Position papers
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1 Digital curation in the classroom

Charles Crook

I approach this meeting’s central theme (museum communication) as an outsider. The central theme of my own work is educational practice and its appropriation of new technologies. However, I feel this interest does involve a synergy with three sub-themes of our present meeting: in particular, creative learning, community engagement, and organisational partnerships. I would like to think that something of what I say here also might touch upon the final sub-theme (“museum strategy development”). It might do that by identifying points of engagement for schools and museums to further develop their conversation of shared interests. What in particular I wish to consider is how the now pervasive digital fabric of schools can create a resonance with the aspirations, design traditions and strategies of museums. I will review my own approaches to this possibility with two examples of empirical work that explore it.

As a confessed outsider I am bound to approach any audience of museum professionals with some anxiety. To get oriented, I consulted the definition of “museum” - as formulated by the Museums Association. It declares: “Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society.” I am not sure if there is definition of “schools” that enjoys the same authority and I am certain that there is no useful definition that would be widely endorsed. However, any attempt at such defining would surely share with the Museum Association a concern for learning, curation, and access. Arguably, schools do pretty well on the first concern but struggle with the second and third. So, there is little constructing of their own “collections” and few means to make more widely accessible the fruits of the knowledge that their students do build.

How can the cultural wealth of museums flow more readily into schools such that their knowledge building practices acquires some of the qualities of curating? An obvious obstruction is the obligation on museums to “safeguard” and “hold in trust”. Inevitably, experience of their “artefacts and specimens” will be based on schools making visits to them – rather than being visited by them. Perhaps this means a dominant research tradition has been one of defining and refining the visitor experience. However, there are ways in which artefacts and specimens can be made more accessible – while continuing to hold them “in trust for society”. One family of methods involves exercising the mediational theme discussed in the present conference.

Recruiting the digitally-mediated artefact to a curriculum

I wish to give one illustration of how digital tools can stimulate inspiration and learning from precious artefacts, without threatening their safety. However, the point of the example is not simply to illustrate the strategy of digital mediation – arguably there are plenty of such illustrations already in place – it is more to encourage reflection on how such mediation needs to be carefully scaffolded for those who are invited to engage with it. The example comes from an EU-funded project (3D-Pitoti) that concerned the analysis of petroglyphs (prehistoric engraved rock art) in Northern Italy. Environmental artefacts of this sort cannot even make it to museums, never mind classrooms. So the problem of making them an inspirational part of European cultural heritage is particularly acute. The 3D-Pitoti project developed 3D visualisation techniques for the micro-analysis of these engravings. But also macro techniques with a different aim. That aim was dissemination. Doing so through creating a digital simulation of walking in the Camonica valley where these engravings are found.

Myself and colleagues were interested in how schools contemplated the prospect of engaging with this form of cultural record via the mediation of digital technologies. We discussed with teachers two formats. One was available and made visible: namely, 2D visualisation techniques involving an augmented reality procedure whereby rich information (text, video, animation) on individual petroglyphs could be accessed by ‘reading’ pictures of a petroglyph with a tablet device. A second visualisation mode needed to be described and imagined as it was still under development. This involved a headset that furnished a virtual reality experience of (collaboratively) walking within the Val Camonica.

Both forms of mediation had significant appeal to the (primary/elementary) teachers we engaged with: they were enthusiastic about the potential of such experiences for stimulating cross-curricular insights and
Generated a long list of subject openings. One of our interests was in exactly how (mediated) access to such artefacts was coordinated with curricular obligations and aspirations. In reviewing these conversations, we borrowed the vocabulary of Piaget’s schema theory of cognitive integration to describe two broad strategies apparent in the teachers’ reactions. An ‘assimilative’ approach was more practical and instrumental in having the artefacts exercise or rehearse some curricular acts of knowing or skill. For example, remarking on how a rock art engraving could serve as a device for exploring measurement or angle in mathematics. The artefact is input to, or an example for, an existing disciplinary practice and thereby consolidates it. An accommodative approach, however, involved mobilising material from the curriculum that would generate or extend meaning and knowledge about the artefact. It would be more integrative than descriptive, allowing movement towards new creative insights, opening up new meanings.

The teacher discussions tended to be dominated by more assimilative relationships. This is perhaps not surprising given that accommodating curricular practices to these artefacts (and thereby stimulating new knowledge) depends on more teacher confidence with subject-specific and cross-curricular themes, getting outside the curricular comfort zone and gaining familiarity with rock art resources. This suggests that teachers would benefit not just from accessing the rich illustration and explanation of 2D and 3D visualisations, but also acquiring guidance and support on how to position such visualisations in an enterprise of wider interdisciplinary inquiry. To extrapolate: the important task of rendering precious and inaccessible artefacts more vivid depends not just on the development of sophisticated digital tools. The heritage sector also faces the challenge of supporting teachers in the thinking that is necessary to recruit curricular frameworks that help interpret and locate these unfamiliar artefacts and practices. Otherwise they risk playing a rather passive (or “assimilative”) role in curricular niche.

In short, my first theme of digital curation in classrooms concerns responsibilities to scaffold the processes whereby imported artefacts can become targets for inquiry through exercising established disciplinary frameworks. My second theme concerns curation not so much as an analytic resource but as an active and local practice of commemoration. From this perspective, schools learn from museums not so much in relation to principles of inquiry and analysis but more in terms of appropriating the attitude or traditions of organised curation.

Digital formats for local curations

Although schools, like museums, are knowledge building organisations they are not much inclined to the business of “collect, safeguard and make accessible”. Yet they need not be denied such opportunities on the grounds that curation must involve “artefacts and specimens” that are iconic or somehow prohibitively rare and expensive. Communities can curate their local worlds. And schools are communities that may be very well placed to act as focal points for both the creation and dissemination of commemorative records. Digital photography is a natural medium for this purpose. But it is hardly an original solution to the challenge of creative curation. The ubiquitous digital image needs to be annotated and interpreted if it is to be a rich source of local commemoration.

To this end I have been exploring the potential of the ‘sound photo’ as a format for curated artefacts that capture something of life as lived at particular places and particular times. In this format individual voice (or interpretative conversation) is attached to images and they are archived and organised as historical records. Schools are rather poor at the ‘leaving of tracks’ and this sound photo format seems a convivial and engaging way of doing so.

Yet schools are not the only knowledge-protecting communities for which this may be a useful technology of curation. We are exploring its potential within contexts where different generations can each give their own interpretation of the same local “artefact or specimen” through voicing its image. However, this version of digital curation comes with its own challenges – not least in the contexts of early education. Despite the rhetoric of this being a visual generation living in a visual age, we do not find confidence (or “literacy”) around the creation of visual meaning to be that well developed. And where such meanings that are found must be interpreted, neither do we find confidence in narrating (or “oracy”). However, cultivating such confidence is merely a further reason for pursuing these ambitions of digital curation.
In sum, I have identified two approaches to mediated, digital curation – at least as it may be realised in the school and perhaps in like-minded communities beyond schools. In both cases there are challenges of implementation. But these are challenges that involve more deeply coordinating the agenda of schools with the agendas of the museum.

Bio
Charles Crook is Professor of Education at the University of Nottingham and Director of the Learning Sciences Research Institute. He has a doctorate in experimental psychology from Cambridge University, has been a Research Fellow at Brown and Strathclyde Universities, and taught at Durham and Loughborough Universities. His main interest is in the psychology of human development, with special concern for young people’s use of new technologies. He wrote one of the early books on what has become known as “computer supported collaborative learning” and has published empirical papers in most of the major journals of developmental psychology.
Museum cross-sector partnerships and the challenge of communicating climate change in science and natural history museums in the United States

Karen Knutson

Introduction
In 2012, 150 natural history museum professionals, curators, educators and researchers gathered in DC to plan and develop a research agenda for natural history museums in the 21st century (Watson & Werb, 2013). It was a complex task and over the two-day meeting many subgroups and breakout discussions worked on different aspects of the agenda. One group self-organized and decided that before a research agenda could be created, they would first need to establish some common ground for thinking about the values and beliefs that the disparate parties in the room might agree on. At the end of the meeting this group presented a statement on the assets, public value, and potential of natural history institutions. They called it the Declaration of Interdependence.

February 15, 2012
DRAFT

Statement on the assets, public value, and potential of Natural History Institutions

“The Declaration of Interdependence”

The natural history institutions of the world affirm that:
Humanity is embedded within nature and we are at a critical moment in the continuity of time. Our collections are the direct scientific evidence for evolution and the ecological interdependence of all living things. The human species is actively altering the Earth’s natural processes and reducing its biodiversity. As the sentient cause of these impacts, we have the urgent responsibility to give voice to the Earth’s immense story and to secure a sustainable future.

WHAT WE ARE
We are places, people, collections, and facilities that connect the natural world and humanity in the past present and future. We are trusted and we are in the public trust.

DISCOVERY-We make discoveries and create knowledge
We create new knowledge, collect, study
We are a collection of experts
Our collections continue to be global resources of knowledge.

PRESERVATION-We are the keepers of the record
We are the places where our culture houses its treasures
We are a bank for information for the future
We are the archives of a changing world

AUDIENCE-We are learning institutions
We disseminate, inspire, and inform
We tell the whole story
We connect art, science, nature, place and culture
We are a resource for people to take action
We are a meeting ground for science and culture
We are where children learn about the diversity of the natural world
We are places for public deliberation.

CREDIBILITY AND PUBLIC TRUST
We are owned by our public
We are trusted

WHAT WE NEED TO BE
We recognize these tenets and our assets as the basis for a framework of collaboration and action:
We will be places where the complex challenges of the future are met in an open, honest, inclusive, and rational way.
We will be welcoming to all people, not just our traditional constituents.
We will actively engage our assets, science, and stakeholders with local and global nature.
We will be the storytellers of humanity’s origins; the interface between humans and nature.
We will reinvent ourselves to become trailheads for lifelong journeys of nature and science exploration.
We will be agents of social change and embed people in nature by giving them new eyes with which to see the world and to understand their responsibility.
We will work together.
We will catalyze a sustainable future for the planet.
We will do this before the end of the century.

The statement was impressive and created a buzz. It resonated well with earlier presentations that underscored the critical moment in time in which we are now situated, and the vital need for extreme change should humanity wish to survive into the next generations. This document generated by practitioners and researchers has a tone that underscores issues of timeliness and impact and concern for audiences. In short, the document affirms the concern and commitment of museum practitioners to the highest possible goals for their work.

I was quite taken by the work of this group, and much later have found myself continuing to return to think about it and those who created it. In my presentation I explore the nature of museum communication in relation to this declaration document, some climate change exhibitions, and a recent project on climate change education in museums that I’ve been working on for the last four years. Museums are at an interesting juncture, looking for ways to be agents of change while still living within the bounds of institutional frames that value the repository of artefacts and visitors through the gate. The climate change example points towards a troubling shift in museum practice, but perhaps also suggests a potential way forward to a more energized and relevant community-based focus for museum work.

The case. CUSP: A project to energize climate change education in informal learning organizations
The project is called the Climate and Urban Systems Partnership (CUSP), and it is one of the National Science Foundation funded project in the Climate Change Education Partnership program. These grants were created to establish a coordinated national network of regionally- or thematically-based partnerships devoted to increasing the adoption of effective, high quality educational programs and resources related to the science of climate change and its impacts. Each CCEP is required to be of a large enough scale that it will have catalytic or transformative impact that cannot be achieved through other core NSF program awards. In the case of CUSP, museums in four north-east cities (New York, Philadelphia, Pittsburgh and DC), are serving as network hubs to disseminate climate change educational materials. In this model, networks are convened by the museums of community-based groups with varying relations to climate change or environmental interests. These networks, called Urban Learning Networks (ULNs) work on different kinds of climate change education projects that relate to their constituents and use museum-based resources.

This project emerged in response to test recent educational studies that posit that climate education may have to leverage community-based learning and move broaden beyond individual messaging. Research suggests that identity, social norms, and community influence are consistently predictive variables when
examining environmentally friendly behaviors and that these are often much better predictors of behavior than knowledge (Shandas & Messer, 2008; Allen & Crowley, in press). Instead, CUSP programming is designed around three concepts: framing for relevance, participation and systems thinking.

Program work of the ULNs is directed and framed to be relevant to issues of interest and concern to specific community organizations and neighborhood-level groups. What do city residents care about? What are the issues, topics, and activities with which residents personally and socially identify? CUSP calls for a targeted, coordinated approach that relies on connecting personal passions to urban systems and how they will be impacted by a changing climate.

A bottom-up approach has been taken by focusing on the general public rather than key decision makers because the long-term success of any adaptation or mitigation efforts will rely greatly on what the average person does. The project will focus on local impacts matching the need for personal engagement. Taking that into account, participants should be urban residents who have common values and shared interests who gather in a space that can be occupied by multiple organizations simultaneously.

By using this approach, information about climate change and its potential impacts will be available through a broad range of learning experiences, providing multiple reinforcing opportunities to engage in quality climate science learning across each city. The result will be a relevant, city-wide approach to improving the state of climate literacy in the urban environment.

Each of the four cities in the project is utilizing a different communication strategy, with the idea that in the final years of the project, cities will adopt approaches from other partner cities.

1. Digital tools are focused around the development of an online mapping system that will allow ULN members to use the interests and concerns of the digital, virtually-based audiences they serve to select appropriate overlays for the map. Our New York museum partner has created a user-generated map of the city that incorporates layers about city infrastructure, flood plains, and green roofs and garden projects. ULN members will also integrate the map into their programming, from uploading citizen science data to sharing stories and pictures via the map.

2. Festival kits are used by ULN organizations to tap into festival-goers’ curiosity. Our Pittsburgh museum partner has developed kits offer hands-on activities related to topics such as the temperature effects of alternative roofing materials, the carbon footprint of mass-transit versus car-centered transit systems, and urban stormwater management. With kits distributed among the booths of several community organizations, visitors will have multiple opportunities for interactive learning that catalyzes conversations about climate change and their city within a short time frame.

3. Mass media and neighborhood-focused activities are being developed by the Philadelphia museum partner. Programs currently active within the pilot neighborhood (at libraries, recreation centers, railway stations, and so on) are developing a shared set of learning goals to be incorporated into the broad set of programs offered. Within the pilot neighborhood, each of these educational assets will provide a coordinated set of climate learning opportunities within a three-month period.

4. A community of practice focused hub, based in DC is developing professional development opportunities for its ULN members, in order to help these community-based organizations develop skills around communicating climate science to their audiences.

The project extends our work in museums in a couple of important ways. Rather than our traditional view of learning taking place at the individual or family level, as we do in a museum experience, the project looks at learning at a community-level. Project activities may involve the museum being one step removed from the actual learning situation, and work with ULN members on how to facilitate these learning activities has important ramifications for learning at the ULN level.

The project asks museums to take on a leadership role in the creation and support of ULNs, fostering new connections, sharing, and hopefully, new communities of practice in the process.
And finally, and most importantly perhaps, the project seeks to leverage the resources of museums and informal learning organizations to catalyze new discussions about climate change. By focusing on sending resources out of the museum, the project asks museums to think differently about their potential role in the communities in which they live. As the project team grapples with new modes of communication, they encounter issues that raise issues about some of our foundational beliefs about museum communication strategies and the role of museums in our society.

The case in context: Climate change in museums
Working as the learning science partner on the CUSP project, I’ve had some time to explore the issue of climate change education in the United States and particularly as it’s represented in museum contexts. The last few years have proven to be a very exciting and challenging time for museums. A time that reflects rapid changes in societal conversations about climate change and global warming, but that also I argue, suggests some powerful and potentially detrimental changes to the museum sector.

In the first few years of the CUSP project, the conversation was very much about the public’s belief in the concept of climate change. The Six Americas study was first published in 2008 and measured the public’s beliefs and attitudes around climate change (Leiserowitz, Maibach & Roser-Renouf, 2008). Segmenting results they came up with six categories of beliefs: the alarmed, the concerned, the cautious, the disengaged, the doubtful, and the dismissive. During the first years of our project, conversations focused on how to get the doubtful and dismissive on board. Yet with several large scale weather events (ie Hurricane Sandy), the public conversation shifted rapidly. And the reality is that science museum goers were probably already among those who were more likely to believe in the issue. One study suggested that:

- 90% of frequent visitors say that global warming is happening, compared to 67% of occasional visitors and 60% of non-visitors;
- 66% of frequent visitors understand that global warming is caused mostly by human activities compared to 48% of occasional visitors and 50% of non-visitors;
- 65% of frequent visitors understand that most scientists think that global warming is happening, compared to 47% of occasional visitors and 36% of non-visitors;
- 58% of frequent visitors understand that a transition to renewable energy source is an important solution compared to 46% of occasional visitors and 42% of non-visitors (Leiserowitz & Smith, 2011).


Climate change is a science issue that is relevant to audiences that is timely and that is (was) controversial. The example helps us to understand changes to the mission and perspective of museums, to the notions of what visitors want and expect from museums, and the role of professionals in the institutions that present them. Why is it that these exhibitions have been poorly received, in spite of museums’ great commitment to exploring important societal issues. In addition, as Robert Janes (2009) has pointed out, museums are rarely acknowledged in global discussions of climate change, environmental degradation, the inevitability of depleted fossil fuels and the myriad local issues concerning the well-being of particular communities. How do we reconcile the incredible dedication and belief in the power of science and the wonders of museums and museum learning, with the apparent lack of impact and muteness of this work?

References

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**Bio**

Karen Knutson is Associate Director of UPCLOSE (University of Pittsburgh Center for Learning in Out of School Environments). Her work focuses on understanding visitor learning and organizational practices in museums, and how academic disciplines are designed and enacted in informal learning environments. Currently projects include museum networks of practice and innovative messaging, interest development, family learning in natural history museums and on new spaces for teens in inner-city libraries. She has published in a range of journals including Studies in Art Education, Nordic Journal of Digital Literacy, Curator, Science Education, Visitor Studies, and the Journal of Educational Change.
3  The visitor as mediator

Angela McFarlane

Lone visitors to museums are in a minority, most prefer a more social experience and some have little choice as when in a group visit. Collaboration is a prominent research topic amongst those who study learning, and the evidence base for the efficacy of interaction to enhance and deepen learner engagement is significant. The shared experience of a museum affords an opportunity to exploit inter-visitor exchanges to mediate experience. This paper will explore three approaches to designing interpretive strategies designed deliberately to increase the opportunities for visitor-visitor mediation and consider the implications of each. The methods used include mobile digital devices, print media and a student ambassador model.

The affective-informative axis

The design of the visitor experience in museums is rarely left entirely to those with specialist skills in that area. Those responsible for the museum will have views; the visitors themselves will have a perspective; funders are never neutral. The result can be that an experience is expected to deliver everything to everyone, or at least many things to a wide variety of visitors. In my experience there are common tensions in museum design, the affective-informative dilemma and the current-new visitor conflict. Here I want to explore the first of those with particular reference to visitor curiosity. As director for public engagement at a major international visitor destination I had one rather simple aim – to provoke and feed visitor curiosity. I hoped to do this by encouraging them to look harder at what they encountered, to think and talk about what they saw. This simple set of ideas was at the heart of the interpretation strategy for three years during which there was a marked uplift in visitor satisfaction – although that may not have been a causative relationship!

Where visitor engagement is concerned there can be an assumption that this must support some kind of learning, often characterised as informal, although this is itself a contested term. For me an important distinction relates to control. Formal learning generally follows an agenda not set by the learner, informal learning is entirely at the learner’s whim. Motivation is likely to be affected as a result. In either case, when the objective of those behind the exhibit is to ‘educate’ there is inclined to be an emphasis on transmission of information and possibly an opportunity for some kind of visitor re-transmission as evidence of ‘learning’. Less emphasis is placed on experiences which are purely affective. Un-interpreted exhibits are rare – at least in contemporary installations. At Kew there was on-going dissatisfaction that the treetop walkway lacked explanatory signage. The argument that the experience of walking through the canopy, at roof height, was designed as an assault on the senses to be experienced in full and not as an opportunity to stop and read texts fell on deaf ears. It was only lack of funds that prevented the structure from becoming a rather expensive notice board.

And yet the field of behavioural psychology will tell of the significance of moments of experience that trigger lasting memories and even behavioural change. Can there be any doubt of the power of the one-off, sensually rich, powerfully affective experiences that stay with you long after the visit - that cause the world to tilt slightly and one’s perspective to be changed irrevocably? There are anecdotal accounts of professional scientists having such early experiences in science museums - I have memories of such myself and these definitely contributed to my decision to study science at university. The hallowed museums of South Kensington and wet Sunday afternoons have a lot to answer for.

Designing for curiosity

When provoking or feeding visitor curiosity, exhibits and experiences where the written interpretation is restricted can act as a powerful stimulus. The good old diorama, where objects such as stuffed animals tools, weapons, clothes even figures are placed against a scenic backdrop, with little or no explanation beyond name labels, has been shown to provoke a high degree of visitor discussion. And getting people talking about what they see is surely a good first step to getting them to think about it, which combined with a powerful affective reaction looks like a good place to start when seeking to create memorable moments.
But given that the epic and inspiring experience is not always possible or permissible, if getting visitors talking is our aim, how might we design interventions which provoke conversation?

Starting with the cheap and cheerful, we can think about how we present the content on the printed interpretation. When this is clearly focussed on the object in front of the visitor, invites them to observe closely through asking a question, this serves as a hook for visitors to begin a conversation about the exhibit. It is useful if the answer to the question is discernable through observation. We found particularly with family groups that parents and carers found this helpful when interacting with children around exhibits. They liked content that helped them talk to their children about the exhibit and which could make them seem ‘smart’. So nothing complicated here in theory – although it can be challenging to achieve and is not as common as one might expect.

Digitally enhanced interpretation can add additional material to enhance the wow factor – especially where content is available on film which shows aspects of the exhibit not observable at the time. Trials with this technology at Kew found a range of effects on visitor behaviour, perhaps the most surprising of which was an increased interaction between visitors around the content on the device.

Face to face experiences are perhaps the ultimate – can there be anything to quite match the experience of an exhibit in the company of an engaging and knowledgeable person who can tell you stories – ideally based on personal experience – and answer the questions this excites in you? But providing such a service is only ever likely to be a minority experience. The artists, scientists, curators, conservators who have this first-hand knowledge will always be in short supply. Enthusiastic volunteers can add to the pool but even they are not on tap. An interesting scheme, devised by within the Enterprising Science programme based around the Science Museum in London, involves a school visit design that specifically ‘trains’ young people to become the guide for a visit by their family to the museum. Placing the young person in the position of ‘expert’ seems to be having a remarkable impact on them and how they are seen by their family.

How do you know if it has worked?

Inevitably one of the greatest challenges is finding out if a particular exhibit or interaction has had the outcome for visitors that we hoped for at the design stage. There is particular interest in the UK in evidence of museum based experiences on learning. The Wellcome Trust Science Learning+ programme and the BP funded Enterprising Science project both seek evidence of the educational benefits of science museum experiences. The notion of ‘science capital’ developed by Prof Louise Archer at King’s College London is interesting here. Akin to other forms of cultural capital it describes the range of science related experiences a person may have, from knowing or having family members who are scientists to reading about science in the media. Amongst this landscape the experience of museum visits is seen to add to science capital; those with higher science capital are proposed to be more likely to be open to science and presumably more open to science based education and even careers. However the studies recognise that to really understand if indeed the museum based experiences that are being researched, in some cases specifically designed for the project, may have effects which are hard to distinguish and may not have discernible effects for a long time. For example if the museum experience of a school trip sparks an interest that leads to a career in science the lag time could be 20 years. Even then, the causal relationship between the events is impossible to prove given all else that will have happened in between.

In her PhD research, Amy Seakins took an innovative approach to collecting evidence of impact on visitors. She interacted with members of the public before and after they joined the audience of a live encounter with scientists at the Natural History Museum in London. She noted their use of language before and after the ‘shows’. If there was an increase in the use of specialist terminology and a more sophisticated syntax for example in questions, this was taken as evidence of the session having made an impression. Again it would be necessary to carry out a longitudinal study to know if any effects were lasting, but it certainly took the evidence a step further than self-report data.

Overall then it seems we are left with a situation where designing museum based experiences with a particular outcome for visitors in mind is as much an art as a science. We could perhaps move towards the evidence based end of that spectrum through consideration of behavioural psychology at some level.
But even if we were to become more successful, in terms of influencing opinions and behaviours, we would be very unlikely to know for sure. And so we continue to rely on visitor feedback and ultimately visit numbers as the primary measure of whether or not an exhibit or even entirely museum is a success.

References

Bio
Professor Angela McFarlane, BSc, PhD, PGCE is Chief Executive and Registrar at The College of Teachers. Following a doctorate in biological sciences, Angela began her career as a science teacher. She designed and directed highly successful educational development and research projects at Cambridge, Bristol and as Director of Public Engagement and Learning at the RBG, Kew.
Angela’s work addresses digital technologies in education, and has included the development of a series of commercially successful software tools. Authentic Learning for the Digital Generation, was published in August 2014 by Routledge. She holds visiting chairs at King’s College, London and the University of Bath, is an adviser to a 3 year research and development project looking at learning in Museums – Enterprising Science - and a member of the ESRC seminar series Building a Collaborative Learning Research Agenda for Natural History Museums. In November 2014 she was one of the expert contributors to the Nordic and Baltic Prime Ministers’ Northern Futures Forum.
Seeing the big picture: Museum communication and visitor experiences

Jan Packer

This paper discusses the place of museum communication as one of many factors that influence the visitor experience. It addresses the question “What is the relevance of mediated museum communication within the grand landscape of museum studies and museum practice?”

What is the grand landscape?
Our view of the landscape depends on where we are standing, and which way we are looking. Sociologists, anthropologists, historians, artists, architects, educators, marketers, managers – all look from different perspectives, and therefore see different landscapes. In this paper, I am looking from the perspective of a psychologist – one who is interested in individual human thoughts, feelings and actions. And so my view of the landscape places the individual visitor in the centre of the frame. As we zoom in on the visitor, we ask, “Why are they at the museum? What are they doing, feeling, or thinking? What will they take away with them?” Everything else in the landscape, including mediated museum communication, has the potential to make an impact – large or small, positive or negative – on the visitor experience.

Why is the visitor experience at the centre of the landscape?
In the landscape that I am looking at, the visitor experience is central. People are coming because they want an experience. It is the experiential dimensions that they look forward to, communicate with others, remember and value about their visit. Perhaps they want to feel something; to be moved or changed in some way; to be able to learn from their experience. Perhaps they want an experience that will enrich their lives; that will give them a memory to take home; a story they can share with their friends or family over dinner; a new way of seeing the world; or a new way of understanding themselves.

Pine and Gilmore (1999) proposed that experiences are a new economic offering, distinct from goods and services. They argued that businesses of all kinds, from restaurants and shoe stores to insurance companies, banks and airlines, need to ‘stage’ experiences in order to win the hearts and minds of their customers. This is not about entertaining customers; it’s about engaging them in a personal way. Although Pine and Gilmore’s discussion of experience focuses on its effectiveness as a business strategy, their insights into visitor needs, and the ways these might be satisfied, are valuable for museum settings.

Understanding what visitors experience is an important focus for visitor research and for museum practice, because it gives attention to the aspects that are important to visitors. These are not necessarily the same as the aspects that are important to the museum or the message the museum is trying to communicate. In order to communicate their message, and accomplish their mission, museums need to be aware of the responses they elicit within visitors.

What is the visitor experience?
Although commonly considered the core product offered by visitor attractions such as museums, the visitor experience has proved a difficult construct to both define and measure. The visitor experience is an individual’s personal and subjective response to the activities, settings or events they are offered. Visitors are actively involved in narrating, interpreting and transforming their impressions, thus constructing (or co-constructing) their own experience. The experience can be shaped or enhanced, but not controlled by those who design these offerings.

Experiences occur on a continuum from mundane and commonplace to peak or transformative – some experiences are ordinary and some are extraordinary. Visitor experiences, by definition, happen outside of the daily routine and away from the home environment, and so are expected to be noticeably different
from everyday life, either because of their intensity, or because of their framing as a reportable story (Carù and Cova, 2003). An experience does not need to be emotionally intense to be memorable. Bruner (1986) argued that the act of narration can transform the everyday into the extraordinary. Thus as visitors articulate and re-tell the story of their visit, they add new meanings and interpretations, emphasising the non-routine or unexpected aspects.

What are the components of the visitor experience?
It is often taken for granted that visitor learning, however broadly it is defined and measured, is the only important outcome of a museum visit. This is not surprising given the conceptualisation of museums as informal or free-choice learning environments. However, learning is only one of many experiences available to, and valued by visitors. Visitors also value physical experiences (hands-on interaction and immersion in a novel environment); hedonic experiences (excitement, amusement, just having fun); sensory or aesthetic experiences (appreciation of beauty); emotional experiences (feeling joy, pride, nostalgia or empathy); restorative experiences (feeling refreshed, restored, thoughtful, reflective, calm and relaxed); relational experiences (significant interactions with companions), introspective experiences (engaging the imagination, developing and testing out new identities); spiritual experiences (reverence, transcendence or communion with nature); transformative experiences (inspiration, fulfilment); and other cognitive experiences (exploration, discovery, making choices).

The visitor experience has more facets than is often recognised by museum professionals, and contributes to meeting a broad range of human needs (Falk and Dierking, 2013; Silverman, 1995). According to Packer and Ballantyne (in press), the visitor experience is like a multifaceted gem. Cutting the gem allows the unique features of each facet to be observed and appreciated, without separating the parts from the whole. The different facets reflect light at different times and in different ways, revealing an infinite number of combinations of light and colour. Similarly, Pearce (2011) likens the visitor experience to an orchestra – each individual instrument contributes to the totality of the experience, their contributions increasing or decreasing at different times to achieve a musical effect.

What else is in the landscape?
Surrounding the visitor experience are the many factors that influence which facets will take precedence at a particular time and place for a particular visitor. These include the external elements that are offered to the visitor – the physical and social environments that they enter; the activities and events that they participate in. This is where mediated communication finds its place in the landscape. It offers the opportunity for an experience. But there are other factors. The internal elements the visitor brings to the museum – previous experiences, interests, expectations, and motivations – these influence how the visitor perceives what is offered, what he or she will attend to, and how he or she receives the communication. Thus every visitor has a unique, personal and individual experience.

How do museums communicate?
Visitors tend to perceive their experience as a whole, although there are many elements that contribute to it. From the visitor’s perspective, the museum communicates in many different ways, across all stages of the visit. The museum communicates through its website and signage, its accessibility, its architecture, the welcome and orientation it offers, the rest rooms, seating areas, retail outlets and cafes it provides. Depending on the type of experience a visitor is seeking, some of these may be the most important forms of communication they encounter. Museum environments and visitor services, as well as the exhibitions, programs, technologies, activities and events offered, can be intentionally designed in order to increase the likelihood that particular types of experiences will emerge. Often, however, many of these indirect forms of communication are left to chance.

The museum communicates its own identity through these indirect or non-verbal cues – Is it a place that welcomes strangers or only the initiated? Is it a place of awe and wonder where countless treasures are stored, a place of peace and quiet offering a respite from the stresses of modern life, or a place where children can freely explore? Does it care about the needs of all its visitors? Visitors receive all of these messages as well as (or perhaps even more clearly than) the messages the museum is intentionally
communicating. When all of these messages – both intentional and unintentional, direct and indirect – are aligned, the visitor will most likely have a satisfying experience.

What makes a museum experience meaningful and memorable?
Visitors are not passive recipients of museum communication, but are actively pursuing their own personal agendas, trying to meet their own needs, and constructing meanings about themselves (Silverman, 1995; Rounds, 1999). When visitors make their own personal meanings or narratives from the communications they receive, they are constructing an experience that is likely to be both meaningful and memorable. This process of construction and reconstruction can continue long after the visit, as the narratives are shared and reshaped over time.

How then can museum staff structure environments in order to facilitate or encourage satisfying experiences? Perhaps an emerging and important role for new technologies in museum communication is to empower visitors to create their own experiences, preserve their experiences in time, and share their experiences with others. In this way, their experiences become “extraordinary” (beyond what is usual) or “remarkable” (worthy of notice or attention). Some people might use smartphones and social media to do this. Others will prefer to rely on more traditional modes of storytelling. Either way, the museum can provide the raw materials, and a little encouragement, for visitors to engage in self-mediated communication. To take Bruner’s (1986, p.17) observation regarding the relationship between experience and its expression, and apply it to museum visitation, it might be argued that “one measure of the success of [a visit] is the story that is subsequently told about it”.

References

Bio
Associate Professor Jan Packer is a Research Fellow in the University of Queensland Business School, Australia. She is part of a small team of researchers working in the area of tourist behaviour and visitor experiences. Jan’s research focuses on applying principles from educational, environmental and positive psychology to understand and improve visitor experiences at natural and cultural tourism attractions such as museums, zoos and aquariums, botanic gardens, national parks, ecotourism and wildlife tourism attractions. She has over 70 refereed publications in the areas of visitor studies, informal learning, environmental education and higher education.
Prospecting postdigital museum communication
Ross Parry

The agility of mediated museum communication
A product and construct of their times and places, museums have always adapted to their changing world. Museum history shows them responding to shifting political contexts and to developing social settings. They react to alterations in the demographics of their audiences, as well as changes to their environment. They are shaped by the prevailing ideas and the philosophical climate around them. And they choose new ways of working within evolving technological landscapes. Far from a staid institution, fixed in shape and habits, the museum, in actuality, when viewed in a broader historical scope, is a study in cultural and intellectual change.

It is this agility and responsiveness that enables the museum not only to find new ways of framing learning opportunities (inside and outside of its precinct), but allows even the definition of learning itself to be explored. It enables the museum to afford myriad types of opportunities for different communities to engage, with varying degrees of authorship, ownership and active participation. It is this inherent plasticity that allows the museum to select new platforms and channels for its communication, and even, when necessary, to restructure itself, its organisational shape and its very modes of operation.

Another adaption that we are witness to today relates to how the museum sector and the museum academy conceptualise the scope and qualities of museum communication - particularly digital communication. These, I would argue, are changes that relate to: repositioning ‘mediated museum communication’ within the subject of museum studies; the characteristics of future museum communication research; and where, today, we find might look for our thought leaders.

The place of mediated museum communication
First, I would suggest, we are today witnessing a fusion between what were once distinct and divergent discourses around museum communication and education on the one hand and digital media on the other.

Traditionally, within the subject of museum studies, at least within the first three decades of its fifty-year history, there was a separation between ‘communication’ and ‘media’ (particularly digital media). Museum communication was closely implicated with and allied to the revolution in museum education that took place (in practice and in the academy) during the 1980s. The term and discourse of ‘communication’ was, consequently, invariably appropriated by and related to ‘learning’, and the powerful case that generation of museologists and curators made for the unique educational role of the museum. ‘Media’, on the other hand, had a lineage (in practice and in scholarship) that aligned, instead, more closely with the advent of computer-based technology, particularly within the provision of collections management. The ‘new media’ had since the 1960s (though initially termed ‘automation’ and ‘computerisation’) been applied largely to inward-facing processes of documentation and records management, rather than outwardly to public engagement and experience.

It was only during the 1990s with the rise of more integrated in-gallery digital media and, more conspicuously, with the advent of the Web, that these divergent areas of ‘communication’ and ‘media’ finally became overtly connected. Now more than just a machine for information management, digital media was now also an environment and tool for the museum’s learning mission. Suddenly, to reflect on museum communication was (amongst others) to consider the experience an audience could have online at a distance or that a user could have locatively as a flâneur accompanied by the museum, or (more latterly) as a connected visitor with their own device arriving at the venue, able and inclined to interact digitally within the museum’s physical environment.

However, from divergent to convergent (from separation to connection), we see perhaps today another phase in the development of ‘museum communication’ and ‘museum media’ – what we might call a fusion between the two. Today’s progressive museology, after all, declines to relegate media behind the primacy of the object. Instead media can (like an object) be authentic, media (like an object) can define a museum experience, and media is that upon which the experience of the museum object is reliant. Increasingly we acknowledge today the defining role that mediated communication has always had throughout the museum’s history. Over time, the museum has been shaped by its media and forms of
mediated communication – the cabinet, the gallery, the label, the case, the catalogue, the interactive, the website, the app. Moreover, today we appreciate the museum as a unique media environment (complex and multi-modal), and the museum, itself, as a unique medium.

Essentially, within our latest formations of museum studies and museum practice, the subject of ‘mediated museum communication’ now assumes and consumes the digital, rather than being adjacent to it.

The characteristics of mediated museum communication

In the next three to five years there are undoubtedly areas of investigation to which this reconstituted and revitalised subject area of ‘mediated museum communication’ (or just ‘museum communication’) is likely to be drawn. Some subjects - particularly with respect to digital - will remain hugely magnetic, demanding the attention of practitioners and scholars alike. For instance, a good demonstration of the extended horizons of the new museum communication, social media research is likely to explore further not only ‘reach’ and ‘impact’, but push on into the realm of activity over which the museum has less, if any, control; that is, the museum narratives that audiences build and own themselves, the activities that the museum does not initiate, the removed use (re-use and mixing) of online museum content. Similarly, a strong example of the media and platform agnosticism of the new subject of museum communication, research into augmentation and alternate reality will continue to be irresistible, blending the actually real with the ideally real (the present with the virtual). Likewise, the pull of Big Data research (inheriting the long history of museum information management) as well as the Internet of Things and 3D Printing (both interrogating the museum’s on-going relationship with materiality), are all for the time being at least likely to prove unavoidable - with good reason - for the area of museum communication.

But looking beyond these specific nodes and project areas, there are more general characteristics of this new research domain that are already emerging, and that the subject might do well to retain. Museum communication would, for instance, benefit from resisting universal narratives around media, communication and digitality, and instead continuing to expose local difference by situating studies within different cultural settings – working from the valuable principle that both ‘museum’ and ‘media’ are culturally contingent, as area variables such as levels of connectivity, digital literacy and freedom of expression.

Museum Communication will also benefit from not limiting itself to the traditional theoreticians of museum communication (that align closely to the established discourse on museum education), or those more general theories concerned principally with media change and digital adoption and revolution. The next generation of digital media research, for instance, has an opportunity to look instead to a wider panoply of media and communication studies theories, concepts and models – frameworks that help us, for instance, to consider ‘literacy’, ‘trust’, ‘ethics’, ‘authenticity’, ‘atmosphere’, ‘emotion’, rather than simply ‘adoption’, ‘change’ and ‘impact’. One subtle consequence of this reformed subject of ‘museum communication’ drawing from a more established and mature body of media and communication studies theory is that future research might be in a position to then reason more deductively. For many years, with digital media in particular being a new area of practice and research for the museum, larger conclusions and generalisations have needed to be all too often extrapolated from local evidence and specific examples inductively.

The partnerships of mediated museum communication

The study and development of mediated museum communication will require (and is already requiring) more varied types of expertise both inside and outside of the academy. As media technologies continue to develop and diversify, and as the range of academics connected to this extending subject continue to broaden, and as the media of museum communication is understood in the context of much wider media landscapes and cultures of use, so partnerships for collaborative research and practice are necessitated.

And it is here that the findings of the recent research into sector collaboration, such as the UK’s CATH project (www.cathproject.org.uk), are perhaps instructive. Studies such as CATH (funded by the Arts and Humanities Research Council, as part of its ‘Creative Economy Knowledge Exchange’ programme) have
Ross Parry

evidenced the value of partnership between the ‘triple helix’ of public, private and non-profit organisations. In the case of CATH, it was examples of small cultural organisations (including museums), small and medium-sized enterprises (mostly digital creatives), and university-based academics (inside, but mostly outside of museum studies) that populated 19 brokered ‘triplets’, each supported by the project with a small amount of seed funding to develop rapidly a digital prototype. Despite perceived barriers by the partners around differences in working language and ‘bottom lines’, as well as around commercial concerns (such as a loss of IP), studies such as these are also revealing the numerous positive motivations from these sectors to become involved in such collaborative research and development. As well as benefiting from the sharing of technical expertise and the collective leveraging of new sources of funding, partners (at least in the CATH evidence) are being motivated and rewarded by the prospect of harnessing potentially new business models and modes of working, by experiencing new supportive environments to develop prototypes, and by the disruptive innovation afforded by the partnership within which creative and novel ideas can be generated.

When both the practice and research of mediated museum communication is forming these new types of ensembles, then the pool of expertise is widened, and – perhaps more significantly – the constituency of potential thought leaders within the subject is extended. Vision for the future of the subject, its research and its defining ideas, can come from a more diverse set of perspectives.

Future action

As we continue to acknowledge and reflect upon a museum sector after the digital revolution, and recognise and accept a condition in which digital is normative rather than disruptive, assumed rather than adopted, we are mindful to the implications this state of the ‘postdigital’ has on our practice and research of museum communication.

The prospect, as we formulate future action, is of an evolving language, a widening scope a new thought leadership, and (even) altered reasoning. For the subject of ‘mediated museum communication’ there will, in other words, be value in widening the view of museum media as a frame for (or just a component of) an experience, to viewing museum media as experience in itself. In not just pursing research into museum digital media, but in involving digital (and digital thinking) into museum research more widely. In rethinking the typically inductive reasoning around (especially) digital media communication, to allow more confidently and more sagaciously for reasoning that can operate more deductively from broader principles. In extending the subject’s constituency from museum studies scholars and museum practitioners, to an ensemble of talent and expertise that is (by default) multi-disciplinary and multi-sector.

This is museum practice that will be even more open, collaborative and circumspect. And this is the research that will be holistic in its thinking, creative in its theoretical and methodological approach, and influential (beyond its own subject) in its outcomes. This, in short, will be ‘Postdigital Museum Communication’.

Bio

Dr Ross Parry is a specialist in digital heritage and Senior Lecturer in the School of Museum Studies at the University of Leicester, UK. He is a former chair of the Museums Computer Group, in 2009 he was made a Tate Research Fellow, and is currently Chair of Trustees for the Jodi Mattes Trust (for accessible digital culture). He is author of ‘Recoding the Museum’ (Routledge 2007), the first major history of museum computing, and in 2010 ‘published Museums in a Digital Age’ (Routledge). Set within his work on the ‘postdigital museum’, he is currently researching a history of illusion, artifice and the imaginary in the museum.
Democratising the museum: Why we need to develop vocabulary for museum engagement

Pille Pruulmann-Vengerfeldt

The museum institution has been constantly evolving to meet the needs of the society around it. From the upper-class cabinets of curiosity to the educational facilities of the middle classes to the innovative ways of connecting to the marginalised groups, the museums have played and are playing different roles in society. Today the roles of the different museums can also be conflicting. The stability oriented, backward looking and past-related socialisation can be often in conflict with the forward looking, relationship building and complex topics negotiating modern knowledge institutions that museums are. Add to this the changing positions of the museums in leisure and tourism sector or educational sector and you see how different demands from the different roles can make museums struggle to meet all the expectations.

Previously, Pille Runnel and I have outlined some of the conflicting demands of the museums in relation to Bourdieu’s notion of three fields – cultural, economic and political (Pruulmann-Vengerfeldt and Runnel, 2011). Add to these conflicts the addition of new media formats and ways of engaging with the outside world and the roles and functions of the museum become even more unstable and in demand of constant update.

Often, when a new medium comes to play in the society, the death of the older ones has been heralded. However, if the previous mediums have a distinct place in the ecology of people’s everyday lives, then the repositioning to meet the changing requirements can be help to reinvent the whole industry/field. Moving image of the film and cinema can be a good example here, as the death of the cinema has evolved into building forever more grand 3D-4D experience centres around the world.

Similarly, the museums are in need of reinventing it position in relation to the whole society and many of them are great at doing so. However, often we see museums struggling with the sense of being overwhelmed with the changes, lack of resources and knowledge contribute to the sense of doom. Reinventing the museum space needs new knowledge and one way of bringing such new knowledge can be partnerships with different academic fields. I personally feel that the media studies can here be a wonderful outside contribution. Being in the constant state of changes, media studies has learned many different ways of focusing and adaptation. From the audience studies perspective, I feel that looking at the people, the recipients of the messages or the participants in the conversations is a great way to anchor the forever changing and unstable world. Thus, instead of trying to guess what is the next great gadget that will turn upside down the previous communicative environment, I feel that making sense of the relationships between the museums and its publics can be of great help and is of utmost importance both to the academic and practitioner world.

I really believe that we do not know enough about the relationship museums have to their people. When Pille Runnel, Krista Lepik and I came up with the pyramid of potential relations with the museum and its people, the key question that remained unanswered was how people move between the different levels of engagement. We distinguished between public, audience, visitor, user and participant, with great awareness that each of these keywords comes from very different disciplinary background (Runnel, Pruulmann-Vengerfeldt, Lepik 2014). But they do also account for different approaches in museum relationship to the society in general. And a lot is at stake in the process naming, because the name, the label you give to your conversation partner, does account for the different treatments. And in practice, the names can have different connotations in theoretical language as well as in everyday practice.

To bring an example from the democratic role of the museums, participant is one of those interesting, theoretically over-laden concept that we have been working with in our past museum communication project. The concept which in many different cases is difficult to grasp in practice as the connotations of participant in museums can be very different. For instance, in everyday language, I participated in an open-air museum well-advertised craft day which was meant to market museum to larger population, where the aim was to educate me of how things were made in a different era. Because it had a very hands-on approach, then the theoretical terminology would be that I interacted with the museum, however, for everyday language, I participated. From theoretical point of view, what I did, had no impact on the
museum as an institution. I just got to amuse myself and feel engaged, but I had no impact, I did not contribute to anything. As you can see, we use a number of different words to account for the same event and each of those words gives a slightly different colouring and slightly different approach from the museum people making the activity part of the working process of the different museum departments even. These differences can be so small that in everyday dealings we might not notice them. At the same time, they do have an impact on how museums and people relate to each other and in the longer run, this does make a difference.

One of the vital differences it makes is related to the different public roles museums have and their expectations in relations to how these public roles can best be served. To bring just one example, together with the changing environment, our understanding of education and how people learn has changed as well. This means that when we learn from educational sciences, how people actually accumulate new knowledge, we will need to reassess also how we impart the knowledge in museums. And we need to reconceptualise the relationship between museum and learner. And the same goes to other disciplines governing the multitude of relations people have with the museums.

In her upcoming doctoral thesis: “Conceptualizing of Engagement Modes: Understanding Museum – Audience Relationship in Latvian Museums” (Lotina, forthcoming), my student Linda Lotina has looked at different relations museums can have with their people, drawing them together under the concept mode of engagement arguing that no mode of engagement is superior to the others. Rather, they fulfil different aims and museums should strive for a rich engagement repertoires from which they can choose appropriate modes of engagement for different purposes.

One of such purposes is the notion of democracy that needs to be democratised. The museum as a public institution has important role to play in society. While believing that democracy is the best of many state governing options we have, we also need to admit that democracy is not inherently in human nature. It needs to be learned and one needs to be socialised into democratic behaviour. Teaching about democracy and how to be democratic, can both be seen as a vital role for a museum institution. And for that we need a repertoire of modes of engagement that will help museums to fulfil this role.

As Lotina (forthcoming) in her theses starts with mapping the different modes of engagement in Latvian museums, we do first need to understand the possibilities that are used in different museums across the globe. Thus mapping and systematisation exercises are called for. In addition, however, I would also like to call for more action research, where museums are pushed to change their practices, to actively seek for new opportunities for different ways of engaging with their audiences. The museum theory should actively seek out to other fields from which to be inspired to try new things, but it should do so together with the practice of museum making. Museums as knowledge institutions are used to making sense of artefacts, stories and complicated relationships. Every now and then, this knowledge and sense making capacities could also be turned inside to makes sense of themselves. To make sense of their own practices, their own artefacts and relationships. Understanding museums as communicative institutions should be more than just mapping existing ways of doing and understanding. This also means theory-led practise in actively seeking new ways of doing things.

As any research, this will not come without a potential of failure. And I think it is very important for museums to try and also fail sometimes as with new, experimental approaches to engagement, we cannot and will never be able to play safe all the time. The notion of action research requires combination of resources from museums and academics and is overall very resource intensive (Pruulmann-Vengerfeldt, Tatsi, Runnel and Aljas, 2014). But for the participating institutions, the rewards are also great. It does generate partnerships between the academics and the practitioners, which I believe are of immense value to everyone involved. It also helps to generate new partnerships for the museums in general. The object of such participatory research could always be about searching for new modes of engagement to enrich the repertoires of the museums. Hence the partnerships should always engage new audiences, visitors or participants to the museums.

Museums are great institutions which have coped with changing societal demands for quite some time and will continue to do so. Museums, together with other memory/knowledge institutions have also the greatest potential for being a learning, self-studying, experimental and open institutions. I call to focus the
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studying to the relationships museums have with their people. And I call for finding new names and inventing new relationships to museum people.

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Bio
Pille Pruulmann-Vengerfeldt is a professor in the University of Tartu, senior lecturer in University of Malmö and a part-time researcher in Estonian National Museum. Her interests are related to internet and social media privacy, internet user typologies, user-friendly online spaces as possible venues for participation and applications for public engagement. In her studies she is combining museum studies with classic academic audience research and technology studies. She is vice-chair of the Audience and Reception Studies Section of ECREA. Her publications include articles in First Monday, Journal of Ethnology and Folkloristic, Journal of Baltic Studies, Journal of Computer Mediated Computation and several chapters in edited volumes. She has also edited two museum communication books: Digital Turn and Democratizing the Museum both published with Peter Lang.
Museums as creative incubators

Angelina Russo

Background

Over the past thirty years and most recently since the rise of social media in the mid-2000s, museums have demonstrated their commitment to participatory learning, particularly in the development of digital literacies which contribute to the semi-formal and informal learning environment\(^1\). This has occurred in tandem with the notion of public value and community well-being facilitated by museums being factored into major policy goals alongside health, education and the economy (Ander et al. 2011a). Museum exhibitions which illustrate well-being\(^2\), mental health\(^3\) and disenfranchised youth (Thomas, 2013), demonstrate that museum leaders have considered the contributions which they make both within and beyond the museum and are seeking ways in which to extend these social practices.

While museums increasingly explore issues of societal importance in partnership with their communities, their ability to act as agents of social change has been challenged by what Sandell asserts is an over-riding notion that many museum professionals harbor ‘considerable ambivalence and uncertainty’ toward the idea ‘of social change as a goal for museums’(Sandell, 2007, 192). Many museums have looked to their internal offerings to develop strategic approaches to participation, (Bradburne 2007) yet as Cole asserts “museologists have addressed the need for museums to be more effective agents of social change for decades yet concrete examples are relatively few and far between” (Cole 2012).

Yet, the capacity for curators to work with communities in innovative ways has been well noted in curatorial scholarship (Witcomb 2003). Scholars have addressed how participation lends weight to community engagement (for example, Kidd, 2011) while others have sought to interrogate the value of museums engaging in well-being initiatives (Ander et al. 2011b)(Association 2013), and still the question of how museums might emerge as leaders in this process through a re-positioning of their own practices remain unanswered. Central to this is what Kidd (2011) describes as a perception that participation, particularly with non-traditional audiences, is often centred around “difficult topics”, which themselves are seen as “rather too challenging in their heterogeneity”.

As a way forward, Lasser (2012b) suggests that non-traditional community engagement approaches can yield results which contribute to social change and social good. He offers that interrogating societal norms often requires the use of unconventional approaches; a challenge which is frequently addressed by engaging audiences in processes of collaboration, participation and co-creation to ensure that multiple viewpoints and narratives are acknowledged (Lynch 2011).

Critical inquiries into the relationship between community engagement, curatorial practice, long-duration participatory processes and exhibition design are now required if we are to position creative learning within the complex 21st century informal and semi-formal learning environment. It is within this context that the discussion of museums as creative incubators is undertaken.

Museums as creative incubators

In the very near future, museums will need to engage with a radically transformed learning environment; one where educational considerations of digital literacy extend to access and familiarity with high level technological fabrication tools such as 3D printers, robotics and 3D modelling based applications. The extent to which this transformation affects their pedagogical underpinnings has yet to be fully determined. What is certain though is the need for the museum to build mutual understandings in community; inspiring creative engagement and learning through the opportunities it makes available to its audiences.

\(^1\) [http://www.dream.dk/?q=en/content/welcome](http://www.dream.dk/?q=en/content/welcome)
\(^2\) [http://blogs.ucl.ac.uk/museums/2013/05/23/can-museums-improve-your-health-and-wellbeing/](http://blogs.ucl.ac.uk/museums/2013/05/23/can-museums-improve-your-health-and-wellbeing/)
\(^3\) [http://www.newinc.org/about/](http://www.newinc.org/about/)
Museums as Creative Incubators

One way in which this could occur can be seen at the New Museum in the USA which, in 2014 released a new facility called NEW INC⁴: it’s the first museum-led incubator. This not-for-profit platform offers co-working space, incubators, accelerators, connections to networks, privileged access to curators, to collection materials, to partners. Central to this is the idea of the museum as a cultural incubator, embedded in education and working with the community. NEW INC positions itself as a cultural institution and a civic leader: it establishes forums, drawing people together to discuss big issues in the world. It offers an example of how we cultural institutions can catalyse engagement in the world and participation in culture to educate through making.

The participant ‘maker’ taps into deep theoretical constructs, particularly in the American psyche where the idea that technological advancements and an individual’s mastery of those advancements were mechanisms towards self-actualisation and personal achievement. In Australia those utopian ideals catalysed in the narrative of making do, with the physical manifestations in the Men’s Shed, a form which has recently received attention as a space for community engagement and wellbeing, a particularly male-dominated form of making, where women are not necessary included because it’s a very special men’s space, and men’s skills and knowledge sets could be passed on.

The pedagogical underpinnings of the NEW INC initiative (with its focus on art-related start up and digital artists) suggests a focus on STEAM education; that is, educational approaches which use Science, Technology, Engineering, the Arts and Mathematics (STEM) as access points for guiding student inquiry, dialogue and critical thinking (EducationCloset 2014).

Recent research suggests that for STEM education to be successful, a fundamental shift is required in how we conceptualise learning (Robelen 2011). STEAM is described not simply as adding the Arts to STEM; but rather as, “fundamentally changing education to incorporate the experimentation and exploration that is at the heart of effective education” (Rose, Smith, and Ryan 2011) STEAM education often uses variants of the to the studio model of learning and practice; a shared work space much like the research laboratory in the sciences, where the ability to “make” (in whatever disciplinary form that might entail) is critical to the establishment of shared understandings of pedagogy and subsequent learning outcomes (Gross and Do 2015). Central to this environment is the ability for students and educators to co-create through reflective processes occurring around the iteration of concepts and outcomes.

Such iterative processes often require multidisciplinary knowledge, particularly when exploring non-discipline specific problems. Using STEAM education processes has the potential to deliver advances in STEM learning and teaching. Therefore, in considering the museum as creative incubator, it would appear that partnerships can be created which explore how ‘making’ and ‘tinkering’ processes contribute to broader learning in STEM education.

Made in the Museum
Emergent research across the sectors of education, museum studies, design and communication suggests that there are three central themes which would coalesce around the notion of museum as creative incubators. These questions have been formed through discussions with multiple colleagues over the past year⁵ and as a result, the author does not deem to have conceptualised them. As author of this paper I offer a critical drawing together of the thoughts and discussions into a narrative which could be offered as a way of engaging in further research into the concept of museum as creative incubator.

1 - The notion of pedagogies of prototyping - opportunities made available to audiences as they connect with the museum and experiment with new processes
This would include questions such as:

⁴ http://www.newinc.org/about/
⁵ These questions have been formed through and with colleagues including Dr Jen Ross (University of Edinburgh), Dr Ben Williamson (Dundee University) Dr Ross Parry (University of Leicester) Suzanne Miso (Queensland Museum) Dr Stuart Kohlhaagen (Questacon) Dr Lynda Kelly (Australian National Maritime Museum) Dr Narelle Lemon (Monash University), Anne-Marie Scott (University of Edinburgh) Mark Wetton (University of Edinburgh) Professor Sian Bayne (University of Edinburgh) and so many others!!
• How do we identify and document assumed and real literacies?
• What methods are used to explain the ‘maker’ process and the pedagogies which arise from it?
• How do we mobilize latent and real literacies to create pedagogies of creative prototyping?

2 - The convergence of emergent and existing literacies - a reflection on critical engagement with implicit and explicit knowledge systems
This would include questions such as:
• How do we connect with local historical (particularly industrial) narratives to re-frame traditional knowledge sets?
• What tools and processes do we establish to share existing & new knowledge as it produced?
• How do we create a multi-generational ‘confederacy of skills’ to catalyze commercial creative production?

3 - The role of citizenship in historical narratives of making
This would include questions such as:
• What types of citizens are we trying to create by reinvigorating the visceral engagement with physical objects and linking this with the breadth of digital literacy (connection, co-creation and communication)?
• How are the problems of access conceptualised and how do we come to understand the importance of them?
• What are the new models of participation and access?

The paradigm of the museum as incubator where new knowledge is formed and new outcomes are, if you like, ‘made in the museum’ suggests interdisciplinary; creative solutions; critical thinking; collaboration; infrastructure, coalescing to create new forms of engagement and a platform for co-creation and participation. It is interesting to note that early examples of museums as incubators demonstrate characteristics of what (Gibbons et al. 1994) describe as Mode 2 learning, that is, a commitment to socially distributed, application oriented, trans-disciplinary knowledge production that offers a way of both conceptualising and framing interdisciplinary problems relevant to contemporary society.

The Collaborative Arts Triple Helix (CATH) project conducted through University of Leicester and University of Birmingham provided a framework for drawing together the threads described within. Their foundational projects demonstrate the value and benefits of collaborative co-creation which draws teams of participants across sectors. It is hoped that this can form a model for conceptualising the creative learning that would make up the museum as incubator.

This paper attempts to both conceptualise and theorise a future where the museum as creative incubator allows participant to both connect with collections and create new knowledge through the act of ‘making’. In doing so it hopes to describe a pathway to the creation, production, collection and promotion of literacies with museums as trusted authoritative cultural environments at their core and ‘maker’ activities as the catalyst for the development of new forms of creative learning.

References

6 http://www.cathproject.org.uk/


**Bio**

Professor Angelina Russo is the Associate Dean Research in the Faculty of Arts and Design at University of Canberra. Prior to this she was Director, Higher Degrees Research in the School of Media and Communications (RMIT) (2010 - 2013) and a Chief Investigator in the ARC Centre of Excellence in Creative Industries and Innovation (2005 - 2011). Her research practice explores the intersections between cultural collections, media, and design. She has research partners in major cultural institutions around the world and supervises candidates across a number of different areas which are drawn together through their investigations into new modes of knowledge production in museum studies and communication design. She is recognised for the research and practice which she has undertaken in social media for museums and innovative participatory practices. She is currently developing a new stream of research which draws together design and making communities with museums.
Seeding, wonder rooms and curatorial inquiry: New forms of museum communication and learning

Mike Sharples

This paper addresses how to enable innovative forms of learning with museums. Research into the learning sciences has identified attributes of successful learning, including learning through conversation and collaboration, embodied cognition, and metacognitive awareness (Sawyer, 2014). Parallel work has identified new methods of learning in an age of digital and mobile technologies, such as seamless learning, rhizomatic learning and personal inquiry learning (Sharples et al., 2014). These are underpinned by a social constructivist theory of learning whereby people construct shared understanding of the world through active exploration and dialogue, mediated by cognitive tools and supported by expert teachers. How can this new science of learning be aligned with the role and fabric of museums as places to exhibit and interpret collections for public education and entertainment?

One approach has been for museums to extend into the online space of social media and virtual worlds, where knowledge is constructed through a democratised process of contribution, recommendation and commentary (Drotner & Schrøder, 2013). Instead of seeing knowledge construction as the preserve of experts, to be published and consumed through mass media, knowledge is created through a distributed process of continual construction and adjustment. The social learning process of, for example, Wikipedia is based upon a dynamic medium (MediaWiki software system) where knowledge is publically constructed, discussed, and refined. This distributed and visible process of meaning making aligns with social constructivist theories of learning, as well as more innovative approaches such as rhizomatic and connectionist learning. Computer-mediated methods of reputation management can add a layer of expert facilitation, by promoting and rewarding contributors, who are valued by the community, (see e.g. StackExchange.com).

The function of social media, to co-create dynamic and undifferentiated knowledge, does not sit well alongside the established role of museums as solid architectural sites for careful curation and display of lasting historic artefacts. Attempts have been made to integrate social knowledge construction into online curated exhibitions, for example with the BBC site for The British Museum’s ‘A History of the World in 100 Objects’1, where other museums, schools and members of the public were encouraged to contribute descriptions and classifications of objects that are both personally and historically meaningful. The exhibition organisers then face the difficult tasks of producing a carefully prescribed and authoritative online catalogue of definitive works, alongside an eclectic mix of personal and local contributions. This is a shift away from presenting authentic objects, towards orchestrating a multiplicity of personal and collective authentic experiences that create a distributed web of meaning making (Parry, 2013). It is a move from trust presenting to trust building.

Until recently, these activities of experience sharing and trust building have been confined to carefully-managed online spaces that are adumbrations or annotations of museum collections, or they have been conducted outside the control of museums through visitor websites such as TripAdvisor. This paper explores how learning through conversation and sharing of experience can be brought back into the museum in forms that are both empowering and subversive. It draws on the work of Juliet Sprake in ‘learning through touring’, Matthew McFall in developing a ‘wonder curriculum’ and Annika Wolff and Paul Mulholland in ‘curatorial inquiry’.

Learning through touring

The premise from Sprake’s work is that ‘learning through touring’ is haptic, such that the learner is a fully physical, cognitive and emotional participant in the process (Sprake, 2012). Visitors together create tours by moving freely around constructed spaces, creating experiences from their interactions with people, locations and objects. These experiences are built up into a shared artefact that both tells a story of the tour (as a guide for other tourers) and also creates a playful response to the physical space.

1 http://www.britishmuseum.org/explore/a_history_of_the_world.aspx
Sprake proposes three elements of learning through touring: stumbling upon, noticing, and connecting. As they stumble upon physical spaces in unexpected ways, meeting other people and talking about the things they find, visitors create narratives of their experiences. They notice some parts of the environment in ways that are signed and proposed, and others in ways that create personal meaning. Thus, touring is an act of imaginative association between the given and the found. By viewing an environment from different perspectives, visitors make cognitive and social connections.

Tour-enabled sites, such as museums or heritage sites, impose limits on the journey, restricting the making of meaning to what can be seen front-of-stage in the visitors’ areas. The un-toured spaces, that are off-limits for visitors, may show the museum as a work in progress, with more uncertainty than is shown to the public. Thus, a tour is a line of tension between a displayed environment and an unfolding story of its fabrication. Sprake has probed this tension by taking children on tours behind the scenes at museums. Her Transitional Spaces project involved a group of young people, aged 13-14 years, exploring galleries of the Victoria and Albert Museum (V&A) that were closed to the public while being re-developed for a new exhibition. Through a series of four workshops, run in cooperation with the V&A, the young people recorded their impressions of the work-in-progress and created multimedia guides on mobile devices.

Sprake terms this activity ‘seeding’: where mobilised visitors collectively create content for handheld technology that invites further incubation, cutting, or development. Both the creation of the guides and the use and extension of them at later times by other visitors are acts of learning through connection and conversation – exploring the fabric of the building, documenting the evolving exhibition, and conversing with others across time. Seeding sees the museum as a site for playful engagement with ideas in flux (Figure 1).

**Wonder curriculum**
For his doctoral thesis, McFall investigated wonder as an instigator of learning (McFall, 2014). Wonder is seen as a process of personal exploration characterised by positive affect, questioning and the motivation to find out more. As an experience, wonder progresses through phases of anticipation, wondrous encounter, exploration, and revelation. A wondrous encounter drives exploration forward, by contrast with the similar but less productive experiences of astonishment (immobile), amazement (confounded), awestruck (fearful insignificance), and admiration (subjugation).
Building on the educational theories of Pestalozzi\(^2\) (learning through active exploration of objects) and the art and craft of conjuring, he devised a ‘wonder curriculum’ for primary schools comprising eight interventions: The Magic Show; Speed Object Lesson; Wonder Hunt; Wonder Tables; The Cabinet; The Quest; Workshops; The Wonder Smash. The final part of this process was for children to create impromptu museum galleries in school classrooms, to display and promote the wondrous objects they had collected.

To credit of all concerned a great deal of effort had gone into presenting something resembling a school science fair but whose scope went beyond into intriguing areas of mystery, magic and the natural world. I was invited to examine fossils and crystals, try quizzes, play games, decipher codes, listen to music (and join in)... in short, to do and learn...It must have been a splendid learning experience. (Visitor Report by Denny Plowman, Nottingham City Museum and Galleries) (McFall, 2014, p. 178)

Following on from this work, McFall has established a permanent Wonder Room in a Nottingham school where teachers and children can exhibit objects of curiosity and wonder, and has also created a temporary Museum of Wonder within the indoor atrium of a school (Figure 2). Here, the walls are decorated with stimulating puzzles and illusions, and the partitions create a labyrinth furnished with cabinets of curiosity. School students are encouraged to contribute and display their own curios. These installations are being extended to other locations, with the possibility of a Museum of Wonder being installed within a conventional museum as a space to juxtapose curation and happenstance, taxonomy and serendipity.

Figure 2. Temporary Museum of Wonder installed by McFall within a school atrium.

Curatorial learning

The history of inquiry-based learning can be traced back to the instrumentalism of John Dewey (1910), whereby encounters with objects in the world can become instruments for knowledge forming. Learners are active agents, continually posing questions and seeking answers. Wolff and Mulholland transpose inquiry learning into a museum setting through the concept of curatorial inquiry: by organising and re-presenting museum artefacts in other contexts we come to understand their shared value and meaning. Adapting a cycle of inquiry-based learning, they propose a learning process that involves researching a topic, collecting and selecting museum content, interpreting the items of content and their connections, displaying and presenting the content and reflecting on the process.

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Discussion
The three pedagogies of learning through touring, wonder curriculum and curatorial inquiry are complementary. They do not seek to extend the museum into an online space, but to equip visitors with the means to subvert museum space through bricolage – creative and exploratory play with objects. For Sprake, bricolage comes from taking young people on tours through museum work-in-progress, encouraging them to create playful multimedia guides to content that is located within the museum but not part of its curated display. For McFall, it involves creating and extending miniature museums of wonder within institutional spaces. For Wolff and Mulholland, bricolage comes from a process of acquiring, organising and re-presenting museum objects out of their normal contexts. Bricolage is a powerful method of learning. It develops sensitivity to the properties and uses of materials, it encourages creativity by re-casting objects in new forms, and it questions the established order of things by re-classifying objects. On a more abstract level, bricolage is a continual testing of constraints and the structures within which learning can occur (Sharples et al, 2014). Too much constraint and creativity is stifled; too little constraint and the activity becomes disorganised. Where museums have become ossified, “too concerned to preserve their curatorial and communicative chastity” (Drotner & Schröder, 2013), bricolage can “penetrate the exhibition space” (Bitgood et al. 1990, cited in Meecham, 2013) with creative play of materials and ideas. Where museums are in transition, bricolage can offer a means to explore the process of human-centred design and a movement from the primacy of authentic object towards authentic experience.

Lastly, in the same way that digital experiences are becoming more embodied, for example through wearable fitness monitors, so there is a new challenge to reconnect online viewing experiences back to the physical space of the museum and its tangible artefacts. By presenting online versions of the multimedia guides from seeded tours and re-presenting artefacts through curatorial inquiry, by creating web-based museums of wonder, and by connecting learners online to live explorations behind the scenes of museums, we may find new ways to re-mediate museum communication.
References

Bio
Mike Sharples is Professor of Educational Technology in the Institute of Educational Technology at The Open University, UK. He also has a post as Academic Lead for the FutureLearn company. His research involves human-centred design of new technologies and environments for learning. He inaugurated the mLearn conference series and was Founding President of the International Association for Mobile Learning. He is Associate Editor in Chief of IEEE Transactions on Learning Technologies. He is author of over 300 papers in the areas of educational technology, science education, museum learning, and human-centred design of personal technologies.
The past decade has presented us with numerous concepts following Stephen Weil's (1999 and 2002) suggested paradigm of the new museum. Concepts such as the Responsive museum (Reeve and Wollard 2006), the Engaging museum (Black 2005), the Participatory museum (Simon 2010) are all supporting the shift away from the inward collection focus towards outward museum communication and public role for social development, education and inclusion of communities. The concept of the Connected museum (Drotner and Schröder 2013) captures the central role media have for this development, as key tools for visitor engagement, democratisation, social development and activism, and I find this concept a promising ground for further development of mediated museum communication into museum studies.

Mobile, social media and online communication has proposed a re-thinking of central concepts in museum studies; rather than talking about audiences and visitors we start talking about users and publics, rather than talking about reception and representations – we talk about contribution and performance, and rather than being concerned about capturing museum experience we are concerned with how museums can scaffold visitors self-expression and self-recognition (Horta 1997). The attention to expressions, affiliations, circulations and collaborative problem solving that come with current participatory culture (Jenkins et al 2010), suggests museums to take a role to meet the societal challenges of networked and mediated culture. The consequences are cultural and related to access to knowledge, definition of knowledge as well as understanding of media’s shaping of the world. In my view, museums are in a special position to address the gaps of participation, transparency and ethics that digital media produce.

The Connected Museum as a concept does a great job in pointing us to this position and to how museums shape social connections through networked media. Mobile and GPS based simulations, mixed and augmented reality and the constant flow of social applications does challenge the museum to find the best ways to connect people, knowledge and objects both on site and online. This is an ongoing endeavour, and point to the museum as a connecting means with main aim to care for, scaffold and trigger people’s reflections on issues and relating them to their own life. Focusing on the social connections of museum objects goes in this way a bit deeper into questions of relevance and motivation than the former well-known attention to museum encounters. It demands to think about how the museum may support multiple knowledges and understandings, values, histories and futures.

The Connected museum contrasts in this way the former collecting museum and points to the assembling character of museums. The connected museum is a connecting ‘thing’ that in the actor-network theory perspective proposed by Latour and Weibel may help change our focus from matters of facts to matters of concern (Latour 2005). The concept of Connectedness may include this switch that will have implications for museum practices, education, and societal role as well as implications for the methods that museums use to perform new social connections. I see several bigger changes of museums integrated in the concept of the Connected museum that are supported by media use but go way above the role and character of media. The connected museum is taking a step towards living cultural heritage organisations that are based on activities from ‘below’, of people engaging actively with cultural heritage concerns. This changes the museum to have as a main goal to provide the space (Bhabha 2004) and zones (Pratt 1991) that scaffold people in making connections. It also changes our understanding of museum learning, as media steps in as a main tool for visitors exploration of objects and expressions of concerns.

The connected museum also questions current understanding of participation, and does in my view address collaboration as the main feature of museum connections. And last, the connected museum points to the new ways museums have to work to establish and maintain spaces for people to make connections.

In my view the connected museum raises questions about these four issues that I also see as key areas to develop over the next 3-5 years; the transition to cultural heritage activities, the question of democratic education, the question of collaboration and collaborative methods and involvement. All these key areas involve the question of who is to make the connections and how the connections are made and maintained. The concept may trigger to think about the ‘Connective’ museum that has as a main goal to make peoples connections happen, and to develop knowledge about the end and means that people make
connections with. This includes stepping down and re-thinking expertise and curation, and I see mediated museum communication as a core topic in this process that also includes new form of partnerships and new understandings of community relations.

The transition to cultural heritage activities extends the community relations many museums have cared for and maintained. Museums community relations have till now been about the very demanding work of involving interest groups in museum collection work (e.g. Meyer 2010). Media such as mobile phones has enabled museums to open for amateur image making, or ‘photography 2.0’ practices that expand the dominant museological narrative in the museum (Galani and Moschovi 2010). Photography-based social media applications such as Tumblr, Instagram and Pinterest have also allowed museums to build new relationships with online communities of interest through imagery (Colquhoun and Galani 2013), through photo sharing database Flickr (Dalton 2010) or online collection based projects that explore the social and cultural dynamics of social tagging and folksonomies related to museums art collections (Trant 2009). These crowdsourcing actions of correcting, contextualizing, complementing, co-curating and crowdfunding of photographic historical content provided by cultural heritage institutions (Oomen and Aroyo 2011) represents new formations of partnerships where media serves as core tool for museums connective work (Stuedahl 2011, Stuedahl and Smørdal forthcoming 2015). The connectiveness introduces new mediated practices for the museum that goes beyond communication into acts of caring and supporting communities. The dilemmas of this connectiveness are still to be explored, as amateur content in many ways challenge existing conception of quality, copyrights and responsibilities of the museum. Several studies show how openness is ambiguous and cause frictions between technological and institutional infrastructures of archives and museums (van Passel & Rigole 2014, Holdgaard & Klastrup 2014).

The connective museum also highlights how people are learning with media. Not just by viewing, gazing and talking but also by making, doing and producing with media tools. This transitions to creation and making extends museum learning into questions where democratic education and theories of learning as responding, creating and bringing something new into the world may be valuable. Gert Biestas theories (e.g. Biesta 2006) of learning as responding, creating and inventing in relation to something given, state an alternative of learning as acquisition of something that already exists. Also the Connected Learning movement points to directions of attending learning as creative processes across spatial and temporal sites and times and deeply related to personal interest, opportunity and recognition (e.g. Ito et al 2013, Sefton-Green et al 2009, Erstad 2013). Museums and science centers may take a more central role in these pedagogical discussions, providing the expertise in informal learning and personal connections.

Last comes the question I have focused deliberately in my work, and this is the question of collaboration and collaborative methods and involvement. Museums mediated communication activities gives museums the opportunity to partner in new forms of assemblies, or ‘things’, and re-think museum communication and learning in a much wider spectre than the guided tour or in-house museum activities. We see the emergence of a museum that goes beyond the walls of its building to explore new communication spaces and arrangements (Balsamo 2011, Stuedahl and Lowe 2014). This includes the museum to do interventions, activism, provide social development programs etc. Many science center and technical museums are already exploring ways to involve citizens and communities not only as activities provided to the public, but also as core methods for improvement and development of the institution. For example do science centers include citizens in new science communication thinking and invite people to events of debate and discussions of science controversies way beyond exhibition development. Also, we see several examples of how art museums explore new ways that curation can involve and delve into discussions of urban planning and politics. These are all examples of explorations of how museums may collaborate and how participation needs to be re-thought with a focus on the outcome and relevance of participation. I see a big potential of museums to get inspired by theories and experiences from the Scandinavian tradition of co-design. Developed as part of democratic movement to technological development in the 1970ties, has Denmark, Sweden and Norway a sound tradition of involvement and collaboration across expert and novice, citizens inclusion and collaboration crossing practices (Kensing and Greenbaum 2013). This body of research may provide museums with methods and tools to explore how new collaborations of partnerships and practices of scholarly and institutional connectedness and does currently present experimental projects of exhibition development (Smith 2012) and development of educational programmes (Stuedahl 2015) that may support endeavours of mediated museum communication in future connective museum.
References:
Bio
Dagny Stuedahl has a background in ethnology and is presently holding a position as professor at Department of Mathematical Sciences and Technology, Norwegian University of Life Sciences (NMBU). Her research area is digital technologies in museum communication, with a special interest in the relation between co-design and participatory action research including youth to develop relevant media uses in museum communication. She currently works on several development projects on mobile and social media in development of digital learning programs and outreach initiatives. She is also part of the research project ‘Expand, exploring and expanding science centers’ (NMBU) focusing on installations and science communication.
The conference marks the closure of a major research project ‘Learning 2.0’ initiated by the Centre in 2009. The conference offers an opportunity to not only take stock of current trends in museum communication, but also to horizon-scan museum communication as a particular entry point to key challenges in museum studies and practices.