of the indigenous natural and cultural heritage, and in the other as a comparison tool to provide an intuitive illustration of progress. The diverse subject matters covered, and the different approaches to the delivery of olfactory stimuli demonstrate the versatility of the olfactory device in a range of exhibit settings. The case studies presented indicate that olfactory experiences can be effectively integrated in local museums, but their inclusion demands additional processes and specific consideration. Growing interest in this area of exhibition design, consistent with a global trend to transform museums into multisensory environments, makes this an important field for further research.

**Mapping the Intangible Cultural Heritage of Ethnic Communities: Designing an Interactive Cultural History of Koreatown**

Dr. Kristy H.A. Kang (#87)

Author keywords: interactive, cultural history, ethnicity, urban studies, mapping, koreatown, los angeles

This paper presents the interactive online cultural history “The Seoul of Los Angeles: Contested Identities and Transnationalism in Immigrant Space” (http://seoulofla.com/). Informed by interaction design and urban studies, this project examines and visualizes the sociocultural networks shaping immigrant communities and how local neighborhoods negotiate a sense of place within an increasingly globalized space. Geographer Doreen Massey
recognizes space not as a static entity but as the product of interrelations from the immensity of the global to the intimately tiny. These interrelations are part of a story, an interpreted history that changes and develops over time. One could recognize cultural heritage in a similar way – as dynamic and part of a narrative trajectory that is not merely frozen in a romanticized or essentialist past. Much of what constitutes the dynamics of ethnic community formation is intangible as it is largely a lived experience rather than one that is necessarily documented or archived. As such, this project serves as a digital archive and platform for community storytelling that enriches our understanding of the city and the often intangible narratives that create a sense of place.

Currently, Los Angeles has the largest population of Koreans in the United States living outside of Korea. Nicknamed the “L.A. district of Seoul City”, most visitors understand Koreatown as an extension of Seoul. But, what most people may not know is that the majority of inhabitants who comprise its residential and working class population are not Korean, but Latino. The everyday space of this community is inhabited by a mix of immigrants coming from Mexico, Central and South America, and other parts of Asia including Bangladesh. These networks of nationalisms converge in the urban space of Koreatown. This contests predominant conceptions of ethnic enclaves being understood as homogenous and makes us re-imagine what we think we understand about them–they are increasingly becoming polycentric in complex ways. Combining design, documentary and issues in contemporary media studies including global/local relations, ethnic and urban studies, this work uses new media and mapping to create greater awareness of our built environment and the peoples who populate it. Mapping is a dynamic system that changes according to the shifts in culture and community that characterize any geographic place. How can this system be visualized in order to read a space with newly informed imaginations? What kind of urban interfaces could be designed to communicate with the spaces we move through and what overlooked stories could be uncovered in order to enrich our understanding of cities and the intangible cultural histories embedded in them? Such questions are explored in this project.

New Media Interactive Design in Museum Exhibits
Danyun Liu (#45)

Author keywords: New Media, Interactive Experience, Intelligent Exhibition, Museum

As the notion of museum education develops, the exhibition in museum is gradually separated from the original single, static and fixed display form that simply highlights the exhibited objects and transforms to vivid, interesting and diverse exhibition form. By making use of instructive education that integrates active participation, experience cooperation and game playing, that is, creating interesting experience for audience by concentrating on the theme or applying various new media approaches to show collected and exhibited objects, it changes the relationship between the museum and audience – “being viewed” and “viewing”. It has become the most effective active spreading educational method in museums now. By analyzing the interactive exhibition cases and studying the new trend, the paper summarizes the new method of new media interactive exhibition design, hoping to enlighten and help designers who engage in interactive experience exhibition in museums. Besides the physical museums, more and more Virtual museums are being created, allowing us to enjoy famous works at high resolutions online. This has led many people to think that visiting museums is a time-wasting activity. Through investigations on many interactive media areas in museums, we realised that the museums’ previous exhibition designs of making the
exhibits the “centre” of the design often failed and were unable to achieve the intended effect. Although most current museums do have many touch-screen devices installed to allow for direct interaction with the audience, questions like “What can we do to attract audiences?” or more specifically, “How can we encourage the younger generation, who love to surf the net, to come down to museums to learn?” have become the keys of the current development of the museums. “How can we increase the amount of direct interaction with the audience?” has also become an important point of consideration for people-oriented museums.

With the introduction of new media styled experiential interactive designs, besides improving the multi-dimensional experience of the audience, by making use of multimedia tools and equipment, we are able to add in interesting topics for the audience to ponder upon during the exhibition. We are also able to make use of the quick spread of new media to guide and increase the amount of interaction among the audience and also between the exhibits and the audience. For example, Taiwan's National Palace Museum makes use of an “Along the River during the Qingming Festival” monopoly game to attract younger audiences. Through this educational and interesting video game familiar to people of all generations, youths were able to immerse themselves in the experience, and learn about the essence of traditional Chinese culture. Another example is the Vaso Art Gallery, which made some of its works into puzzles, laying every set in front of its original art work to allow the audience to piece the pieces back together. These games will allow the audience to feel a sense of achievement upon participating, while providing entertainment at the same time. As the audience carefully observe the original art work, it is possible for the experience to be both fun and educational.