



The University of Manchester



Researching Digital Cultural Heritage

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Abstracts and Biographies List of Delegates

#digheritage17

Abstracts and Biographies

Maria Paula Arias, University of Manchester

Visual Narratives: Museum Visiting Experience on Instagram

Abstract

Engaging with social media technologies has increasingly become a habitual practice, entrenched in day-to-day activities and informed by its users' interactions online and offline. In museological literature this influence is addressed as the democratization of access and interpretation, by simultaneously extending the museum visiting experience beyond its physical domains and these daily social practices into the museum. Visual media shared online is an ubiquitous part of these everyday activities, in a museological context visual media can be understood as the product of participatory culture, the result of universal social practices embodied during museum visits, and as mediators in shaping public history.

This presentation highlights the importance of visual media in online communication practices and their study through visual research methods towards understanding online audiences and their museum visiting experiences. The presentation will draw from a case study: the Museum of Islamic Art in Doha, Qatar – where over 4000 images collected from Instagram revealed graphic trends in the visiting narratives situating this experience not only within the museum's collection, but also within the social and cultural fabric of Qatar.

Although visual research methods are commonly associated with fields such as media studies, sociology, anthropology, and ethnography (Hughes 2012; Pink 2012; Banks 2007; Bell 2004; Collier & Collier 1986) – this presentation further intends to contribute to the small sample of available literature that applies visual and content analysis in museum audience studies (Budge 2017; Burness *et al.* 2016; Leftwich 2016; Lillebø & Linde 2016). As such, the case study does not seek to answer a direct question or test a specific hypothesis; rather it seeks to illustrate the use and application of these methods to further the understanding of the museum visiting experience portrayed and shared online as images.

Biography

Maria Paula Arias is a PhD student at the University of Manchester whose research interests lie at the intersection of social media, museum branding, and audience participation. Prior to her studies at the University of Manchester she lived in Qatar where she worked as a research assistant after being awarded a MA with Distinction in Museum and Gallery Practice at University College London. She aims to continue exploring her research interests through the PhD in Museology programme in Manchester and to contribute to the growing inter-disciplinary digital humanities field.

Dr Gabriella Arrigoni, Newcastle University

Heritage and digital cultures: sustaining criticality through prototypical thinking

Abstract

Methodological shifts can not only open up new research possibilities but also redefine, expand and destabilise a disciplinary field. In recent years, heritage scholars begun to engage with a set of practice-based, digitally-grounded methods and tools, contributing to a shift towards a stronger interdisciplinarity in Heritage Studies. These include: co-design, prototyping, speculative approaches, workshop-based activities, digital making, data visualisation, as well as investigations on social media. Part of these tendencies, particularly those focusing on creative reuse of archives and collections, are often developed within a Digital Humanities perspective. Others converge with now established participatory approaches but also with a more recent critical rethinking of Heritage Studies. Here, digital media and creative practice can contribute to challenge existing power relations, make room for unofficial, bottom-up discourses, and question institutional authority and expert knowledge. Besides introducing new methodologies to heritage research, this emerging interdisciplinary dimension goes alongside a transformation of principles and perspectives in the field. These can be summarised as follow: i) a less reverential attitude to cultural heritage and archival material, now increasingly open to generative and creative reuse (as opposed to principles of preservation); ii) a stronger awareness of the changeability through time of heritage values and meanings; iii) the idea that heritage discourses are increasingly developed outside the institutional framework, for instance embedded in practices of everyday creativity and self-expression on social media.

The paper makes the argument for the reciprocity between digital and design-based methods, interdisciplinarity, and criticality within heritage research. It illustrates these emerging tendencies by discussing two brief examples. The first one presents the methodology adopted in the study of serendipitous, unofficial understandings of heritage and place by analysing images gathered from photo-sharing platforms. The second one addresses the use of collections as raw material for creative reuse and participatory making in the gallery space.

Biography

Gabi Arrigoni is a research associate at Newcastle University where she is involved in the EU-funded project [Critical Heritages \(CoHERE\): performing and representing identities in Europe](#). She has a PhD in Digital Media researched at Culture Lab, focused on the notion of artistic prototypes and the practice of artists working in technology-oriented labs. She has a background in Heritage Studies, Art History and Art Curatorship and previous professional experience in the museum and art publishing sectors. Her research interests lie broadly in the field of Digital Culture, with a focus on collaborative practices, design-led methodologies and the intersections between critical heritage and digital technologies.

Dr Kostas Arvanitis, University of Manchester (Conference Co-Organiser)

Biography

Dr Kostas Arvanitis is a Senior Lecturer in Museology at the University of Manchester. His research interests cross the fields of museology, archaeology, cultural heritage, and digital media. His recent work has focused on the emergence of a data culture in cultural organisations (Culture Metrics Project, funded by the Digital R&D Fund for the Arts: Big Data strand: <http://www.culturemetricsresearch.com>). Kostas is also interested in notions and practices of heritage activism: drawing on the case of the Amphipolis tomb, he's researching the impact of social media on the co-production and crowd-sourcing of interpretations of the past and how these interact with notions of authority in cultural professionalism.

Kostas is currently working with the Manchester Art Gallery and Archives+ to archive and study the material recovered from the spontaneous memorials after the Manchester Arena bombing on 22nd May 2017. This work explores conceptual, practical and ethical challenges in archiving spontaneous memorials, including the preparedness of cultural authorities to respond to the timeframe and public expectations of these memorials; issues of public participation; and the expansion of the spontaneous memorialisation on digital and social media.

Kostas is a Managing Editor of the *Museum and Society* journal.

Sophia Bakogianni, Open University of Cyprus
Dr Jahna Otterbacher, Open University of Cyprus

Common Ground and Affordances in Museums' Social Media

Abstract

Although museums are increasingly incorporating social media into their communication practices, there are scholars (among others indicatively: Baggesen, 2014; Walker, 2015; Zuanni, 2017) that question the reach and breadth of engagement achieved through social media. Moving away from the first excitement about the growing numbers of friends and likes, shares and casual comments from museums' social platforms, the current research is directed to more informed and nuanced analyses that question museums' ability to engage public in meaningful and effective ways.

This paper calls for a better awareness of social media platforms and their potentials in the museum sector. It is argued that it is important to gain insight of what social media can bring or afford to museums in terms of online engagement and participation of their audiences. For this an "affordance approach" based on Gibson's (1986) concept is employed and it is integrated with the grounding framework (Clark & Brennan, 1991) in an exploratory study, in order to explicate the distinct ways that social media is used by museums for ongoing communicative processes with their audiences. A corpus is built incorporating a small sample of museums' Facebook accounts and relevant metrics (likes, comments) to describe communicative practices and apply the proposed approach.

The research is structured in two parts. First, the affordances that Facebook as an exemplar social media platform provide to museums for their communicative practices are explored, and second, the affordances that museums use in their actual actions on their Facebook accounts are recognized and presented through examples. This paper's contribution is a conceptual tool, incorporating the "affordance approach" along with the common ground framework, that can be used by researchers and practitioners to better understand museums' social media metrics and data, and to provide new insights into the nature of conversations and interactions between museums and their audiences.

Biography

Sophia Bakogianni graduated from the Department of History and Archaeology of the Aristotle University of Thessaloniki and has a Master of Arts (M.A.) in Art History from the same Department of the Aristotle University of Thessaloniki. She also has a Master of Arts (M.A.) in Cultural Organizations Management from the Hellenic Open University and a Master (M.Ed.) in Education from the Hellenic Open University. She is a PhD candidate in the Open University of Cyprus. Her research is investigating the use of museums' social media and the overall experience of them, using elements from museum studies, computer – mediated studies and communication theories. Currently, she is working as an archaeologist and art historian in the Byzantine and Christian Museum in Athens. She has also worked as a researcher in EU projects and she has published the results of her research in these projects in international and Greek conferences.

Jahna Otterbacher received her doctorate in Information from the University of Michigan (Ann Arbor – USA), where she was a member of the Computational Linguistics and Information Retrieval (CLAIR) research group. She is currently academic coordinator of the M.Sc. in Social Information Systems at the Open University of Cyprus, where she holds the rank of Assistant Professor. She previously served as Assistant Professor in the Lewis College of Human Sciences at the Illinois Institute of Technology (Chicago, USA) (2010-2012) and Visiting Lecturer of Management Information Systems at the University of Cyprus (2006-2009). Her research and teaching interests lie at the intersection of social computing, communication science and data science. She analyzes behavioral and language traces left by users of information systems in order to better facilitate their interactions with others, as well as their access to information.

Prof Christoph Bareither, Humboldt-Universität zu Berlin

Past Presencing through New Media: Making Selfies in Heritage Spaces

Abstract

In my paper, I will draw upon the concept of "past presencing" (Macdonald 2013) to take a closer look at the question of how memory practices in heritage spaces are transformed through the rise of digital media. From the perspective of media and digital anthropology (see e.g. Askew 2002; Hine 2015; Horst and Miller 2012; Pink et al 2016; Rothenbuhler and Coman 2005), media are enacted through complex sets of practices. Only through practices do they *mediate* and thus become what they are (see also Bräuchler and Postill 2010). At the same time, media reshape the very practices they are embedded in. Smartphones, for example, offer a multiplicity of digital affordances (Hutchby 2001; Madianou 2014) that have become central to our everyday "nexus of doings and sayings" (Schatzki 1996). Social actors are not determined by these affordances. Rather they develop their own and sometimes contradictory "media ideologies" (Gershon 2012) or, in the terms of practice theory, a "practical sense" (Bourdieu 1990) for how to handle these affordances. Through the lens of these concepts, I want to take a closer look at the making of selfies at "The Memorial to the Murdered Jews of Europe" in Berlin. While causing much controversy in German debates about appropriate uses of heritage, the making of selfies at the monument also serves as an example to discuss how *past presencing* is transformed through the affordances and heterogeneous practical sense connected to digital media. Through this example, I will ask how ethnographic approaches can contribute to a nuanced analysis of the entanglements of media and memory practices (see e.g. Garde-Hansen 2011; Giaccardi 2012; Hajek, Lohmeier and Pentzold 2016; Keightley and Pickering 2014; van Dijck 2007) in order to understand current transformations of heritage spaces, especially regarding their everyday experience.

Biography

Prof. Christoph Bareither is Junior Professor of European Ethnology & Media Anthropology at the Center for Anthropological Research on Museum and Heritage (CARMAH) / Department of European Ethnology at the Humboldt-Universität zu Berlin. His research is concerned with the transformations of everyday practices and experiences enabled through digital technologies. He is especially interested in the fields of media anthropology, popular culture research and the ethnography of emotions. His work focuses on developing an ethnographic approach to the study of digital media, which is strongly inspired by practice theory. Currently he is starting a new research project as member of the Centre for Anthropological Research on Museums and Heritage (CARMAH), in which he will apply this perspective to foster a better understanding of media practices and media experiences at memory places and heritage sites in Berlin and Europe.

Chiara Bartolini, University of Bologna

Investigating web communication in the domain of digital cultural heritage

Abstract

Cultural heritage is based on the generation of meanings and contents, which may be conveyed through texts. Communication and texts are thus crucial for museums. Nowadays, the web is a fundamental tool to reach a wider, diversified audience by creating digital, multimedia contents. Museums need to negotiate their position of “temples of knowledge” with the dynamics of the web, and adapt their voice and contents to this communicative medium. However, scant attention has been paid to web-based museum communication, and to how museum-related texts are written to be published online.

This study seeks to outline a methodological approach to investigate how museums write contents for their websites, and more specifically whether they follow internal or external writing style guides and adopt general web writing standards. The paper will report on a study in which 187 European university museum websites with an English/international version were selected and examined. Texts in English have been sampled from these websites and divided per page genre for further qualitative inspection. Drawing from studies on web communication, a series of web writing practices will be identified and looked for in the sampled texts to see to what extent these principles are employed by museums to create their web-based contents. Common patterns and discrepancies between different institutions and different genres of online museum communication will also be highlighted.

The aim is to offer a method to describe web communication in the domain of cultural heritage by analyzing museum web writing practices, and thus define communicative strategies which may mediate between a web-oriented approach and the museum identity and values, without the risk of an oversimplification of language and contents. The study ultimately hopes to shed new light on how museums shape and express their identity online through verbal communication.

Biography

Chiara Bartolini is a first-year PhD student at the Department of Interpreting and Translation (DIT) of the University of Bologna, Italy. She obtained her MA in Specialized Translation at the DIT with a dissertation on web communication and Search Engine Optimization for museum websites, in partnership with the *Pinacoteca di Brera* in Milan. In 2015 she was a visiting student at the School of Museum Studies of the University of Leicester. Her research focuses on how to define an approach for translating university museum websites into English for an international audience.

Tessa Bell, University of Canberra
Dr Tracy Ireland, University of Canberra

Chasing Future Feelings?

Abstract

Current research in heritage studies is concerned with understanding the representational capacities of digital technologies, and their utility in conservation practices. While methods of digitisation and techniques for the generation of forensically accurate data are frenetically refined, practitioners are tasked with preserving snowballing digital repositories for posterity, and satisfying expectations of innovative forms of digital accessibility. The dominant dialogue that pervades ‘preservation by record’ pursuits is one of unwavering optimism, resolute that *something* of the substance of the material thing persists in digital objects. So, as the plot concerning our ‘digital futures’ thickens, we offer here a speculative methodological framework that triggers a cognitive adventure along the contours that connect material things and their digital counterparts/iterations. In this paper we discuss a practice-led engagement with modes of digital information capture – as both method and the focus/object of study – to creatively interrogate the conditions of the ‘in-between’ of physical and digital forms, and to interrogate the affordances that emerge in their intersection, while also investigating how 3D data capture and interpretation might be used to grapple with questions of material vitality, the political economy of affective objects, and a niggling curiosity about what exactly is ‘preserved’ in digital records. What are the virtues, and the theoretical shortfalls or deadends, of tracing the multiple and emerging materialities of digital heritage objects and spaces?

Biography

Tessa Bell is currently pursuing a PhD at the University of Canberra. Her research focuses on the relationship between material and digital objects, engaging broadly with ideas about circuits of affect and concepts of material vitality, through multidisciplinary methods.

Tracy Ireland is Associate Professor of Cultural Heritage and Head of the Discipline of Creative and Cultural Practice at the University of Canberra in Australia. Tracy publishes on historical archaeology, heritage and conservation, and their entanglement with nationalism, colonialism and the politics of memory and identity. Her books include *The ethics of cultural heritage* (with John Schofield) and *Object Lessons: Archaeology and Heritage in Australia* (with Jane Lydon). She is currently researching and writing about significance and values, the conservation of colonial archaeological remains and the heritage of Australian aviation cultures.

Dr Chiara Bonacchi University College London
Marta Krzyzanska, University College London

The roles of heritage in political micro-activism on social media. An ethnographic approach

Abstract

This paper presents results from an ethnographic study of the ways in which objects, places and practice from the past have been used in the context of political microactivism on social media. We will focus on articulating how ideas and materials from the Iron Age, Roman and Early Medieval periods have been called upon to shape ‘hoped for political identities’ (Marichal 2013) in relation to debates about borders and mobility, and regarding Brexit in particular. In addressing this topic, we have been examining how the ‘pasts’ under question are drawn upon in response to pressing contemporary challenges, as part of human activities that can potentially unfold across both on- and off-line fields of investigation (Hine 2015). We have approached social media as a research environment, but bearing in mind its limitations and bias and the nature of social media engagement as a social practice in its own right. In this talk, we will introduce the overall theoretical framework at the basis of our methodology as well as the specific methods that we have been leveraging. These include data-intensive techniques such as text mining, topic modelling and sentiment analysis as well as more qualitative explorations of the data. We will also discuss how we have been drawing on open source software and collaborative programming to create bespoke workflows to answer our research questions in ethical ways. Our conclusions will reflect on the utility of research designs that combine larger data-driven and smaller-data driven kinds of analysis.

Biography

Dr Chiara Bonacchi is Co-Investigator Researcher at the UCL Institute of Archaeology, in London. Her research and teaching focus on digital heritage and museums, public archaeology, and the archaeology and heritage of Medieval pasts in Mediterranean regions. She is co-founder of the award winning MicroPasts project (micropasts.org), PI on the Digital Heritage Data Initiative and Co-Investigator Researcher on the Ancient Identities in Modern Britain project (ancientidentities.org). Twitter: @ChiaraBonac

Marta Krzyzanska is Research Assistant on the Ancient Identities in Modern Britain project (ancientidentities.org), at the UCL Institute of Archaeology, in London, where she also completed the MSc GIS and Spatial Analysis in Archaeology. Her research interests and expertise focus on computational archaeology and the application of formal methods of data analysis in archaeology and heritage. Marta is collaborating with Chiara Bonacchi on the development of digital research methods. Twitter: @MartaKrzyzanska

Jean Boyd, University of Gloucestershire

Thinking with the work: art practice and digital cultural heritage

Abstract

As a laboratory for articulating new imaginaries, art practice has been engaging with the digital for some decades. It has explored the technically mediated relationship between time, data, memory, perception and representation. Asking what is possible to learn, feel and experience in the encounter with the artwork, the viewer is placed in a visual, haptic and affective relation to the digital image.

I will propose that a digital artwork, David Claerbout's *'Olympia: The real time disintegration into ruins of the Berlin Olympic stadium over the course of a thousand years'* (2016) might help us reflect on the simulation of heritage objects as forms of knowledge production and critical research practice. More than this, we might see the work as a complex of many information registers; as scientific, cultural and historical data, brought to visibility in the guise of an image. I will consider the complex temporalities that coexist in the work, the materiality of the digital object itself and the materialities to which the work refers. Precariousness and duration are integral not only to the work's themes, but also to its own preservation as a digital cultural object.

Its trans disciplinary nature means it may not be possible to categorise the work in terms of media: it is game software, architectural simulation, real time climate data visualisation, speculative model. Meanwhile the work appears to us to be a film projection; one haunted by other films, other architectural models, other speculations. Accessible only in the immediate presence / present of its viewing, the viewer confronts their own apprehension of how histories and futures are understood. It is in this hybridity that potential opens for an epistemology of digital objects, where we might 'think-with' the artwork itself as a source of insight.

Biography

Jean Boyd lectures in the History and Theory of Art and Design at the University of Gloucestershire where she teaches at undergraduate and postgraduate level. Training originally in Fine Art at Winchester School of Art, Boyd worked as an artist before beginning postgraduate study and her teaching career. She has been lecturing for twenty-five years in a range of art departments and in her current post for ten years. Art practice as a way of knowing, as well as doing has always been a focus in her teaching. Her research interests lie in representations of time in post-cinematic art practice, emerging scholarship in media archeology and the potential of artworks as conceptual tools for epistemological understanding.

Dr Paolo Campetella, University Roma Tre

Identifying the ICTs role in archaeological site museums through a spatial and pragmatic analysis

Abstract

The research, the paper deals with, focuses on the spatial and narrative integration of information and communication technology (ICT) applications within archaeological site museums.

The site museum represents a peculiar museum context that integrates an archaeological site within a museum exhibition environment. The research was carried out through the analysis of exhibitions in two site museums: the Capitoline Museums (Section dedicated to the Temple of Capitoline Jupiter) and the Archaeological Museum of Grenoble, Saint-Laurent.

The ways through which ICTs are integrated in the exhibitions are analysed focusing on their spatial positions, the visitor orientation both in the real archaeological site and the virtual reconstructions displayed, the organization of the delivered contents. The research aims at identifying functional elements that can influence the visitors' meaning making process. These elements are detected through the analysis of different exhibition devices. The research took into consideration both digital and analogue exhibition tools in order to better identify the real contribution of ICTs within the exhibition where all the integrated elements contribute to the narrative definition. The analysis was carried out following a methodology that combined two main different theoretical approaches: a spatial and pragmatic approach to investigate how the exhibition tools influence the archaeological site visitors' interpretation; a semiotic approach to recognise the application of specific communication strategies within the exhibition. The research suggests a definition of different levels of spatial and narrative integration for ICTs in relation to other mediation tools used in archaeological exhibitions.

Biography

Paolo Campetella is a Postdoctoral Researcher at the Centre for Museum Education (Department of Education – University Roma Tre). His research focuses on the integration of information and communication technology (ICT) applications within archaeological site museums. Since 2006 he has been working for the Centre for Museum Education of the University of Roma Tre taking part in several research projects and working as Teaching Fellow for post-degree courses on museum studies. In October 2016 he joined UCL Qatar as Teaching Fellow for the MA in Museum and Gallery Practice. He has also been involved in the project "EuroVision Museum Exhibiting Europe" (EMEE), financed by the Culture Programme of the European Union (2012-2016). He took part in the OECD PISA International Study as a Quality Monitor for Italy in 2012 and 2015. He has been giving lectures in museum studies for several institutions.

Prof Erik Champion, Curtin University

Inside Out: Avatars, Agents, Cultural Agents

Abstract

If conveying cultural significance is a central aim of virtual heritage projects, can they convey cultural significance effectively without an understanding of the contextual role of cultural knowledge? In this talk I will argue this is very difficult, but even populating virtual environments with others (human-guided or computer-scripted), there are still vital, missing ingredients. In virtual heritage projects with enough computational power and sophistication to feature intelligent agents, they are primarily used as guides.

They lead players to important landmarks, or perhaps act as historical guides (revealing past events, conveying situationally appropriate behaviour). Intelligent agents are usually designed for limited forms of conversation and typically help convey social presence rather than cultural presence. For an enhanced “sense of inhabited place”, engaging narrative-related elements, or embodiment, a cultural agent recognizes, adds to, or transmits physically embedded and embodied aspects of culture. They could provide a sense of cultural presence, becoming *Aware-Of-Not-Quite-Being-‘There’*.

Cultural agents would not be mere conversational agents if they were able to:

1. Automatically select correct cultural behaviours given specific events or situations.
2. Recognize in/correct cultural behaviours given specific events, locations, or situations.
3. Transmit cultural knowledge.
4. Modify, create, or command artefacts that become cultural knowledge.

To fulfil the above criteria, cultural agents would be culturally constrained. Not just socially constrained; their actions and beliefs would be dependent on role, space, and time. They could understand and point out right from wrong in terms of culturally specific behaviour and understand the history and possibly also the future trajectory of specific cultural movements. In this talk I will discuss three scenarios for cultural agents, their relationship to roles and rituals, and two more missing ingredients. The result? A more situated, reflexive appreciation of cultural significance via virtual heritage.

Biography

Professor Erik Champion is UNESCO Chair of Cultural Visualisation and Heritage at Curtin University and Visualisation theme leader for the Curtin Institute of Computation (<http://computation.curtin.edu.au>). His research area is virtual heritage, game design, interactive media, and architectural computing. Prior to joining Curtin University, he was Project leader of DIGHUMLAB in Denmark, a consortium of four Danish universities. Here he also worked with EU research infrastructures, acting as “Research and Public Engagement” co-leader for <http://dariah.eu/>. His publications include *Critical Gaming: Interactive History and Virtual Heritage* (Routledge, 2015), *Playing with the Past* (Springer, 2011), and he edited *Game Mods: Design, Theory and Criticism* (ETC Press, 2012). His next book project (in press) is *Cultural Heritage Infrastructures in Digital Humanities*, (Routledge, 2017), with co-editors Agiati Benardou, Costis Dallas and Lorna Hughes and a monograph, *Designing the ‘Place’ of Virtual Space*, for the Spatial Humanities Series, Indiana University Press.

Prof Luigina Ciolfi, Sheffield Hallam University (Plenary Panel)

Biography

Luigina Ciolfi is Professor of Human Centred Computing at Sheffield Hallam University. She holds a Laurea (Univ. of Siena, Italy) and a PhD (Univ. of Limerick, Ireland) in Human-Computer Interaction. Her research focuses on understanding and designing for human practices mediated by technology, with a particular interest in the heritage domain. She worked on numerous international research projects on digital interaction in museums and participatory design for (digital) cultural heritage. She is the author of over 80 peer-reviewed publications, and has been an invited speaker in ten countries. She serves in a number of scientific committees for international conferences and journals. Professor Ciolfi has advised on research policy around digital technologies and cultural heritage for several European countries and funding agencies, and is a longtime judge for the Museums and the Web “Best of the Web/GLAMi” awards. Her most recent book is “Cultural Heritage Communities: Technologies and Challenges” (Routledge).

Caroline Claisse, Sheffield Hallam University

Ethical complexities and new challenges when co-creating digitally enhanced exhibits with museum volunteers

Abstract

This presentation proposes a critical reflection on a case of research through design where participatory approach was used to design a series of digitally enhanced exhibits at the Bishops' House museum in Sheffield (UK). This research has involved a community of museum volunteers at the heart of the design process to create hybrid physical-digital experiences of heritage where physical artefacts were digitally augmented with content created by the volunteers. Museum volunteers are actors of growing importance across the whole cultural sector; they play a significant role but they need more recognition as they are clearly underrepresented among the field of museum studies and academic research. With this research, the experience of co-creating the work placed the volunteers in a position of "expert" of their experience at the museum, pushing them beyond day-to-day management toward more creative and curatorial roles. In the process of co-creating the digitally enhanced exhibits, heritage was co-constructed, re-imagined and negotiated between the designer and volunteers. As a result, visitors encountered the heritage of the place in a new way – through the eyes of the volunteers and connected to the house on personal and emotional levels. This presentation will focus on a series of digitally enhanced exhibits to show how both participatory methods with museum volunteers and digitally augmented artefacts have challenged traditional ways of interpreting and presenting heritage to visitors. The co-designed exhibits will show in what ways participatory process and digital technologies have challenged more traditional and authoritative discourse of heritage. It will consider ethical and methodological complexities such as the way content was created, its legacy and authenticity, and the ever changing aspects of digital cultural heritage. This presentation aims to expand our definition of heritage and outline major challenges to suggest implications for future work on research practices in digital cultural heritage.

Biography

Caroline is a designer and researcher specialising in developing exhibitions and interpretive works for museums. She graduated from the Royal College of Art (London) where she worked as a Visiting Lecturer and carried out research on digital technology, storytelling and creative thinking. Her work "The Exquisite Cabinet" was selected in 2015 by Design Council as "Ones to Watch Rethinking Reality". She is currently pursuing a PhD where she investigates the potential of tangible interaction and new digital technologies to create novel experiences of heritage. She uses participatory and design---based methods, and explores ways of bringing technology in museum to encourage a more social, multisensory and active engagement with heritage. Participatory and digitally augmented works were recently exhibited as part of her show "Curious House" (2016) in Sheffield, which succeeded in engaging visitors in personal, emotional and multi---sensory ways with the objects and stories on display.

Dr Catherine Dillon, University College London, Qatar
Cymbeline Storey, University College London, Qatar
Dr Anna Bülow, British Museum
Katy Lithgow, National Trust
Dr Stavroula Golfomitsou, University College London, Qatar

‘Researcher for the Day’: Inviting Visitors to Crowdsourcing Conservation Needs.

Abstract

As part of the Coming Clean project (investigating decision making in conservation), over 300 visitors to National Trust Properties and the British Museum were invited to be a ‘researcher’ for the day. They were given a low-cost digital camera and clipboard to take photos of and make notes of anything they felt needed more care, conservation or cleaning.

The results revealed where the focus of visitor’s attention was, what they believed to be risky or unacceptable, and where they had gaps in knowledge and questions about objects. Consensus and disagreement amongst visitors about the appearance of objects was also revealed (e.g. whether different types of surface deposit are felt to be interesting and attractive). Hence, the method could help flag potential areas of concern or controversy and inform conservation plans. Visitors commented that the photo survey made them look at objects differently. Opportunities for interpretation based around materials and change were also highlighted. Overall, the method could provide a direct link between collections care and visitor experience and impact, with the potential to be used as an education and engagement tool with heritage audiences.

A deliberate decision to collect data ‘offline’ in a ‘lo-fi’ way was taken for a number of reasons: to accommodate diverse visitors’ access to and abilities with technology, to mitigate against data loss and equipment loss, because of ethical concerns, and because of the lack of wifi and mobile signal at some data collection sites. Means of collecting and presenting data through widely available social media channels are being explored. This paper will discuss the pros and cons of crowdsourcing conservation needs using online and offline methods, such as the challenges of data management and analysis, and the need for traditional research quality standards to carry forward into digitally enabled heritage research.

Biography

Cath Dillon has collaborated with the Coming Clean project for the past three years on a mixed methods approach to understanding the visiting public’s attitude to conservation and cleaning at heritage settings. The project is led by **Dr. S. Golfomitsou** at UCL Qatar in partnership with, amongst others, **Katy Lithgow** (Head of Conservation) at the National Trust and with the support of **Anna Buelow** (Head Conservator) at the British Museum. Cath worked with **Cymbeline Storey**, a conservator, on the analysis of the photo survey data. Prior to this project Cath was a research associate at the Centre (now Institute) for Sustainable Heritage at UCL. She has a background in research psychology and social research (first degree in Experimental Psychology at UCL, PhD on ‘Emotional Responses to Immersive Media’ at Goldsmiths College).

Francesca Dolcetti, University of York

Digital visualisation and interpretation of archaeological sites. The Erimi-Laonin tou Porakou experience

Abstract

The application of 3D interactive models in archaeology in both academic and public dissemination domains needs to be properly evaluated, to understand how it affects people's engagement and perception of past cultures.

The research project I present is focused on evaluating the impact that 3D modelling has upon archaeological research, as well as academic and public dissemination. The aim is then to develop, test and apply a specific framework to assess how varying audiences perceive 3D interactive visualisations of archaeological sites, engage with and learn through them.

Using the case study of the Middle Bronze Age Cypriot settlement at Erimi- *Laonin tou Porakou* (2000-1450 BC), this research considers the different stages of archaeological 3D modelling practice along the following workflow:

1. *3D modelling*: create an interactive 3D model that shows the site in its current state and the interpretive visualisation of the settlement;
2. *Evaluation*: present the 3D visualisation to different audiences and collect their feedback;
3. *Implementation*: use the audience feedback to improve the 3D model comprehensibility and establish an effective workflow that can be potentially applied to other case studies.

The methodology proposed for this project entails the application of both qualitative (interviews and focus groups) and quantitative (questionnaires) approaches and an evaluation framework involving multiple iterations. Through a study conducted using different user groups (composed of expert and non-expert users), I collected and analysed users' feedback, in order to identify the best way to present the 3D models of archaeological sites to different audiences, improving their impact and comprehensibility.

Biography

Francesca earned her BA in History and Preservation of Archaeological Heritage and her MA in Archaeology from the University of Florence, respectively in 2007 and 2010.

In 2011 she obtained her MSc in Conservation and Management of Archaeological and Historical Art at the University of Siena. In 2014 Francesca started a PhD in Archaeology at the University of York, with a project focused on assessing the efficacy of interactive 3D models of archaeological sites to understand how they affect people's engagements with and perceptions of past cultures. Since 2009 she is participating in the research project of the Italian Archaeological Mission at Erimi-*Laonin tou Porakou* (Limassol, Cyprus), a joint project of the University of Turin and the Department of Antiquities of Cyprus; since 2011 with the role of trench supervisor.

Dr Maria Economou, University of Glasgow

Dr Hilary Young, University of Glasgow

Dr Laia Pujol Post, University of Glasgow and University of York

Dr Sara Perry, University of York

Designing and evaluating emotionally engaging digital stories in cultural heritage settings

Abstract

Cultural heritage professionals and researchers have been experimenting with the potential of digital tools for heritage interpretation for over the last two decades. A lot of the effort was initially invested in recording and recreating as accurately as possible the related monuments, sites, and past societies. This often took the form of 3D reconstructions, often also integrated in an immersive experience and focusing on a photorealistic representation of the past. This has been criticised by academics for its uncritical and didactic approach, which does not clearly communicate the subjective element of the digital interpretations. Furthermore, and perhaps more importantly, many of these digital interpretations fail to engage or maintain the interest of visitors.

In order to address this issue, digital interpretation designers and researchers from different fields have started exploring the potential of storytelling, as this has a long history, long before the digital revolution, of engaging different audiences and creating empathetic responses. In the cultural heritage sector, however, narrative tends to still be used narrowly, as a method to communicate to the public the research conducted by the domain experts of a cultural site or collection. Where emotive forms of storytelling have been engaged in heritage interpretations, these have often been regarded suspiciously by domain experts as part of the so-called “Disneyfication” or commodification of the past. Despite decades of reflection on the power of ‘resonance’, ‘wonder’, and ‘feeling’ for cultural sites, as well as related evidence that indicates personal experiences at these sites lead them to be more lastingly remembered, restorative and sometimes transformative, emotion has generally been avoided in discussions of heritage and museums until relatively recently.

The paper will examine these issues in depth by using the case study of the H2020 EMOTIVE project, which aims to design and evaluate emotionally resonant collaborative digital experiences.

Biography

Maria Economou is Curator/Senior Lecturer in Museum Studies, a joint post at the University of Glasgow shared between Information Studies and the Hunterian Museum. She co-ordinated the RSE-funded Scottish Network on Digital Cultural Resources Evaluation (2015-16, <https://scotdigich.wordpress.com>). She is Co-I in the H2020 EMOTIVE project (2016-19, <http://www.emotiveproject.eu/>) on emotional digital storytelling for cultural heritage, and of POEM, the MSCA ITN network on participatory memory practices (2017-2020). She was previously Associate Professor, Museology and New Technologies at the University of the Aegean (2003-13), where she directed the Museology Research Laboratory. She also worked at the University of Manchester (2000-2003) and the Pitt Rivers Museum as Assistant Curator- Information Technology (1995-1997). She studied Archaeology and Art History at the Aristotle University of Thessaloniki, carried out an MA in Museum Studies at the University of Leicester and a DPhil at the University of Oxford (with a scholarship from the Lambrakis Research Foundation, Athens).

Seth Ellis, Griffith University

Placeholders: Popup Exhibitions and Digital Archives

Abstract

Placeholders is an ongoing collaboration between Seth Ellis and Chris Cassidy. It explores a new strategy for constructing digital archives with the full collaboration of visitors, using a model of “collection” that doesn’t remove objects from everyday life. A database structure stores 3D scans, photos, first-person narratives, and more information about objects supplied by visitors, in a variety of locations; this data structure is then used to drive pop-up exhibitions, artistic and/or historical. The object-as-artefact is entirely digital; the object-as-object continues on its way.

We have developed the Placeholders series as a strategy for collecting information and documentation of local objects, treating them specifically as foci for local history in order to create a variety of immersive and interactive experiences that connect audiences to the cultural and geographic identities of specific locations. We have created installations exploring the histories of Deerborn, MI; Durham, NC; and Kronstadt, Russia. In this work we are operating at the meeting point of museum-centered exhibition design and curation (Ellis) and artistic expression (Cassidy). We use the same backend system for all locations, reflecting our larger, curatorial/artistic project of examining the similarities and differences in post-industrial towns around the world. However the specific installations differ in form – using video, audio, and interaction – in order to remain true to the specific nature of their place.

For the RDCH conference we will present this project and introduce the latest iteration of Placeholders, a large-scale, multipart installation in Greensboro, NC in 2018, where we will not only solicit objects and stories from visitors in a series of events, but spend several months beforehand working with local cultural institutions. This is a strategy for less formal installation, and more collaborative, community-focused, “popup” exhibition that nonetheless adds to a growing permanent body of archived objects.

Biography

Seth Ellis is Senior Lecturer in the Creative and Interactive Media program. He is also the Program Director of the Master of Interactive Media program, and South Bank campus coordinator for the Bachelor in Creative and Interactive Media. He is a narrative artist and interface designer; his work draws upon local history, allegorical narrative, and experience design to create stories both historical and fictional in new, experiential forms. Seth has worked with local museums and galleries on their collections and exhibitions; his own projects have shown in galleries, streets, symposia and festivals throughout the U.S. and Europe, and at a few places in the Atlantic Ocean. Ellis has a BA from Yale University, and an MFA from Columbia University School of the Arts. Prior to Griffith University he taught at the University of Michigan and the University of North Carolina at Greensboro. He maintains both art and design practices.

David Farrell-Banks, Newcastle University

Considering the Right to Change: Issues of anonymity when heritage is mobilised to foster divisive viewpoints

Abstract

In the months surrounding the EU referendum in 2016, numerous political statements posted to Twitter gave reference to Magna Carta. The researching of these statements, and the reasons for their impact, often involves confronting racist, or otherwise divisive, statements and viewpoints. When dealing with Twitter this content is in the public domain, often with the names of those presenting these viewpoints openly available. In situations such as this we may be confronted not only with viewpoints that we may find abhorrent, but also by the manipulation or misrepresentation of the very history and heritage that engages us in our work.

This paper discusses the ethics of anonymising content that is, at the time of research, publicly available. In essence, these views are presented publicly, and so do researchers retain a duty to anonymise them in the presentation of their findings? The common use of Twitter content by news organisations would suggest not.

Recently, a Scottish newspaper investigation revealed that a young individual from the small Scottish island community that I grew up in has been recruiting for an extreme far-right organisation. This paper reflects on the personal impact of this story to offer a perspective on the right of people to change their views, and asks whether researchers have the right to preserve content that social media users may, in the future, wish to revoke. The paper will further look to instigate debate regarding how we, as the much maligned “experts”, might engage with the manipulation of history and heritage through social media. With platforms such as Twitter acting as a public space for dialogue around cultural heritage the paper asks: ‘are we simply observers, or do we have an ethical duty to enter the conversation?’

Biography

David Farrell-Banks is a PhD candidate at Newcastle University currently researching uses of the past in heritage and political discourse. He graduated from Edinburgh University in 2015 with a degree in Geography and Archaeology, and followed this up with a Master’s in Heritage Studies at Newcastle University. His research work has been diverse, taking in community attachment to a World Heritage Site in Malta and the role of archaeology as a safe workspace for adults with autism. In each instance the research recognises the power of heritage to impact on identity. His current work focuses on the use of two historical moments – the 1215 introduction of Magna Carta and the 1683 Siege of Vienna – in present day political discourse. The work takes in issues of memory, identity and affect, and works across political discourse, museum display analysis, and digital content analysis. The work is tangentially associated with the CoHERE research project - Critical Heritages: Performing and representing identities in Europe.

Sarah Feinstein, University of Manchester
Prof Margaret Littler, University of Manchester

The Medium is the Message: Physical to Digital Display through the case study of Germans in Manchester

Abstract

In recent years, migration stories have become a central theme to many cultural institutions' exhibition programming. In part, this has been a response from the cultural sector and new museology to incorporate a social justice agenda into their organisational vision and mission, such as the 'Museums Change Lives' initiative of the Museums Association. These efforts conceptualize the space of an exhibition as a critical juncture to engage and challenge public history for a greater social benefit. One example of this is the Migration Museum's traveling exhibition *Germans in Great Britain*. In 2015, Margaret Littler curated a pop-up exhibition, *Germans in Manchester*, as part of the exhibition's sojourn at Manchester's Central Library. *Germans in Manchester* began its second-life in 2017 as a pilot project for the University of Manchester's Digital Humanities new online exhibition platform Mnemosyne. What are the barriers and assets to re-imaging physical exhibitions in the digital? Additionally, as HEIs public engagement and impact agendas grow in importance, a turn to the digital has seemed to offer an opportunity to showcase research, which turn raises questions about the need to develop new skills and new ways of thinking. This paper investigates these questions through the case study of *Germans in Manchester*, highlighting the ways in which the medium of the digital can open up strands for new research as well as grant new life to the cultural heritage of display. In both the process of constructing the design and in generating new content, the online exhibition offered a critical and reflexive space for storytelling and new partnerships across university departments and between cultural institutions. This presentation will pay particular attention to how increased collaboration can add depth to knowledge production within these dynamics.

Biography

Sarah Feinstein has worked in the cultural sector for over nineteen years, including as a programme officer at the Arts and Business Council of Chicago and museum specialist at the Smithsonian Institution. Recently, she worked as collections assistant at the Women's Art Library (London) and a researcher with the Prisons Memory Archive (Belfast). She is currently a doctoral candidate at the Institute for Cultural Practices at the University of Manchester and a trustee of the Manchester Digital Music Archive.

Margaret Littler is Professor of Contemporary German Culture at the University of Manchester. From 2012-2015, Margaret was Germanic Studies representative on the Executive Committee of the University Council for Modern Languages (UCML). She is a founder member of Women in German Studies and was co-director of the AHRC-funded Migration and Diaspora Cultural Studies Network in Manchester. Margaret is currently Vice-President of the Association for German Studies in the UK and Ireland.

Dr Petrina Foti, Nazareth College

Curatorial Practice Without A Precedent: Collecting and Exhibiting the Digital at the Smithsonian Institution

Abstract

No matter what formal discipline they might be from, the curators who record the history of computer-based technology are faced with a longstanding problem of trying to collect and exhibit hardware-dependent software and software-dependent hardware when only one of these two is tangible. Among the challenges and unknowns that come with collecting without the guidance of an established historical narrative, computer-based technology offers a particularly difficult set of circumstances both for its prevalence and for its complexity. The museum is faced with a new challenge both in terms in what to collect and how the museum staff approach this change. Therefore, the museum must re-examine what it means to curate a collection and even what it means to be an expert in the field.

In this paper, we will examine how the curators at the Smithsonian Institution have collected and interpreted digital and digital-dependent objects. This research, part of a larger museological study, will illustrate how curatorial expertise, through contemporary collecting, can respond with agility and creativity to unknown types of technology. In doing so, the critical role that 21st-century curators play within the museum will be examined and how the museum both contributes to and is influenced by modern society's understanding of these new technologies will be explored. What is emerging is a responsive and agile model of curatorship, one that has been honed by a long tradition of technology-related collection stewardship and one that is fully prepared to answer the challenges posed by computer-based technology, revealing the museum as a trusted source for context and clarity in a rapidly evolving world.

Biography

Dr Petrina Foti is a Research Fellow for Nazareth College of Rochester's Center for Public History and works with the Oral History Collection at the Smithsonian Institution Archives. She recently completed her degree from the University of Leicester's School of Museum Studies. Her research focuses on how the rise of digital information has effected material culture and what that means for both museums and the wider world. She is interested in the curatorial history of collections especially those that contain computer-based technology, with specific attention given to the concepts of collection stewardship and contemporary collecting. She has held various museum positions including a post from 2006 - 2011 in the Computers Collections at the National Museum of American History. She is the author of *Collecting Computer-based Technology: Curatorial Expertise at the Smithsonian Museums*, an upcoming monograph with Routledge.

Harald Fredheim, University of York
L. Meghan Dennis, University of York
Tara Copplestone, University of York
Dr Sara Perry, University of York

#heritagegonewild: Digital heritage field-schools as seedbeds for transformative heritage research

Abstract

As digital tools and approaches become ubiquitous, discussions of the utility of distinguishing “digital” from supposedly “non-digital” approaches inevitably emerge. Rather than argue against the emphasis on digital, however, we suggest that its ubiquity calls for a centring of the digital in negotiating the big issues facing heritage studies as a whole. One of the most pressing of these challenges is the increasing separation between theory and practice, between heritage scholars and heritage practitioners. We argue that this separation leads to generalising critiques that inhibit productive advancements in theory or practice.

In response to this, we promote the adoption of digitally-focused creative field-schools for situated reflexive learning and research. Contesting the false dichotomy between teaching and research, we demonstrate how intensive, all-day, uninterrupted, multi-week engagement with full project cycles - from recording through interpretation, collections handling, audio-visual production, museological display and curation, to archiving, promotion, audience evaluation, reporting and critical self-reflection - offers a rich and rewarding laboratory for advancing both heritage practice and grounded heritage scholarship. Crucially, this approach is distinct from mere skills training, by emphasising the holistic process of production and critical self-reflection, including the transformative experience of negotiating real-world constraints and the bittersweet inevitability of compromise.

Within this process, we identify the process of digital creative production as crucial for facilitating epistemological change, and we illustrate our points with reference to 5 years’ worth of data gathered as leaders of the University of York’s annual 10-week long ‘Heritage Practice’ field-school. Ultimately, we argue that the digital realm isn’t necessarily changing the questions we ask or the dilemmas we face, but offering a new arena from which to approach them - and a new dimension from which to address the central questions of heritage studies as a whole.

Biography

Harald Fredheim is a PhD Candidate in the Department of Archaeology at the University of York. He uses digital co-design to re-negotiate professional/volunteer roles and responsibilities in collaborative heritage projects.

L. Meghan Dennis is a PhD candidate in the Department of Archaeology at the University of York. She is an archaeological ethicist whose research focuses on digital and virtual spaces.

Tara Copplestone is a PhD candidate in the Department of Archaeology between the University of York and Aarhus University. Her research examines how creating through the videogame media form might offer novel pathways for archaeological knowledge production.

Sara Perry is Senior Lecturer in the Department of Archaeology, University of York. She is Director of the Visualisation Team at the archaeological site of Çatalhöyük, Turkey; co-Investigator on the Memphis Site and Community Development Project at Memphis, ancient Egypt’s first capital city; and a co-investigator on the international, EU-funded EMOTIVE Project (www.emotiveproject.eu).

Dr Areti Galani, Newcastle University (Conference Co-Organiser)

Biography

Dr Areti Galani is a digital cultural heritage specialist in the Department of Media, Culture, Heritage, at Newcastle University, UK. She holds qualifications in Museology and Computing Science and has curated projects in Greece and the UK. Areti explores the potential of critical design approaches in heritage contexts. She has led the design, development and evaluation of digital interactive installations in UK museums as well as a series of mobile web apps for Rock Art sites in rural Northumberland. In her recent research, she has looked at how empathy and memory are negotiated by visitors in museum exhibitions about migration. Areti is currently a Co-I in the Horizon2020 project CoHERE, where she investigates how digital practices and platforms provide opportunities for dialogue around heritage in the context of European identity/s. Areti has published her research in both Human Computer Interaction and heritage-related edited volumes and peer-reviewed journals. She is a co-editor of the forthcoming special issue on 'Evaluation of Digital Cultural Resources' in ACM Journal on Computing and Cultural Heritage.

<http://www.ncl.ac.uk/sacs/staff/profile/aretigalani.html>

Dr Haidy Geismar, University College London (Keynote Speaker)

Five ways to think about Digital Cultural Heritage

Abstract

In this keynote I present 5 Frameworks for understanding digital cultural heritage, using them as springboards to develop a methodological and conceptual framework to advance our understanding of this complex social, technical, political and material field. By challenging our assumptions about the nature of the digital, locating it in previous histories of collection and previous discourses of materiality, we can better explore the transformations effected by digital media on our understanding of the past in the present.

Biography

Haidy Geismar is Reader in Anthropology at University College London where she directs the Digital Anthropology Masters Programme and Centre for Digital Anthropology. She is also the curator of the UCL Ethnography Collections and Vice Dean responsible for developing the Arts and Humanities and Social Sciences presence at UCL's new campus in East London. She has long term fieldwork experience in the South Pacific and within museums in the Pacific, North America and Europe where she has worked on issues of indigenous intellectual and cultural property rights, histories of museums and collections and the transformation of historic collections into digital media. Recent publications include *Treasured Possessions: Indigenous Interventions into Cultural and Intellectual Property* (Duke 2013), *The Routledge Cultural Property Reader* (with Jane Anderson, 2017). Her latest book, *Museum Object Lessons for the 21st Century* is forthcoming from UCL Press.

Dr Megan Gooch, Historic Royal Palaces

Commemoration in the digital age: the digital materiality of the Tower of London Poppies

Abstract

In 2014, an installation of ceramic poppies in the moat of the Tower of London called Blood Swept Lands and Seas of Red attracted 5 million onsite visitors and reached over 18 million people online. Each of the 888,246 ceramic poppies in the installation was created to represent a single life; or rather a death. The number of ceramic poppies and the scale of the installation were its defining features both in terms of the spectacle it created in the moat, but also in the meanings people made of the artwork. Volunteers, staff, visitors and purchasers frequently referred to the emotional significance of 'one poppy, one life'. Each handmade poppy embodied individuality within the conformity which is associated with military service in WWI. No two poppies were the same, connecting the individuality of the dead combatants with the horrifying scale of the war.

This research paper will look at some findings from the data collected as part of the Blood Swept Lands installation, specifically the preliminary text mining analysis of 9,000 online dedications left by the public on a dedicated online portal and website: The Tower of London Remembers. This paper investigates how and why people chose to participate online with a site-specific artistic memorial installation, and focuses on the age and genders of online participants, as well as the language of remembrance and imagery of the poppy which are dominant features of this online memorial.

Biography

Dr Megan Gooch has worked in museums and heritage for 9 years as a curator and learning producer. As a coin curator in the British Museum, she built on her PhD specialism of medieval coinage. She joined Historic Royal Palaces in 2010 to curate a new permanent exhibition on the Tower Mint, as well and has published in numismatics and mint archaeology. Since 2013 she has worked in the Learning & Engagement team bringing the palaces' collections to the public through object handling, a new secondary schools programming and the development of the Tower of London's new interpretation plan. More recently, Megan has been working on the legacy of the Poppies project Blood Swept Lands and Seas of Red which was a commemorative art installation at the Tower in 2014. Her current research focuses on how the public engaged online and onsite with the artwork and how public participation contributed to its creation and success.

Althea Greenan, Goldsmiths, University of London

From slide collection to feminist net-work: digitization as a deviant performance to recover the politics of a moribund technology

Abstract

My doctoral research revisits the Women's Art Library slide collection in the Special Collections and Archives at Goldsmiths using the promise of digitization to discover the political implications of women artists making and collecting slides. Slide registries were an important strategy for feminist art projects internationally but 30 years on, what does this slide collection of approximately 30,000 slides do? The 35mm slide was developed to store, project and disseminate images, but digitization rendered slidemaking into a redundant technology. Kodak stopped producing slide projectors in 2004 as digitization overtook the production and management of images. Since then teaching slide collections have been dismantled while the WAL slide collection was preserved as part of a research resource. While it is widely accepted that the future of image collections is digital, the political origin of the WAL slide collection as a feminist project of visibility for women artists raises questions about the notion of digitization as an ideal project of transmutation that ensures preservation and enhanced access. Taking up a camera to digitally photograph artists' slide files became a way to challenge standard scanning methods. My presentation considers how the feminist slide collection continues to embody a marginalized cultural heritage that comes into view by contaminating the slide's transition into a digital file functioning in digitized space. Political implications for cultural heritage when analogue slide collections are digitized are explored as this mostly un-digitized collection of women artists' slides shifts from image repository to become "a site of resistance" reflecting on the nature of knowledge, culture and power. The aim of this aberrant digitization is to question how these slides will speak in a future when the artists are gone, the feminist moment evolves, the slide becomes an artefact, and this slide collection faces the question: why keep it?

Biography

Althea Greenan works in Special Collections and Archives at Goldsmiths, University of London curating the Women's Art Library collection. She works with artists and academic researchers to realise new projects based on the Women's Art Library collection that position the collection in contemporary practices. Her writing on the work of women artists dates from the 1980s, but her recent doctoral research focuses on the process of digitization to ask: What can an artists' slide collection do besides represent artwork?

Dr Huw Halstead, University of York

‘Ask the Assyrians, Armenians, Kurds’: nationalism and transcultural cross-referencing in YouTube comments

Abstract

In recent years, there has been a ‘transcultural turn’ in the field of memory studies, developed by researchers who felt that earlier work was circumscribed by a ‘methodological nationalism’ that took for granted a close link between particular collective memories and particular national/ethnic groups. For many of these scholars, globalisation and digital mass media have broken memory free from its traditional moorings, creating opportunities for individuals to access one another’s histories in a manner that might replace exclusive and antagonistic nationalist histories with inclusive cosmopolitan solidarities. In Alison Landsberg’s terms, ‘mass culture makes particular memories more widely available, so that people who have no “natural” claim to them might nevertheless incorporate them into their own archive of experience’. This is exemplified by the Internet and Web 2.0 platforms, (seemingly) deterritorialized spaces where individuals from diverse backgrounds are able to interact and gain access to each other’s mnemonic repertoires.

In this paper, I explore interactions between Greek and Turkish Internet users in the ‘comments’ section of YouTube. Despite the varied subject matter of the videos selected for analysis, the comments almost invariably descend into impassioned and acrimonious debates about the history of Greek-Turkish relationships, pitting Greek and Turkish users offering narratives of harmonious Greek-Turkish coexistence against users from both sides propounding narratives of strife and hostility. I focus on how Greek ‘strife narrators’, in their efforts to communicate, contextualise, and validate their grievances towards Turkey, commonly parallel Greek history with the experiences of Turkey’s Armenian, Assyrian, and Kurdish communities, and analogise with the Nazi genocide of the Jews. I discuss how these discourses influence (or fail to influence) the narrators’ perceptions and representations of self, the past, and the Turkish other, arguing that whilst transcultural digital dialogues might indeed draw different victim communities closer together and generate intercommunal solidarities, they nevertheless frequently reinforce rather than transcend national identities and frameworks of remembrance.

Biography

Dr Huw Halstead is an Associate Lecturer in the Department of History at the University of York. He is a modern European historian specialising in collective memory, displacement, nationalism, and ethnic identity. He has conducted research on the expatriated Greek communities of Istanbul and Imbros, the 1974 Cyprus conflict, and Greek-Turkish relationships in the digital world.

Dr Julian Hartley, Dim Sum Digital

Ethics and Informatics: Disclosing Power Hidden in Museum Technology

Abstract

In line with Lucas Introna's notion of disclosive ethics, this paper will argue for research to disclose museum processes and technologies for creating, storing, finding, manipulating and sharing information. Disclosure is offered here as a method for revealing power hidden in those information frameworks that fold into the museums' political programme. In particular this paper addresses ethical issues which arise from software algorithms in museum information. Algorithms impact how, and in what relationships, museum information becomes public yet remain a 'black boxed' technology and therefore obscured from ethical scrutiny. Only through disclosure of algorithmic rules in museum informatics, and Internet culture, can their impact on the creation, access to and interpretation of digital museum objects be measured.

After introducing Introna's argument, this paper continues by proposing that disclosive ethics could happen through comparison between museum informatics and urban informatics; the material, technological and social structures that make the information age possible. In this context we might think of real-time sensor networks and wearable technologies which log and learn from the cultural preferences and location data of their users. Examining the two informatic systems alongside each other, and highlighting the differences between them, provides an opportunity to map their political or systemic enclosure, and therefore disclose them to ethical scrutiny. This returns the paper to the political programme of the contemporary museum and its ethical parameters of social inclusion, public accountability, and transparency.

To conclude, the suggestion will be made that the museum only comes into existence when the algorithms rule it is correct to do so. Therefore, it is argued, research is needed to disclose ethical issue that falls within, and speaks to, a museology of technology.

Biography

Julian Hartley is a museum and heritage professional working at Dim Sum Digital, a company offering data expertise to the culture and media sector. Clients have included the Guardian Media Group, Google (Paris), Institute of Cultural Practices (University of Manchester), The Indigo Trust in South Africa and UCL Qatar. He has a MA and PhD in Museum Studies from the University of Manchester. Between 2008 and 2014 he was a researcher in residence at the Whitworth, Manchester, which included instigating, following, documenting and critically reflecting upon processes, challenges and actions of digital engagement and the people involved in them.

Dr Antoinette Maget Dominicé, University of Lucerne and Dario Henri Haux, University of Lucerne

Accessing digital cultural heritage: developing a legal framework

Abstract

Every day, humanity is creating elements of the digital cultural heritage, creating an unprecedented amount and innumerable variations. The digital realm is creation and conservation occurring at the same time. Still, a distinction between digitally born and digitalized objects is needed. Furthermore, we do not know whether interoperability and sustainability can be guaranteed for forthcoming generations – neither from a technical, nor from a legal point of view. Nevertheless, “the digital” is presented, especially within different academic discourses, as the single and perfect solution for preserving not only intangible but also tangible cultural heritage.

Considering the legal approach of safeguarding, one may note that the law is reacting instead of acting in a proactive manner. The UNESCO’s Charta 2003 on the preservation of the digital cultural heritage can be seen as a major step towards furthering the interests of a global community of scientists, activists and civil society. But its effects are dwindling, with goals and means being confused on account of a lack of precision in the use of terms. Firstly, we would like to consider an ongoing legal and technical debate between the data and the support needed for preserving digital cultural heritage. By referring to the evolution of information- transmission since Gutenberg and by drawing comparisons with other areas of cultural heritage, the scope of action can be delimited. Secondly, we suggest a reflection based on the UNESCO’s selective criteria, referring to various types of legal instruments. By this means, and by involving concerned interest groups from the cultural sphere, better definitions can be provided. Ultimately, this might lead to a better recognition of digital services and selected digital content, as testimonies of cultural heritage from the 21st century society. Finally, we propose a renewal of the Charta or an embedding of the core concepts in a European resolution or project like Europeana.

Biography

Antoinette Maget Dominicé (1980) has been a Senior Research Assistant at the University of Lucerne since August 2013. She is trained in law and history of art; her research interests lie in the fields of state law, copyright law, art law and cultural law. Alongside her activities at the University of Lucerne, Antoinette is a member of the editorial team of the online legal journal *sui-generis.ch* and of the research group *Droit, patrimoine et culture*. She qualified as a lawyer in France, and regularly consults as an expert for governmental and non-governmental organisations.

Dario Haux studied law between 2010 and 2016 at the Humboldt-Universität zu Berlin, the Université de Genève and the Luiss Guido Carli University in Rome. He then gained professional experience at law offices in Rome and Montréal. On account of his mediation degree, Dario actively co-organises the annual Summer School on Dispute Resolution in Berlin. Since 2017, he has been a Research Assistant at the University of Lucerne and is currently preparing his PhD thesis, a legal-philosophical enquiry on the subject of “Digital Commons”.

Cimeon Ellerton (Plenary Panel)

Biography

Cimeon Ellerton has worked for over 12 years in public engagement from arts development and policy, to data-driven audience strategy and large-scale programme management. Following seven years in local government, he joined The Audience Agency to build and manage Audience Finder - now the largest source of aggregated audience data in the world. During this time, he has worked with arts organisations of all sizes to develop rapid-prototyping and data driven decision-making approaches. Cimeon is regularly invited to contribute to professional media and journals, as well as speaking internationally about the UK arts sector, notably for the British Council across Europe. Cimeon has a PG Cert in Creative Commerce from the University of Greenwich and is also chair of Lewisham Education Arts Network - a charity championing arts education by empowering artist educators and those that work with them. Cimeon is now working on the next generation of user-centred and AI enhanced data tools for the cultural sector.

Anisa Hawes, Victoria and Albert Museum

Objects in context: new modes of collecting and curating digital posters

Abstract

Collecting and Curating Digital Posters is a Posters Subject Specialist Network research project, supported by Arts Council England. It aims to tackle the question of how institutional collections can adapt to the changing cultural and technical nature of poster material.

This presentation will showcase findings from the first two project phases, investigating what digital posters are and how they can be collected by museums. A key challenge has been capturing web-based posters and graphics, such as memes which are shared and re-appropriated in the context of social media. We have recognised an inherent contingency between digital objects and the socio-cultural domain within which they circulate. Posters have always been designed with the context of public space in mind, but the digital environment, and in particular Web 2.0, represents a changed landscape of public space. While we can't collect a city street, we can collect contextual elements of the digital environment.

An expanded case study at the core of this work represents a collaboration with online arts organisation Rhizome <http://rhizome.org>. Rhizome's web archiving tool, Webrecorder <http://webrecorder.io>, reflects our shared understanding that context is the formative and enlivening facet of web-based objects. This open-source tool has enabled us to capture dynamic, digital posters *in situ*.

Biography

Anisa Hawes is a Researcher based in the Prints Section of the Victoria and Albert Museum. She is leading *Collecting and Curating Digital Posters*, a collaborative project activated by the Posters Subject Specialist Network and supported by Arts Council England.

Jess Hoare, Cardiff University

Hang onto Your Emotions: Emotional Geographies of the Museum

Abstract

This paper examines methods for utilizing wearable physiological sensors within social science research. The project investigates the implications of technologies that can record, visualise and share some of our most personal and intimate data. It involves monitoring movement, heart rate, and skin conductive response [SCR] via wearable sensors to detect emotional arousal and intensity to environmental factors. It draws on precedents set by an artistic practice called bio-mapping and seeks to discover how such a cartography might add value to the field of emotional geographies. Associated with the artist and researcher Christian Nold, bio-mapping emerged as a critical reaction towards the currently dominant concept of pervasive technology, which aims for computer intelligence to be integrated everywhere, including our everyday lives and even bodies.

The growth of wearable biosensors means that the combination of personal biometric data, emotion, *and* our environment has opened up new routes for inquiry, but what does it mean to measure and evaluate ourselves in such ways? Through a discussion of a project underway between Cardiff University and National Museum Wales, exploring the use of wearable sensors to understand the emotional effect museums have on us. A small sensor, worn on the wrist like a watch or like a Fitbit fitness tracker, records physiological data that might be linked to emotional responses triggered in the museum.

The presentation will describe the methods behind the project, talk through some of the challenges of working with bio-data and finish by looking at some of the opportunities this technology presents for museums and their audiences. Through sharing the very early stages of this research, the paper intends to expose some of the problematics such devices and data, whilst looking for useful routes forward.

Biography

Jess describes herself as an errant art historian who wanders around museums and across disciplines. She has worked at the intersection of public arts and technology since 2012 and has collaborated with leading public institutions across the UK, including Tate, National Museums Wales, Watershed, Arts Council England, Arts Council Wales, National Theatre Wales, Shakespeare's Globe, the Guardian, and the British Council. It has never been about shiny technology, gadgets or even the art, Jess is interested in understanding people and their response to cultural experiences. This interest has led her to her doctoral research, exploring the role of biodata and wearable sensors in understanding emotion and affect in the museum. Previously, as part of the team at the Pervasive Media Studio, she worked closely with the Playable City team to deliver the international Playable City Award - a prize given to promote civic engagement through playful technology interventions in the urban environment. In 2016, Jess ran the Digital Innovation Fund for Wales on behalf of the Welsh Government and the UK's National Endowment for Arts, Science and Technology (NESTA). She currently sits on the Digital Innovation Board of the UK's Office for National Statistics and the Government Digital Service board for Open Standards.

Dr Nicola Horsley, Royal Netherlands Academy of Arts and Sciences

Gatekeeping Imaginaries of Cultural Heritage Research: the role of archives in shaping the possibilities of future research

Abstract

The proliferation of digital sources that may be drawn on by cultural heritage researchers has been described as a 'data deluge' that might fundamentally change how humanities research is done. Archives' role in facilitating the use of different types of research objects, and of novel and emerging methods, has not been fully investigated in this context. This presentation explores the processes and practices that govern uses of the historical record, and how they affect the stories that researchers go on to tell. Engaging with the perspectives of archivists offers a more nuanced understanding of a crucial element of the research process, addressing questions of mediation, 'new empiricism', epistemic agency and possible future imaginaries of heritage research.

The 'digital divide' in the interests and methods of humanities researchers has garnered much attention but the complexities of how everyday practices of practitioners in cultural heritage institutions act on this supposed faultline, shaping (and being shaped by) the research landscape, have been relatively neglected. Drawing on emerging findings from the Horizon 2020 Knowledge Complexity (KPLEX) project, this presentation explores archivists' roles in producing and/or constraining the possibilities for the creation of new knowledges by examining perspectives on how their 'gatekeeping' role is affected by the affordances of new technology and changing processes. Understanding how these actors view, lead and respond to change, and how they develop their expertise to support researchers, helps us to envision a vital aspect of the future of digital cultural heritage research. Spotlighting practitioner perspectives garnered through interviews and survey data, KPLEX takes a critical view of the adoption of 'big data' approaches in humanities research and asks how policy attempts to expand access to historical sources translate into practice and whether there is a risk that research objects that do not fit this model become under-researched.

Biography

Dr Nicola Horsley is a research fellow at DANS, an institute of the Royal Netherlands Academy of Arts and Sciences, where she researches how a focus on 'big data' elides important issues about the current knowledge landscape. Her work problematises the concepts of data and the historical record, investigating how humanities research objects may become 'hidden'. Nicola's qualitative research critiques the marginalisation of the social in various discourses and explores the dominance of scientific and technical knowledge as bases for policy and practice. A graduate of the University of Leeds' School of Sociology and Social Policy, she has previously worked at Loughborough University, Goldsmiths and London South Bank University, where she explored the scientific evidence base for early intervention policies. Her co-authored book, *Challenging the Politics of Early Intervention: who's 'saving' children and why*, expands on that project's analysis, and the related article 'Brave new brains: sociology, family and the politics of knowledge' was the winner of *The Sociological Review's* Prize for Outstanding Scholarship 2016.

Dr Stuart Jeffrey, The Glasgow School of Art
Prof Siân Jones, University of Stirling

Material/Virtual Relations: 3D heritage visualisation and the negotiation of authenticity

Abstract

In this paper we examine the question of authenticity in relation to 3D records and visualisations of historic objects and monuments. Much of the literature focusing on 3D visualisations locates their authenticity in the accuracy of the data and/or the realism of the resulting models. At the same time, critics argue that 3D visualisations disrupt people's access to the unique materiality, biography and aura of their historic counterparts. Furthermore, the production and use of 3D digital heritage objects remains largely restricted to the realm of professional practice with limited community or public engagement.

Drawing on recent research projects that involve community co-production of 3D visualisations in conjunction with rapid ethnographic methods we discuss when and how such visualisations become involved in the negotiation of authenticity. We argue that subtle forms of migration and borrowing occur between the original and the digital, creating new forms of authenticity associated with the digital object. Likewise, there is evidence that the creation of digital models actively mediates the authenticity and status of their original counterparts through the networks of relations in which they are embedded. We will argue that pre-occupation with questions of whether 3D digital records and models are authentic or not obscures the wider work that such objects do in respect to the cultural politics of ownership, attachment, place-making and regeneration

Biography

Stuart Jeffrey is Research Fellow in International Heritage Visualisation at the School of Simulation and Visualisation of The Glasgow School of Art (GSA). Stuart studied a combined honours BSc degree in Computer Science and Archaeology at the University of Glasgow and completed his PhD in 3D modelling of early medieval sculpted stones, also at Glasgow, in 2003 he joined the Archaeology Data Service at the University of York leaving as Deputy Director (Access) to join the GSA in 2013. His work at explores the use of new technologies to create records, analyse, interpret, re-interpret and represent heritage from built to intangible. His research focuses on replication and co-production as well as digital authenticity. Stuart has published extensively on diverse topics in archaeology and computer science, including, medieval sculpted stones, archaeological informatics, visualisation techniques, digital preservation and reuse, natural language processing, and the use of social media in archaeology. Stuart is a member of the ClfA and a fellow of the Society of Antiquaries of Scotland

Siân Jones is Professor of Environmental History and Heritage at the University of Stirling. She is an interdisciplinary scholar with expertise in cultural heritage, as well as on the role of the past in the production of power, identity, and sense of place. Her research interests include: monuments, memory and place; heritage management and conservation, authenticity, significance and social value; the material, social and environmental history of urban public parks; and community heritage. Recent research projects have focused on the experience of authenticity, approaches to social value, conservation practice, and participatory digital heritage. Siân's publications include: *The Archaeology of Ethnicity* (Routledge), *Early Medieval Sculpture and the Production of Meaning, Value and Place* (Historic Scotland) and the co-authored monograph, *A Fragmented Masterpiece: recovering the biography of the Hilton of Cadboll cross-slab* (Society of Antiquaries of Scotland).

Dr Olof Karsvall, The Swedish National Archives

From open data to linked data: experiences from an ongoing project on historical settlements at the Swedish National Archives

Abstract

National Archives in Sweden has a huge and unique map collection from the 17th century, covering settlements all over the country, in a very detailed scale of 1:5 000. Information about hamlets and farms also appears in older registers and letters. Using these sources we could travel back in time and get a close look on rural life 400 hundred years ago and further interpret the medieval living conditions. These historical data are of importance not only for researchers but also for archaeologists and landscape planners. Many of these sources have been digitalized and are available as open access. Despite this most databases are rarely used in research. Historical sources are also being published in book series (editions), which takes decades to compile, but are mostly used by a limited number of specialists. One way to overcome this is to promote connections between databases.

Since last year, a research project at the National Archives in Stockholm is ongoing, aiming to create a new digital platform (called TORA) for historic spatial data. *Settlement unit* (villages, hamlets and farms) is the main concept, which are registered as coordinates (point object) along with the place names. The platform serves as a cloud and imports data from different databases and converts them into linked data in RDF-format. Data modeling has been a major part of the work. Other key concepts includes events, digital sources material (images, maps), alternative place names and administrative divisions (parishes etc.). Using linked data principles, the project goal is to make a large amount of historical data available for researchers and programmers who could combine these in new ways in different types of applications.

Biography

Olof Karsvall hold a PhD in Agrarian History from the Swedish University of Agricultural Sciences, a M.S. in Computer Science and a B.Soc.Sc in Human Geography. The doctoral thesis (2016) focuses on the Late Medieval Agrarian Crisis (c. 1350–1500) by an examination of uninhabited cadastral units (vacant holdings) referred as *utjord* in Swedish cadastral written sources and maps. Since 2005, Karsvall has been working in projects at the National Archives in Stockholm concerning the Swedish 1600's geometrical maps and created a coordinate-based database and a search application, holding 12 000 maps and 100 000 data statistics and GIS data points (www.riksarkivet.se/geometriska).

Dr Orsalia-Eleni Kassaveti, National & Kapodistrian University of Athens

Dr Lia Galani, National & Kapodistrian University of Athens

Dr Rea Kakampoura, National & Kapodistrian University of Athens

Dr Areti Galani, Newcastle University

Exploring Cultural Heritage and Identity on Photo-sharing Social Media: A Suggested Visual Methodology

Abstract

Horizon 2020 Project CoHERE aims to explore the construction of European identities and places through heritage representations and the ways digital technologies may provide a profound knowledge about European Heritage, its discourses and the construction of the European identity. More specifically, through the use of Geostream tool, a dataset of user-generated images has been created and investigated in order to discuss the diverse and multifocal notions of heritage and identity, as well as the online visual dialogues that emerge and engage with ideas related to the European Union. Through the visual analysis of this data, this research aims to investigate the construction of visual representations of place and identity on geo-social digital platforms, such as Flickr and Panoramio. It will also analyse the online dialogues about the established notions of heritage, place and identity produced by such platforms as well as their further involvement in the redefinition or reshaping of our knowledge about them.

This presentation will focus on the visual methodologies used in order to access, examine and process the visual dataset, aggregated by Geostream, which consisted of more than 2,000 photographs of the Greek square Kotzia, located in the centre of Athens. It will, furthermore, evaluate the findings and critically reflect on the role of photo-sharing social media in providing a clear understanding of cultural heritage and identity related to place.

Biography

Orsalia-Eleni Kassaveti is a Post-Doc Researcher in Cultural Studies at the National & Kapodistrian University of Athens, Department of Primary Education. **Lia Galani** is an associate Professor of Geography & its Didactics and **Rea Kakampoura** is an associate Professor of Social Folklore at the same department. **Areti Galani** is a Lecturer in Digital Cultural Heritage, Newcastle University, School of Arts and Cultures.

Prof Sarah Kenderdine, École Polytechnique Fédérale de Lausanne (EPFL) (Keynote Speaker)

New models for experimental museology

Abstract

This presentation explores prevalent issues related to the use of digital facsimiles of cultural heritage in museums. In an era of 'heritage at risk', digital reproduction provides us with access to cultural sites and objects that may otherwise be irrevocably lost. Recent debates also describe how digital copies form part of the trajectory of an object's cultural career. Analogously, documentation of intangible heritage practices gives us opportunities to examine embodied knowledge systems and to explore their transmission through time. Nonetheless, digital facsimiles continue to occupy an uneasy space within museums whereby their artful materialities—intangible, reproducible and transmissible—pose a threat to institutionalized claims of uniqueness and authenticity. By focusing on a series of experimental new media installations for museums, this talk re-examines the possible futures for digital modelling of intangible and tangible heritage in exhibitions, where issues of authenticity and interpretation are at stake.

Biography

Sarah Kenderdine researches at the forefront of interactive and immersive experiences for galleries, libraries, archives and museums. In widely exhibited installation works, she has amalgamated cultural heritage with new media art practice, especially in the realms of interactive cinema, augmented reality and embodied narrative. Sarah is Professor of Digital Museology, at the École polytechnique fédérale de Lausanne (EPFL), Switzerland where she directs the Laboratory for Experimental Museology (eM+), exploring the convergence of aesthetic practice, visual analytics and cultural data. She also directs EPFL's art/science museum. Formerly, she was Professor at University of NSW (2014-2017) and founding director for interdisciplinary Expanded Perception and Interaction Centre (EPICentre) where she conceived and designed its primary visualisation infrastructure. She was head of Special Projects for Museum Victoria, Australia (2003—2017). From 2010-2015 she was the founding Director of Research at the Applied Laboratory for Interactive Visualization and Embodiment (ALiVE), CityU Hong Kong. In 2015 she was elected President of the Australasian Association for Digital Humanities (aaDH).

Amelia Knowlson, Sheffield Hallam University

3D scanning as a curatorial tool: Stories from the East: The Grice Ivories

Abstract

This paper explores a recent curatorial residency with the Curator of Decorative Arts at Museums Sheffield. The residency is part of research that examines how 3D scanning and printing can be used as a curatorial tool, and as a means to challenge museological relationships between artefacts and their digitally created counterparts. The collaborative nature of this research invited the curator to practically engage with 3D technology through the museum's Ivory collection. The end result was the production and integration of 3D scanned and printed objects into the narrative of the exhibition, 'Stories from the East: The Grice Ivories', via in-case objects, handling objects and interpretative aids.

Here, 3D scanning, is both the process and subject of the inquiry. The process helps us see the original artefacts in new ways, but also challenges the authority of the museum objects. Such a method of research opens up new imaginings of what heritage can be as the scan data is derived from the museum object, locating it within the context of the collection. The creation of digitally created content, by the curator, exposes new notions and imaginings in digital heritage including revealing previously unseen details whilst re-shaping the curator's understanding of the museum object. The curator's comments, her understandings of the 3D scans and response to their use, both digitally and physically, shaped the narratives within 'Stories from the East'.

The 3D scans were created from co-selected ivories; their production, use and reception were discussed with curators before transforming them or sections of them into 3D printed museum objects. The 3D printed museum objects were treated as museum objects, with their own in-case labels, despite their digital origins. This digitally enabled method questions not only what heritage can be but also the role museums have in displaying, creating and interpreting digital content.

Biography

Amelia is PhD researcher and curator based at Sheffield Hallam University. Her AHRC funded PhD uses participatory methods to research the effects 3D technology has on museum practice. 3D scanning and printing sits at the heart of her research, which she uses to create situations that challenge the traditional rhetoric of the museum. Spanning the realms of curator, designer and maker, Amelia has built an active portfolio in the museum sector. She completed her MA in Museum Studies at Newcastle University where upon graduating was employed on the AHRC project 'Co-Curate' where she engaged communities and museums with 3D technology. Since then she has completed 3D curatorial projects for Tyne and Wear Archives and Museums, English Heritage and Museums Sheffield. Her future work will involve a 2-month curatorial residency with The British Museum. In 2015, Amelia was awarded Art Catalyst funding to explore the use of embedded technology to facilitate museum engagement with the blind and partially sighted community.

Stefania Zardini Lacedelli, University of Leicester

Digital heritage and platform museum: sonic thinking as organising principle

Abstract

Museums in 21st century are ready for a paradigmatic shift. The dematerialization of tangible objects, the sharing economy and the participatory culture are transforming the ways through which cultural heritage is valued, transmitted and created. Consequently, museums are changing their shape: in 18th century, they conceived themselves as architectural spaces devoted to the collection and display of tangible cultures; under the digital revolution, museums have become distributed, decentralized and always accessible platforms. The museum presence has been extended from the physical places to the virtual Web. Instead of proposing just the curatorial voice, museums promote interpretative processes of visitors, user co-creation and knowledge sharing. Beside tangible heritage, they collect, preserve and spread intangible assets and digital cultural heritage. In their evolution towards the platform model, museums need an entire new set of tools to redesign their activities, products and strategies. Using a born digital museum as case study, the presentation will propose an organising principle that originates from the intangible element par excellence: sound. Sonic thinking can guide museums in developing their presence in the digital world, thanks to the portable qualities of sound to be reproduced, shared and remixed in a variety of new contexts. In Museo Dolom.it – a virtual museum that involves different target users in the creation of digital heritage related to the Dolomites landscape – sonic thinking has shaped a wide range of digitally mediated activities: from the collaborative sound archive on SoundCloud – composed by different types of soundscape recorded by users - to the creation of multimedia galleries that collect sonic interpretations of Dolomites heritage. Drawing upon these emerging sonic practices, the presentation will ultimately highlight the contribution that sonic thinking can give as a new organising principle for the platform museum.

Biography

Stefania Zardini Lacedelli is a postgraduate researcher at the School of Museum Studies at the University of Leicester and a digital heritage project manager. Her doctoral research is funded by the AHRC-Midlands3Cities Doctoral Training Partnership and investigates the museum as a platform for sound culture in a post-digital age. Since 2013, she has carried on different research and teaching activities in the field of digital heritage in Italy, USA and UK. In 2014 she was Visiting Scholar at the Duke University (NC), where she developed a platform model for museums that was first applied in the design of a multimedia platform for the Mario Rimoldi Modern Art Museum in Cortina. In 2016, she became the co-founder of the virtual museum of landscape [DOLOM.IT](https://dolom.it) and the Ambassador of the cultural movement Digital Invasions in the Dolomites area. She collaborates as a researcher with DiCultHer, the Italian Network for Digital Cultural Heritage.

Dr Åsa M Larsson, Swedish National Heritage Board

From Changing Tools to Changing Practices. Challenges for archaeology and heritage management when documenting, preserving and sharing digital data

Abstract

In 2014 the National Heritage Board in Sweden initiated an ambitious project to create a Digital Archaeological Process (DAP) involving County Boards, contract archaeologists, museums and the Heritage Board. The aim is to ensure efficient sharing and use of digital heritage information, and the preservation of digital documentation and data from surveys and excavations. In order to reach these goals a digital Historic Environment Record with a public web interface is being developed, as well as new web tools for archaeologists and administrators to register data and documents. Just as important as these new tools has been the opportunity to take an in-depth look at the way information about ancient sites and artefacts are documented. Current practices are sometimes needlessly heterogeneous and often based on analogue practices that do not make full use of opportunities afforded by digital data. As archaeologists well know, it is easier to change the tools than practises and structures. In order for digital cultural heritage to come of maturity we need to do more than to implement new digital tools, we need to reflect upon which practices need to be changed as well. We need to question if current ways of documenting information is conducive to the goals of research and heritage management, or if they are based on outdated analogous habits. However, there are dangers as well in tailoring practices to adhere only to digital logic: with the implementation of (inter)national standards we run the risk of favouring heritage management at the expense of research. This presentation will raise some important questions of what it takes to actually change practices, and how far we should go to make the best use of the opportunities afforded by digital cultural heritage.

Biography

Åsa M Larsson has a PhD in archaeology from Uppsala University. She worked as a field archaeologist for many years with both private companies and museums and then served as Director of Societas Archaeologica Upsaliensis, a foundation doing contract archaeology and research. She is now working at the Swedish National Heritage Board with the Digital Archaeological Process which is developing the Historic Environment Record. Specifically, she is overseeing the collection of old digital data from contract archaeologists, implementing a new digital process for preserving and transferring artefact data from excavations to museum collections, and developing e-learning courses for the Historic Environment Record.

Prof Paul Marty, Florida State University

Diverging Expectations: Invisible Work in Digital Heritage Research and Practice

Abstract

Academics, digital humanists, librarians, and technologists recently assembled at Florida State University for a two-day symposium exploring the challenges facing researchers and practitioners in the digital humanities when their work is invisible to a wide range of audiences and stakeholders — <http://iwdh.cci.fsu.edu/>. One theme that emerged from this symposium involved the concept of diverging expectations in digital projects. Does everyone working on the same project share the same goals? What is the value in helping participants become more aware of each other's stated or unstated goals? What happens when individual expectations about the purpose of a project diverge? Can we anticipate the factors contributing to this divergence?

These questions have important methodological implications for digital cultural heritage researchers. How can we assess the role of invisible work in the digital projects we study, determine the problems that arise when invisible work is not recognized, and identify those points in the project lifecycle that are most likely to lead to diverging expectations? It is critical that we develop new approaches capable of highlighting invisible work in digital cultural heritage projects, and helping project participants understand the implications of making their invisible work more visible.

This presentation will reflect on the methodological frameworks available to researchers and practitioners examining invisible work in the digital realm. It will discuss the importance of studying the tensions that arise when different groups working on the same project discover they have different end goals, and how understanding those tensions can improve the success of digital projects writ large. The ultimate goal of this research is to develop an explanatory and predictive theory to provide a deeper understanding of what happens behind the scenes in digital cultural heritage projects, and bring to light the unexamined assumptions and motivations that underlie invisible work in digital heritage research and practice.

Biography

Paul F. Marty is a Professor in the School of Information at Florida State University. He has a background in ancient history and computer science engineering, and his Ph.D. is from the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign. His research and teaching interests include museum informatics, technology and culture, innovation and design, and information and society. He has served on the editorial boards and committees of national and international organizations including Museum Management and Curatorship, Museums and the Web, and the Museum Computer Network.

Dr Marco Mason, University of Leicester
Dr Giasemi Vavoula, University of Leicester

Design Thinking for Digital Heritage: Designing a new family guide for the Fitzwilliam Museum

Abstract

“Breakthroughs that do count today are not about speed and performance (digital technology) but about collaboration, conversation and co-creation.” Bruce Nussbaum

This paper will present findings from two large interdisciplinary studies funded by EU Marie Skłodowska-Curie actions¹ to research digital heritage design practice. The second of these studies focuses on the application of Design Thinking practice in digital heritage, and addresses new questions about the nature and impact of Design Thinking on digital heritage design and, by extension, on the visitor experience. It is the first systematic study of Design Thinking in museums engaged in digital media projects. We are conducting practice-based research at the Fitzwilliam Museum in which we are applying Design Thinking on a project that aims to design a mobile information system for families visiting the museum. We set up a project team comprising Fitzwilliam educators, curators, digital specialists, visitor services staff and designers, and employed collaborative methods and techniques – including brainstorming, ethnographic methods, experience journey maps, and prototyping. Our research studies the design activity, in particular, the social context in which design is situated and where contingent sets of activities are performed by both designers and non-designers. Through Participatory Observation and Inductive Qualitative Analysis, we are analyzing: the nexus of actions taking place during the design activity; the discursive practice and negotiations; the design methods and techniques that foster collaboration together with the use of visual tools; and how knowledge is shared amongst actors with different backgrounds. The paper will discuss the process of introducing Design Thinking within the organization and how it contributes to museum design strategies, processes and building capacity in digital heritage design. We intend our theoretical perspective to stimulate critical reflections on, and to advance methodologies for researching advanced design practice for cultural heritage in the digital realm.

Biography

With a Ph.D. in Design (2012), **Dr Marco Mason** is Marie Curie Research Associate in Museum Studies at the University of Leicester, in collaboration with the University of Cambridge and Fitzwilliam Museum. He is specialized in Design Research for digital media. His research is at the intersection of Cultural and Digital Heritage studies, Social Science and Design Research for the study of digital media design and its practices in museums. In October 2015 he successfully concluded his first Marie Curie International Outgoing Fellowship with the Massachusetts Institute of Technology and the School of Museum Studies. <http://marcomason.me>

Giasemi Vavoula is Associate Professor in Museum Studies at the University of Leicester, UK, where she is Director of Postgraduate Research (external) and teaches and supervises research in digital heritage. She has expertise in digital learning design and evaluation, particularly in the area of mobile learning. Currently her research focuses on digital design for heritage, digital transformations of heritage archives, and digital learning and participation in heritage. She has held grant awards from AHRC, EU, and HLF among others.

¹ The first Marie Curie research project (started October 2012) is funded by the European Union – Marie Curie Actions International Outgoing Fellowships. The outgoing stage (2013–14) took place at the Massachusetts Institute of Technology; and the return stage (2015) takes place at the School of Museum Studies, University of Leicester. The second Marie Curie research project (started July 2016) is funded by the European Union – Marie Curie Actions Individual Fellowship. It is a joint project with the School of Museum Studies at the University of Leicester and the University of Cambridge, Fitzwilliam Museum (secondment).

Brian Moss, Newcastle University

From Imagined to Lived: The Application of Sensory and Digital Ethnographic Approaches in Capturing the Users' Heritage Process with Mobile Digital Interpretations (MDIs) in Outdoor Cultural Heritage Landscapes

Abstract

This paper problematizes the idea of the perceived user, analysing the implications of this concept and its weaknesses in the process of producing the heritage experience. The application of Smartphone based Mobile Digital Interpretations (MDIs) involves the premise of an 'imagined' user, but there is limited understanding of how this 'imagined' user evolves on-site as the 'lived' user. The relationship between the 'imagined' and 'lived' users relates not only to the desired experience the relevant stakeholders wish to facilitate, but also how the user imagines themselves and their role in the production of the MDI experience.

To understand this development, it is important to give priority to individual users' agency, in particular their cognitive and affective engagement with the process. This paper reports on research conducted across various outdoor cultural heritage sites in the UK, interrogating perceptions of the 'imagined' user as revealed in interviews with multiple stakeholders, through the lens of sensory and digital ethnographic research. The primary component of the sensory and digital ethnographic research was 'go-along' experiences, being present in the site with the user and capturing their experience through wearable technology. This positions the user at the centre of the research, covering both phenomenological principles concerned with the production of experience and the critical examination of approaches sensitive to movement, stemming from the mobility turn.

The 'imagined' user becomes the 'lived' user through the process in-situ and approaches must be sensitive to not only capturing the technological experience with the Smartphone based MDI but also the formation of the heritage experience. Approaches of this nature are important to gain a fuller understanding of the implications of adopting forms of digital interpretations in such spaces.

Biography

Brian Moss is a Doctoral Candidate from Media, Culture and Heritage at Newcastle University. Brian's primary area of interest is in Mobile Digital Interpretations (MDIs) in the outdoor heritage context, but this extends into areas such as digital interpretations for museum and gallery settings, location-based services, GIS and social media. He is particularly interested in the effective deployment of smartphone technology within the museum and heritage sector and the subsequent influence this has on the embodied sensuous experience, this is the focus of his AHRC Northern Bridge Doctoral Training Programme supported Doctoral research. Brian also assists with the delivery of the Museum, Gallery & Heritage Studies MA programme within Newcastle University and has worked for several years in the heritage sector, assisting with the integration of digital tools to the visitor experience.

**Prof Judith Mottram, Lancaster University and
Dr Helen Gorrill, University of Edinburgh**

Colouring in the Gaps: exploring transnational aesthetics through digital collections

Abstract

This paper reflects on an approach to the visual analysis of digital collections for the arts researcher. The subject area is cautious about quantitative analysis, but systematic statistical methods can open up new possibilities for those engaged with visual arts research. We asked whether it is possible to manage the subjectivity of colour reception and analyse colour in artwork through the digital means. The objective of the research was to determine whether it was possible to distinguish palette differences across a range of cultural variables, such as gender, nationality, artist's age, collecting institution, or donor, or pictorial attributes.

A sample of 500 contemporary paintings from museum digital collections was constructed and a measurement derived of each image palette's dominant colour constituents. The digital dataset is drawn from national collections in the UK, Finland, France, USA and Qatar. The images were selected through a random sampling process. The method incorporates the use of a medical mobile app for identifying colour for the colour blind. The app is evaluated as a technique for assisting in colour identification.

We reflect on the potential of such datasets and analytical methods to provide new perspectives on cultural heritage, and scope for application beyond the immediate scholarly field. Previous work using such data has challenged more subjective and inferential perspectives on collection policies or gendered career development. The potential to explore preference or transnational aesthetics in respect to physical object characteristics could be useful at both the meta-level of national collections as well as for individual subjects, notwithstanding the ethical dimensions of both. The opportunity, however, is to use available data to explore patterns hitherto only suggested by informed connoisseurs. We reflect that this enables fresh insights to be drawn on social and economic factors relating to cultural identity and heritage.

Biography

Judith Mottram is Professor of Visual Arts and Director of the Lancaster Institute for the Contemporary Arts (LICA) at Lancaster University. She was previously Dean, School of Material at the Royal College of Art. Her research interests include colour, drawing and pattern, and the inter-relationships between subject knowledge, creativity, research and practice. She was a member of the REF 2014 sub-panel for Art and Design: History, Practice and Theory and is a Fellow of the Design Research Society. She is on the editorial boards of the Journal of the International Colour Association; Journal of Textile Design, Research and Practice; and the Journal of Visual Arts Practice.

Helen Gorrill holds a PhD in the gendered economic and symbolic values in contemporary British painting. Dr Gorrill's PhD identified a new 'androgynous aesthetics' in contemporary British painting, and her postdoctoral research has detected an 'essentialist aesthetics' in contemporary painting.

Dr Artemis Papadaki, Bellerbys College

Emerging the Contemporary Classical Music Culture in the digital era: Methodology and visualization of Linked Data

Abstract

This paper will focus on the methodology used in creating a tool that can be used to reveal aspects of the Contemporary Classical Music landscape by linking data sources in a flexible and productive way useful for any researcher in the digital era. Research can be customized and tailored according to the researcher's interests. The main goal was to present all pieces of information recorded from the Contemporary Classical Music Archive (scores and parts hosted at the National Radio-Television of Greece) combined with primary and secondary data concerning information about the compositions, facts about the composers' life as well as their idiom and way of thinking. The problem that arises with software used by most musical libraries is that you can either search by composer or composition. All other catalogued data are hidden in deeper layers. These systems have been designed in order to serve librarians working in "physical rooms" to respond to a special request. The goal was to enrich and link flexibly the archive with the other sources and to expand it outside its physical limits, enabling Linked Data to be a valuable source not only for researchers, but for any stakeholder or user outside any geographical limits.

The other data sources linked were: a) data available from secondary sources or offered by the composers themselves at the time the main project ended and b) primary data collected through a qualitative and quantitative research among composers.

The big challenge was a) not only to find a way of putting all this Linked Data together in order to trigger and facilitate communication with multiple users and stakeholders and allow multiple readings depending on the interest and point of view of each researcher, but b) to create the potential of linking this platform with other archives and collections and c) to create a dimension of time. This (dimension of time) is defined as an open communication path able to reshape the future. The proposed ground for this was the construction of a website open to controlled feedback which had as starting point, the MySQL data base designed to contain all fore-mentioned Linked Data. This new communication path might contribute to the re-definition of future artistic choices, relationships and directions of the composers and their audience. The aim of this wider project, that started with Greek Contemporary Classical Music, is to reveal the trends in Western classical music.

Biography

Her passion is the art and science of Communication that straddles science and art subjects and applies to both. Her PhD with starting point Musicology and cornerstone Communication was an interdisciplinary approach to oral history, social history, history of art, cultural management, musicology and communication. She has also a Master's in Cultural Management-Communication, a first degree in Biology (scholarship from Greek state: IKY), soloist diplomas in Flute, Piano and Recorder and specialization in Early Music (Lemmingsinstituut, Leuven, Belgium, with a scholarship from the Onassis Foundation). For a number of years, she has been artistic director at Rethymnon Renaissance Festival, strictly devoted to Early Music, Musical Consultant at the National Radio-Television and a professional flute player (at the Music Ensembles of the National Radio-Television of Greece (ERT), the National Opera of Greece as well as in other orchestras and chamber music ensembles). Since the official shut down of the National Radio Television of Greece (2013) she has been teaching Maths in England.

Dr Georgios Papaioannou, University College London in Qatar
Sofia Paschou, Ionian University, Greece

“Five Paintings talking to children”: producing and evaluating a digital educational augmented reality app in Corfu Art Gallery, Greece

Abstract

This work presents the museum augmented reality app entitled "Five Paintings talking to children...", which was created on the AURASMA platform as a result of a research collaboration between the Ionian University's Museology and Interactive Arts Laboratories in 2016. It relates to works of art in the Corfu Art Gallery in Corfu, Greece. Five paintings of famous Corfiot artists talk to visitors on the screen of smartphones and/or tablets after image triggering. The app is addressed to school students of the last two years of Greek Primary School and is available to all interested visitors on demand. We here present the impact of the app to meaning-making and visitors/students learning processes. After a pilot study, an evaluation was conducted via questionnaires and a discussion / interview with teachers at the end of the visit after the use of the app. Results indicated students satisfaction, achieved learning outcomes, attitudes towards Art Galleries and the Corfu Art Gallery in specific, attitudes towards the AURASMA app as well as points for improvement.

Biography

Dr Georgios Papaioannou is currently a Senior Lecturer for the MA in Museum and Gallery Practices at University College London in Qatar. He has studied, lectured, worked and led projects in archaeology, classics, cultural heritage and Information Technology in Europe and the Arab world. His research interests lie in museology, archaeology of the Eastern Mediterranean and the Arab World, education (including e-learning) and IT applications, including augmented reality and (recently) Big Data. He is the General-Secretary of the Hellenic Society for Near Eastern Studies, Director of the Museology Lab in Corfu, Greece, and a member of ICOM.

Ms Sofia Paschou is a researcher in museum studies at the Ionian University, Corfu, Greece. She has studied law and cultural heritage studies, and she is a member of ICOM. Her research interests lie in museum education, cultural law and museum digital ethics.

Dynamic networks of UK national museums that influence on their digital projects**Abstract**

There are myriad of factors that cause digital museum projects to be created in a certain way. These include not only human actors but also non-human actors. The aim of this research is to investigate the degree to which UK national museums have interconnected with other social systems in the digital age, and how the networks of museums, museums organisational culture and museum practitioners' perception on digital elements have influenced digital projects. Through qualitative multiple case studies, interviews with museum staff were conducted and secondary data and visual data were collected regarding three museums, including the British Museum, Tate Modern and the Science Museum, London.

Based on actor-network theory and activity theory, the research identifies actors who have influenced digital projects of the museums in case and their roles. From data analysis, actor network maps of each case museum are developed. The maps visually show that active and hidden actors of the museums slightly differ from each other, depending on the organisational culture of them. Moreover, this research highlights crucial roles of the learning department of the museums as a bridge among other actors. The research also points out the importance of communities of practice for museum practitioners' professional development, especially regarding digital culture, because of the fast evolution of digital technology and the nature of digital projects that are in situ between digital and museum sectors. Cultivating the communities is uncovered as one of ways to empower museum practitioners by affecting their professional identity.

Finally, the research provides holistic context for understanding the digital phenomenon in the museums and the degree to which the museums have shaped/been impacted by digital culture. It concludes with suggestions that museums should develop digital projects through a collaboration process and harness digital technology to empower the public as active actors.

Biography

Juhee Park has been a PhD candidate in Museum Studies at University College London, UK, since 2013. Her research interests include the development of digital culture in museums, with a particular focus on children-focused interpretation. Her PhD research project, which has been funded by Korean Government Scholarship Programme for Study Overseas, investigates the ecosystems of digital culture surrounding six national museums in South Korea and the UK, and how this has influenced communication and learning approaches of digital projects of the museums. This presentation is part of her PhD research. Previously, she was curator at the Gyeonggi Children's Museum near Seoul, South Korea, and at that time, she received a citation for her outstanding work performance from the local government. She studied for her BE in Computer Science and Engineering at Korea University and MS in Graduate School of Culture Technology at Korea Advanced Institute of Science and Technology.

Dr Ross Parry, University of Leicester

From 'operator' to 'actant': how museums made (and re-made) their digital user

Abstract

Museums are stepping into their second half-century of computing. As they do so, and as digital scholarship concurrently matures, the commonplace terms of reference of our subject and our practice grow as 'registers of experience' (Agnew 2014: 312) carrying with them their own heritage. The longevity of the sector's relationship with digital technology, together with the intellectualised discourse now accrued around it (including the postdigital and digital anthropology), begin to reveal new complexities and new histories for us. Terms, for instance, such as 'user' and 'digital user' may at first seem passive and perfunctory. And yet, by looking back - deeply and carefully - at how these concepts are constructed and deployed by the museum, insights to changing priorities, values and intellectual informants come into focus. We can, in short, start to see a sector revealed through its re-making of a word. Surveying archival material (from the Smithsonian Institution, Collections Trust and Jodi Mattes Trust) across 50 years of practice, and leveraging multi-disciplinary theoretical perspectives from digital studies, design studies and disability studies, this chapter uses a form of ideational history, to evidence a shifting linguistic habits (Klein, 2011) and frames of reference around the construct of the 'digital user', at once both sequential and enduring: from the user as 'operator' (set within a system-orientated context of organisational efficiency); to the user as 'individual' (amidst priorities of usability and experience design); to - emerging today - the user as 'actant' (against which social value and agency are the new indices of success). In these different constructions, the 'digital user' moves from being part of the system, to outside system, to in the world, whilst its principal capability shifts from automation, to personalisation to empowerment. What emerges is a usage of the term, at the 'semantic core' (Froeyman, 2014) of digital practice in the sector, shaped by its choice to be responsive to technological change, but also building from a professional ethic of reflective practice and accessible provision. Crucially, it is proposed here that it has been the role of accessible design (in particular the design of digital with disability in mind) that has acted both as a key informant and agitator of this change, but also the practice through which this development can most usefully be seen. The discussion proposes not just how the concept of the museum's 'digital user' has remained in motion, but, moreover, that this motion - this making, and re-making of the term - serves witness to changing and evolving conceptualisations around accessible digital design, and, indeed, around the very idea of the museum itself. We are left, ultimately, with an original modelling of 'user' (and 'use') that is not only a means through which to understand our sector's past, but to articulate its on-going practice.

Biography

Dr Ross Parry is Associate Professor (Museum Studies) and Deputy Pro-Vice-Chancellor (Digital) at the University of Leicester, UK. He is also one of the founding Trustees of the Jodi Mattes Trust - for accessible digital culture. Currently, Ross is leading a major £0.6mn national project (2017-2020), funded by the Arts and Humanities Research Council, and working with a network of 17 institutional partners, to develop a digital literacy framework for the UK museum sector. Previously, he was one of the team of nine academics whose submission to the national Research Assessment Exercise in 2008 produced the highest proportion of world-leading research in any subject in any UK university. In 2005 he was made a HIRF Innovations Fellow for his work on developing in-gallery digital media, and in 2009 was made a Tate Research Fellow. Ross is the author of 'Recoding the Museum: Digital Heritage and the Technologies of Change' (Routledge 2007), the first major history of museum computing, and in 2010 published 'Museums in a Digital Age' (Routledge). He has two co-edited volumes to be published in 2018: 'Museum Thresholds: the design and media of arrival'; and 'The Routledge Handbook of Media and Museums'.

Prof Daniela Petrelli, Sheffield Hallam University

Holistic design to bridge the gap between digital and material collections

Abstract

Museum and cultural heritage institutions tend to consider their material and digital collections as distinct with the result that the visitors experience is often fragmented with digital subordinate to material and offered as an “add on”. As technology can now be seamlessly integrated and the transition between physical sites and online content made transparent and connected, new opportunities arise for institutions to consider the material and the digital as part of the same asset and the visitors’ experience as transmedia, e.g. the experience starts online, then becomes physical in the visit that may include digital touch points, it continues online, possibly deepening individual interests fostered by personalised services or social media.

To make the most of this physical-digital interconnection and fluid visitors’ experience, new methods of design and evaluation need to be defined. “Holistic design”, an approach that sees the different components as belonging to the same system and influencing each other, integrate digital heritage as complementary to the material heritage. An holistic approach must involve the heritage institution (content experts) as well as other expertise such as computer science (technological aspects), design (product, installation, graphics) or communication experts (for social media). Only by simultaneously considering the many ways in which heritage can be “consumed” by visitors we can design innovative and long-lasting experiences.

I will use examples from the meSch project (www.mesch-project.eu) to show how digital and material can be integrated in exhibitions that engage visitors at an emotional level using tangible and embedded interaction to connect visitors with personal stories from the past and how each experience can become the starting point for a personalised online experience. I will reflect on co-design and co-creation across disciplines and on how multiple evaluation methods can be used to unpack and explain the visitor’s experience.

Biography

Daniela Petrelli is professor of Interaction Design at Sheffield Hallam University. She holds a PhD in Interaction Design, an MSc in Computer Science (Italian laurea) and a Diploma in Fine Arts. She started to work on digital technology for cultural heritage in 1996. Her research investigated several aspects of technology and heritage, including the first context sensitive museum guide, automatic classification of historical video archives, personalisation, tangible and embedded interaction. Recently she coordinated the very successful EU project meSch that explored the intersection between digital and material, onsite and online heritage and how design can bridge the two creating novel personalised and interactive experiences. For her research Prof Petrelli has received 11 awards and recognitions from academia and industry. She has published over 90 peer-reviewed papers in journals and international conferences.

Dr Lorna Richardson, Umeå University

‘What’s the meaning of Stonehenge?’ Digital analysis and the public reception of an iconic archaeological site

Abstract

Stonehenge is an iconic archaeological and tourist site in southern England, over 4500 years old, and set in a unique landscape. It is also a World Heritage Site, major English tourist attraction, symbol of national and regional identity, the location of ongoing archaeological research, a spiritual centre point for pagan practices, and focus for earth mysteries and New Age activity. The site has multiple roles, and is one that has received centuries of projected meanings, purposes and imaginings by antiquarian, archaeologist and layperson alike. This paper aims to use two methods of social media analysis with which to explore these multiple identities and meanings made for the site by members of the wider public.

This paper discusses the use of two digital and textual methods used by the author. The source for the data used in this piece of work were gathered from the social media platform Twitter, and a sample of public ‘below the line’ comments on English language newspaper articles about Stonehenge for the period of one year. The data collected were analysed using sentiment analysis and distant reading, with the aim of identifying patterns in language use associated with the archaeological site and its purpose and use in contemporary society. Keywords and common themes were identified from this analysis, and this paper will situate these findings against a backdrop of the authorised version of the Stonehenge narrative, such as that promoted by English Heritage, the site owners, and academic archaeological interpretations, as well as pseudo archaeological understandings of the site. It will present the possibility that the findings of this piece of work suggest that the site of Stonehenge remains a powerful draw for pseudo archaeological and mystical associations, which can be further propagated and retold, and misinterpretations can continue to be promoted, through the use of digital communications. This presents an interesting challenge to the role of the professional archaeologist and archaeological interpretation, and the future direction of public archaeology research.

Biography

Lorna-Jane Richardson is a postdoctoral researcher at Umeå University in Sweden, working in the Department of Sociology. Her work focuses on the impact of the Internet and digital forms of communication on public engagement with archaeology, both by professional archaeologists and through explorations of public reception. She is interested in the ways in which digital technologies can be new gateways through which audiences gain access to, and create, discuss and repurpose archaeological sites, data and narratives. Her work explores the ways through which digital communications support and reinforce concepts of elitism and academic and professional expertise. Her research examines how this elitism works to exclude and contain alternative interpretations of archaeological sites and material, provide platforms for heritage-related activism and facilitate alternative discourse outside the academy.

Dr Jen Ross, University of Edinburgh

Inventive methods and digital cultural heritage research

Abstract

The instrumental question of 'what works' is currently dominating research and practice in a range of fields relevant to digital cultural heritage. Researchers and practitioners need many kinds of questions, and methods, in order to engage appropriately with the rapidly shifting terrain of digital culture, to aim beyond determining 'what works' and to participate in 'intelligent problem solving' (Biesta, 2010) and 'inventive problem-making' (Michael, 2012). This talk introduces speculative methods, which encompass a range of approaches in the social sciences (Lury and Wakeford 2012), and art and design (DiSalvo, 2012), and argues for the relevance of these approaches to digital cultural heritage research. Lury and Wakeford (2012) define inventive method as research which is 'explicitly oriented towards an investigation of the open-endedness of the social world' (p.2). Speculative approaches involve envisioning *and creating* futures, to provoke new ways of thinking and to bring particular ideas or issues into focus (Ross, 2016).

Digital researchers from many disciplines find themselves seeking methodological innovation to 'resist conceding relevance, competence and expertise to actors with principally commercial interests' (Wilkie, Michael and Plummer-Fernandez, 2014, p. 81). Our understanding of practices, identities and technologies in cultural heritage settings can benefit from working with digital objects, processes and social interactions in an exploratory and imaginative way.

Drawing on the recent example of the AHRC-funded Artcasting project, this talk explores the uses of inventive method in digital cultural heritage research. The Artcasting research project explored how a mobilities perspective can provide new insights into, and strategies for, museum and gallery evaluation. The project developed, tested and assessed a new digital and mobile form of evaluation of arts-based engagement in the context of ARTIST ROOMS On Tour in the UK. The use of speculative method in the Artcasting project generated rich insights into intersections of place, movement, engagement, technology, and evaluation.

Biography

Dr Jen Ross is a Senior Lecturer and co-director of the Centre for Research in Digital Education at the University of Edinburgh. She has been working on digital learning and engagement projects with the museum and gallery sector since 2007, when she was part of the research team for the National Museums Online Learning Project, and most recently she was PI for the AHRC-funded Artcasting project. She runs the Digital Cultural Heritage Research Network (<http://dchrn.de.ed.ac.uk>), and is Deputy Director (KE) of Research and Knowledge Exchange in the Moray House School of Education. Her research interests include online distance learning, Massive Open Online Courses (MOOCs), digital futures, reflective practices, and cultural and educational institutions online.

Dr Elizabeth Stainforth, University of Leeds

Dr Rhiannon Bettivia, University of Illinois at Urbana-Champaign

Negotiating the Scalar Politics of Digital Heritage

Abstract

In this paper, we investigate the scalar politics of digital heritage through examination of the large-scale digital heritage aggregators Europeana and the Digital Public Library of America (DPLA). The term aggregator refers to an organization that collects, formats and manages digital data from multiple providers, and offers federated access to that data. Because of their distributed structures, aggregators complicate heritage debates around local, national and transnational scales, especially those that assume the recuperative potential of heritage projects in specific localities among particular audiences. Such geographical scaling is troubled by the decentralized logic of these entities, which are not spatially bounded in the same way. Europeana and the DPLA are relevant case studies for further consideration of these issues. We start by outlining our approach to scale, informed by the work of Michel Foucault and Tony Bennett, and then go on to discuss Europeana and the DPLA in more detail with reference to the policy and strategic planning documents of each project. In their technical development, there are clear parallels; both began as digital libraries and the data model created by Europeana was reused and adapted for the DPLA, allowing for the functional mass aggregation of collections metadata. However, there are also questions to be asked regarding what is lost in the process of standardizing data, and the relative losses and gains of large-scale interoperability. We argue for a critical and reflective approach to these questions, and one that makes visible the political and ethical decisions taken in developing interoperable standards. This paper provides a way into thinking about the multiple scales at which digital heritage aggregators operate, about their technical dimensions in relation to the representation of local, national or transnational heritage and, more broadly, about the methodological implications of scale in the context of digital heritage studies.

Biography

Elizabeth Stainforth is a Visiting Research Fellow in the School of Fine Art, History of Art and Cultural Studies, University of Leeds, UK. Her research investigates digital heritage cultures and the contemporary significance of memory for cultural heritage in the wake of digital technologies. She has published in the journals *Museum and Society*, *Cultural Trends* and *The Journal of Curatorial Studies*, among others, and is one of the editors of *parallax* journal. She also works for Leeds University Library, where she has been involved in projects with the Digital Content and Repositories Team, Special Collections and the Stanley & Audrey Burton Gallery.

Rhiannon Bettivia is a Postdoctoral Research Associate at the University of Illinois, Urbana-Champaign, USA. Her research examines the politics and discourses of the growing sub-field of digital preservation and investigates new methodologies for preserving the interpretive framework for digital materials. She has published in the *International Journal of Digital Curation* about her work on the IMLS grant *Preserving Virtual Worlds II*, among other publications and presentations in the fields of information science, digital humanities, and communications. She also teaches in the areas of digital preservation, metadata, and the role of libraries and information in society in the School of Information Sciences at the University of Illinois.

**Prof Naiara Vicent, Ursula Luna, Aroia Kortabitarte and
Dr Jurgi Kintana, University of the Basque Country (UPV/EHU)**

Obtaining the sample for the analysis of heritage education apps developed in the Basque Country (Spain)

Abstract

Mobile software applications (apps) have become a prominent element of today's society. Cultural and educational agents are incorporating them into their activities, and the offer of apps for heritage spaces is increasing. The aim of our study is to know and analyze the use of ubiquitous technology in heritage education activities developed in the Basque Country (Spain), with the analysis of the offer of apps being a part of the research. To obtain the sample to be analyzed, the "OEPE method" has been followed, through the adaptation of this method to heritage apps. Thus, first, an intensive search for heritage education apps developed and/or linked to the Basque Country has been carried out. Subsequently, these have been subjected to a series of exclusion and inclusion criteria that have allowed us to limit the final sample from which the relevant analyzes will be carried out. In this proposal of poster, the steps followed to obtain the final sample will be explained in detail.

Biography

Naiara Vicent obtained a Bachelor Degree in History from the University of the Basque Country in 2000, a Post Graduate Degree in Museums and Education in 2001 and a Graduate Diploma in Archaeology from 2001–2003; both from the University of Barcelona. Her work experience has been linked simultaneously to the archaeology and heritage industry and the education sector, participating in several projects relating to the teaching of history and archaeology. A highlight of her career includes her work as a technical officer at the Art and History Museum of Zarautz, where she is completing her thesis to evaluate a learning program using mobile technology within the heritage context. She is currently a professor in the Department of Teaching Social Sciences School in the University of the Basque Country.

Ursula Luna obtained a Bachelor Degree in Art History from the University of the Basque Country in 2009, a Master Degree in Education and Museums in 2012 from the University of Murcia and a Master Degree in Secondary Education in 2015 from the University of the Basque Country. Her work experience has been linked museums, heritage industry and the education sector, participating in projects relating to the education programs in non-scholar contexts. She is currently a professor in the Department of Teaching Social Sciences School in the University of the Basque Country.

Aroia Kortabitarte obtained a Bachelor Degree in History specialising in prehistoric archaeology from the University of the Basque Country in 2009, a Master's Degree in Quaternary Sciences (in 2010) and University Master's Degree in Teacher Training, Secondary and Upper Secondary Education, Vocational Training and Language Teaching (in 2012) both from the University of the Basque Country. Her occupational experience is related to leading and carrying out educational programmes related to Roman archaeology and history, teaching assistant at a Frostruphave college (Denmark) for 6 months, and lecturing at the University of the Basque Country in the Department of Teaching Social Sciences School for two years. She is currently teaching history and geography in a High School and doing a doctoral research in evaluating the educational value of the Apps and the educational actions driven in social media platforms.

Jurgi Kintana, bachelor (1999) and doctor (2006) in History by the University of the Basque Country (UPV / EHU). Visiting researcher at the University of Oxford (St Antony's College) (2007-2008). Currently (since 2015) he is a lecturer at the University of the Basque Country, in the Department of Didactics of Social Sciences. Before joining the university he worked as a professor of history and geography in several schools, as well as in the elaboration of didactic materials of history directed to the primary and secondary education. His research deals with topics of cultural history, heritage and didactics of social sciences.

Tone Wang, Museum of Cultural History, University of Oslo

From digital access to digital sharing: “Amundsen's Gjoa Haven Collection 1903-1905”

Abstract

This digital sharing portal <http://www.khm.uio.no/gjoahaven/> is a collaborative effort. It was created through collaboration between the Nattilik Heritage Centre in Gjoa Haven, Arctic Canada, and the Museum of Cultural History in Oslo, Norway. It brings together objects, photographs and documentation, related to the collection of traditional Inuit material culture made in Gjoa Haven 1903-1905, by Norwegian explorer Roald Amundsen. The collection has been the axis collaboration between the two museums has revolved around, and we have engaged with it in different ways. In 2013 some objects from the collection were returned to Gjoa Haven, to become part of the displays at the Nattilik Heritage Centre. In 2017 the digital sharing portal was launched.

Through the portal people have access to the entire collection of artefacts and photographs, the materials currently held in Gjoa Haven as well as those in Oslo. A lot of effort has gone into translating and adapting the materials for digital sharing, both in Gjoa Haven and in Oslo.

Objects in this collection have been available on the Internet for years. There was no point in creating a portal that replicated digital access. In this presentation I want to explore the difference between digital access and digital sharing, some of the challenges we met and worked through - and some that very much still remain.

Biography

Tone Wang is a social anthropologist at the Museum of Cultural History, University of Oslo. She has worked extensively with Roald Amundsen's Gjoa Haven collection, both at the Nattilik Heritage Centre in Gjoa Haven, in the museum in Oslo and on digital platforms.

Meredith Whitfield, University of Manchester

Y Tho: Unpacking Art Memes as Participatory Intertexts

Abstract

Over 4 million people online participate in making and using Internet memes of art: they interact with works of art, many of them museum objects, building and remixing new manifestations of art in online venues.

I explore how art memes operate as intertexts, exploring their semiotic and hypersignificant characteristics alongside their implications for cultural production. By combining ethnographic and visual analysis methodologies, I illuminate how works of art and memetic captions operate as intertexts, connecting the sociocultural experiences of art and meming.

By examining trends in what types of art dispose themselves to meming, I will build the argument that art memes operate by using the artwork's text as visual shorthand and that visual characteristics within memes, akin to Amit and Pinchevski's "operative signs," prompt interaction. By understanding memes as objects with "read/write" functionality, not "read-only" functionality, I unite visual analysis and ethnographic strategies as equally necessary for a holistic understanding of art memes.

My ethnographic research examined memespaces as venues for consumption and cultural practice: identifying who reads and writes memes, where, and through what infrastructures has significant bearing on what they look like. I will discuss my findings about memes' move from message board vernacular to social media consumable as a key factor in the propagation of art memes, raising important questions about how digital infrastructure, community norms, and conversational keying affect how memes are made and understood.

I will conclude with a discussion about reflexivity and criticality while practicing digital ethnography, building on Ryan Milner's idea of web content as "'blandly global."

Biography

Meredith Whitfield is a recent graduate of the MA programme in Art Gallery and Museum Studies at the University of Manchester, where she developed research interests in digital interpretation, informal learning, and public memorialisation. A digital consultant and freelance researcher, she hopes to pursue further research on the relationship between digital behaviours and the future of interpretive strategy.

Dr Chiara Zuanni, Independent Researcher

Transforming digital data into heritage: social media posts in the museum

Abstract

This paper will explore how digital data inform current heritage-making processes, both in adding new layers of interpretations to pre-existing heritage and in creating new future heritage. Social media have added a new dimension to the public sphere, and user-generated data can become new sources for researching public understanding of heritage. In this sense, it could be argued that this data's relevance is not limited to the evaluation of digital engagement with cultural institutions, but it should also be considered how social media data will inform future histories of knowledge and of audience development. The paper will draw on a series of case studies from UK and Italian institutions to shortly discuss possibilities and limitations of this approach.

At the same time, history and heritage are also increasingly produced directly online: the circulation of news, and the debate around current events, that happens in the digital sphere constitutes a substantial part of the 21st century heritage. Thus, the paper will argue that such data has a liminal position in museums, as auxiliary information and as a new type of collection. Drawing on the satirical example of the recent case of the pop-up "Donald J. Trump Presidential Twitter Library" in New York City (produced by 'The Daily Show'), I will consider how this data can enter and be represented in an exhibition.

The paper aims to unpack the notion of digital data as heritage data, and its role in cultural institutions. It will begin by exploring how museums and archives are harvesting, preserving, and displaying digital data, especially when working across different platforms. Subsequently, I will argue that the recognition of digital data as historical sources shift their position in the museum, and consequently it prompts a reconsideration of the approaches to, and taxonomies of, digital data in the museum sector.

Biography

Chiara has a degree in Classics and a MA in Archaeology from the University of Bologna, and a PhD in Museology from the University of Manchester. During her PhD, she worked as a research assistant on digital heritage projects, as an engagement assistant, and as a teaching assistant in Classics, Ancient History, and Archaeology. Her first postdoctoral position was at the Institute of Cultural Capital (a joint initiative between the University of Liverpool and Liverpool John Moores University). More recently, she was a research fellow at the V&A museum working on the 'Universal Histories and Universal Museums' project. Her past and current research focuses on the history of museums and their role in constructing and mediating knowledge in the public sphere. She is particularly interested in the impact of participatory methods and digital media on museums, their audiences, and on the creation of heritage knowledge.

List of Delegates

Ruth	Adams	King's College London	UK
Ahmed	Alshanqiti	University of Glasgow	UK
Esteban	Arévalo	University of Manchester	UK
Maria	Arias	University of Manchester	UK
Guyda	Armstrong	University of Manchester	UK
Gabi	Arrigoni	Newcastle University	UK
Kostas	Arvanitis	University of Manchester	UK
Amelia	Bain-McCullough	University of Manchester	UK
Sophia	Bakogianni	Open University of Cyprus	Cyprus
Christoph	Bareither	Humboldt-University of Berlin	Germany
Izzy	Bartley	Leeds Museums & Galleries	UK
Chiara	Bartolini	University of Bologna	Italy
Tessa	Bell	University of Canberra	Australia
Rebecca	Blackwood	Thirteen Ways	UK
Chiara	Bonacchi	UCL Institute of Archaeology	UK
Jean	Boyd	Jean Boyd University of Gloucestershire	UK
Rachel	Broomhead	English Heritage	UK
Nazli	Cabadag	Humboldt University	Germany
Paolo	Campetella	Roma Tre University	Italy
Carlotta	Capurro	Utrecht University	The Netherlands
Anna	Catalani	University of Lincoln	UK
Laura	Chaillie	University College London	UK
Erik	Champion	Curtin University	Australia
Luigina	Ciolfi	Sheffield Hallam University	UK
Caroline	Claisse	Sheffield Hallam University	UK
Katherine	Clough	Newcastle University / V&A	UK
Sarah	Colley	University of Leicester	UK
L. Meghan	Dennis	University of York	UK
Thomais	Dermati	Newcastle University	UK
Cath	Dillon	UCL Qatar / Independent Researcher	Qatar
Francesca	Dolcetti	University of York	UK
Alyssa	Dowler	University of Manchester	UK
Rongying	Duan	University of Manchester	UK
Maria	Economou	University of Glasgow	UK
Cimeon	Ellerton	The Audience Agency	UK
Sophie	Everest	University of Manchester	UK
Marta	Fanasca	University of Manchester	UK
David	Farrell-Banks	Newcastle University	UK

Sarah	Feinstein	University of Manchester	UK
Alathea	Fernyhough	University of Manchester	UK
Bryony	Fisher	Big Heritage	UK
Petrina	Foti	Rochester Institute of Technology	USA
Harald	Fredheim	University of York	UK
Abigail	Funnell	University of Manchester	UK
Areti	Galani	Newcastle University	UK
Jane	Gallagher	University of Manchester	UK
Marco	Galli	Chilli Studios	UK
Qian	Gao	University of Stirling	UK
Haidy	Geismar	University College London	UK
Nikita	Gill	University of Manchester	UK
Susana	Gonzalez	Chetham's Library	UK
Megan	Gooch	Historic Royal Palaces	UK
Helen	Gorrill	University of Edinburgh	UK
Althea	Greenan	Goldsmiths University of London	UK
Richard	Grove	University of Oxford	UK
Huw	Halstead	University of York	UK
Julian	Hartley	Dim Sum Digital	UK
Dario Henri	Haux	University of Lucerne	Switzerland
Anisa	Hawes	Victoria and Albert Museum	UK
Wendy	Hitchmough	Historic Royal Palaces	UK
Jessica	Hoare	Cardiff University	UK
Nicola	Horsley	Data Archiving and Networked Services (DANS)	The Netherlands
William	Illsley	CHEurope / University of Gothenburg	Sweden
Tracy	Ireland	University of Canberra	Australia
Stuart	Jeffrey	Glasgow School of Art	UK
Chloe	Jeffries	University of Manchester	UK
Olof	Karsvall	The Swedish National Archives	Sweden
Orsalia-Eleni	Kassaveti	National and Kapodistrian University of Athens	Greece
Sarah	Kenderdine	École Polytechnique Fédérale de Lausanne (EPFL)	Switzerland
Jurgi	Kintana	University of the Basque Country (UPV-EHU)	Spain
Amelia	Knowlson	Sheffield Hallam University	UK
Kalliopi	Kontiza	The National Gallery	UK
Aroia	Kortabitarte Egidio	University of the Basque Country (UPV/EHU)	Spain
Marta	Krzyzans	UCL Institute of Archaeology	UK
Sofy	Lam	University of Manchester	UK
Åsa	Larsson	Swedish National Heritage Board	Sweden
Sam	Legg	University of Manchester	UK

Frances	Liddell	University of Manchester	UK
Ursula	Luna	University of the Basque Country (UPV/EHU)	Spain
Antoinette	Maget Dominicé	University of Lucerne	Switzerland
Nevena	Markovic	The Institute of Heritage Sciences - Incipit CSIC	Spain
Paul	Marty	Florida State University	USA
Marco	Mason	University of Leicester	UK
Katie	Mills	University of Manchester	UK
Colleen	Morgan	University of York	UK
Rosalind	Morris	The National Archives	UK
Brian Patrick	Moss	Newcastle University	UK
Judith	Mottram	Lancaster University	UK
Giulia	Muti	University of Manchester	UK
Lukas	Nohrer	University of Manchester	UK
Artemis	Papadaki	Bellerbys College	UK
Georgios	Papaioannou	University College London Qatar	Qatar
Juhee	Park	University College London	UK
Gillian	Park	University of Manchester	UK
Ross	Parry	University of Leicester	UK
Joshua	Pendragon	University of Manchester	UK
Daniela	Petrelli	Sheffield Hallam University	UK
Wei	Qiao Boo	University of Manchester	UK
Clare	Ravenwood	Loughborough University	UK
Arran	Rees	University of Leeds	UK
Lorna-Jane	Richardson	Umeå University	Sweden
Jen	Ross	University of Edinburgh	UK
Patrizia	Schettino	Università della Svizzera italiana (USI)	Switzerland
Alessandro	Schiesaro	University of Manchester	UK
Fernanda	Segreto	Brandenburg University of Technology	Germany
Stephanie	Seville	University of Manchester	UK
Jacqueline	Shaw	Sheffield University	UK
Lawrence	Shaw	University of Winchester	UK
Hannah	Smyth	University College London	UK
Elizabeth	Stainforth	University of Leeds	UK
Egle	Straksyte	Loughborough University	UK
Sally	Tucker	University of Manchester	UK
James	Vail	University of Manchester	UK
Giasemi	Vavoula	University of Leicester	UK
Lynn	Verschuren	University of Glasgow	UK
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