

Young Visitors’ “Messing Around” in Museums

Exploring social media to engage teens in participation

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Abstract

With the advent of social media, discussions of museum participation have taken a new direction. We explore social media and mobile phones to engage teens in participation during museum visits in the form of co-creation and contribution of content. In an experimental set-up at the Viking Ship Museum in Oslo, we asked a group of 13-year olds to explore and share reflections on issues related to Viking ships with mobile phones and visitor blog. The youths’ exploration of the exhibition became more engaging with the mobile phone, and we discuss how integration of the blog in the museum visit could have been more related to the teens’ on-going activities outside the museum and how their communication and participation could be fostered through the museum.

Introduction

Youth participation in museums has the same aims and goals as general programs of youth development; the prime focus being on young people’s building of positive identities, on the democratic access and commitment to learning as well as on participation in decision making. In museums, youth participation programmes has taken the shape of initiatives that strengthen young peoples’ role beyond that of audience, connected to the idea that museums can build links between general youth development and education (Koke & Dierking 2007). A Nordic example that relates youth development to participation in cultural heritage learning is provided by

the project “Xpress on tracks”, initiated by the Nordic Centre of Heritage Learning (NCK). The project was based on a social inclusion and lifelong learning approach and took the form of collaboration between regional archives, Jämtli Museum and voluntary school drop outs. The project focused on museum employment of cultural heritage activities that by the end of the day help the participants in gaining learning competencies (Zipsane 2007).

Models of participation are constantly being developed to give young people constructive roles in the development of museum communication. Among these, we find in-house initiatives introduced by the Tate galleries in UK, that since 1988 has pioneered in-gallery programmes in which young people shape their own museum experience and create new participatory activities with art and artists (Cardiff 2007). Examples are youth participation in developing exhibitions, outreach programmes, establishing Kid’s crew groups, volunteer training and civic learning programmes where young people may participate (Rider & Illingworth 1997). One Nordic example of teen participation in developing exhibitions can be found at Tromsø University Museum in northern Norway, which in 2009 engaged high school students in building the exhibition named “Ka ska vi gjømme på?” [What should we keep?]. The participants contributed with possible future cultural heritage objects from their everyday lives.

With the advent of social media, discussions of museum participation have taken a new direction. As museums currently embrace social media due to their potential to take “museum conversation” beyond the museum (Black 2010), these media have opened up for visitor participation that goes beyond the interactions of earlier interactive and hands-on technologies and in to issues such as visitor co-creation and contribution of content. Examples are the creation and contribution of content to online exhibitions, co-curating exhibitions on YouTube, building community relationships based on blogs, or collection management on Flickr (Russo et al. 2008).

Several Nordic projects in museums and cultural heritage institutions have recently integrated social media and digital technologies to develop new forms of participation. Involving youths in curation and production of art-interpretations has been launched in UKAF (Unge Kunstnere Astrup Fearnley) at the Astrup Fearnley Museum of Modern Art in Norway in 2010¹, and in the “u.l.k.” (Danish abbreviation for Young Peoples Labora-

¹ See URL: <http://ukaf.no/>

ories for Art) at the Danish national gallery: Statens Museum for Kunst (SMK)² in 2007. In these projects, young “art pilots” take part writing art blogs and producing online resources for peers. Studies of the u.l.k project indicate that the community based approach was successful in bringing young peoples’ voices and views on art history into the museum, but experienced that the youths were reluctant to publish their media productions on the project website (Nielsen & Nygaard 2008).

Numerous Nordic projects aim at crossing museum and school contexts with digital technologies. One example is the Norwegian national project on online digital storytelling, “Digitalt Fortalt”, that lately has focused on enhancing teens production of digital stories and publish these on museum websites as well as on the online portal digitaltfortalt.no. Another approach is taken in the project VITENWIKI, at the Museum of Natural History and Archaeology, Norwegian University of Science and Technology (NTNU) where youth produce wiki articles on museum objects based on information found on the Internet (Jørgensen 2011). A final example is the Danish practice based research project “Digital Urban Living”³ that involves research partners as well as museum in the endeavour to develop new exhibition forms including a variety of technologies that fit with youth media cultures (Smith and Iversen 2011) and digital ways of gaining knowledge (Løfgren 2010).

Also, mobile phones have been used to enhance visitor participation during museum visits by inviting into experiencing documentation processes and to give access to additional information about exhibits (Hsi 2002, Walker 2008, Vavoula et al. 2009) or to enhance teen co-compositions and sharing of photos, video or blogging during museum visits (Pierroux, Krange & Sem 2011, Stuedahl & Smørdal 2011). In the project EGO-TRAP at Danish Experimentarium, mobiles were integrated as scaffolding tools that structure, contextualise and personalise the museum visit (Kahr-Højland 2011).

Our report here is based on a small-scale pilot study with a focus group of 20 visitors aged 13 at the Viking Ship Museum in Oslo, Norway. The pilot study questioned if and how blogs and mobile phones can be used to engage youth in participatory activities during museum visits. The pilot was connected to a project on teen participatory engagement with a Viking boat reconstruction (Stuedahl & Smørdal 2011) and to an on-going

² See URL: <http://www.smk.dk/udforsk-kunsten/unges-laboratorier-for-kunst/>

³ See URL <http://www.digitalurbanliving.dk/>

collaboration with the museum in finding ways of participation that may solve practical challenges of communicating with visitors in this specific museum building.

Our aim of the study was to understand if and how young peoples' everyday competencies with mobile phones and social media could guide development of participation in museums. We focused especially on if and how these technologies organise teen appropriation of the complex assembly of objects, texts and narratives in the museum's exhibition, and on the role social media may play to sustain their participation beyond the museum visit. Our approach has been framed by argument stated in media literacy discussions, that the social and cultural integration of technologies in teen learning are fundamentally related to the place they have in young peoples' everyday life outside the institution (Herr-Stephenson et al. 2011). Due to this approach, we see teen participation in museum communication and learning as related to the same cultural patterns, identity shaping and forms of belonging as their participation in society.

In the next section we describe recent debates based on socio-cultural perspectives on youth's media literacy as well as recent claims that there is a need for a stronger framing of technologies in educational theories. In the empirical section we apply a focus on technology with agenda. In the last section we discuss that participation may be related to social as well as cultural-material aspects of the technologies used in our pilot, and discuss what our perspective on technology as actors can bring to an understanding of teen participation in a museum.

From participation in learning to participation in networking

Visitor participation in museum exhibits has its main theoretical foundation in theories on museum learning. Discussions on museum learning have historically developed from focusing on museum agenda into focusing on visitor experience, interpretation of knowledge, memory, history, ideas and relationships (Hooper-Greenhill 2000, Message 2006, Ross 2004). Recently, constructivist approaches to museum learning stresses actions of choice, challenge, control, collaboration and self-discovery (Hein 1995, 1998), and emphasizes that visitors meaning making of museum objects is based on the same culturally constructed and constantly organised human activities of learning and communication involved in peoples' relations to artefacts in general (Vygotsky 1986, Wertsch 1991). This perspective emphasises the social participation, free-choice, self directed, voluntary interaction in museum out-of-school contexts (Falk 2004, Falk

& Dierking 2000), the role of identity and motivation (Schauble, Leinhardt & Martin 1997), the role of interaction with objects (Paris 2002), as well as the role of conversation as museum learning (Leinhardt, Crowley & Knutson 2002, Ellenbogen 2002). By emphasising a focus on how the visitor master and appropriate exhibition objects in collaborative ways, and how meaning is produced based on the culture and knowledge they bring into the exhibition, these theoretical approaches are relevant also for social media integration for youth participation.

Research on young people's practices with digital technologies suggests some fundamental changes of how young people are communicating, producing texts and distributing content (Erstad 2010). The digital forms of communication and production of digital media facilitate a curiosity-driven and interest-based approach to knowledge that characterise young people's out-of-school practices, and also indicate the immediate, procedural and personalised forms this knowledge takes (Drotner 2008a). The media literacy which young people acquire through these practices highlight that youths' media use is not a passive act, but also an actively shaping of cultural meanings (Buckingham 2000, Drotner 1991). Youths' digital production practices or remixing competencies (Erstad et al. 2007), and their competencies in selecting, cutting, pasting and combining semiotic resources into new digital and multimodal texts (Erstad et al. 2007, Gilje 2010) have been brought fore as practices for re-contextualising and reinterpreting works in ways that are personally meaningful, or meaningful in different social and cultural contexts (Lange & Ito 2010). A focus on young peoples' media literacy subsequently captures how technologies give both *semiotic shape* and *social shape* to meaning (Drotner 2008b, Gejer, Insulander & Gottlieb 2006). These semiotic and social qualities of youth media literacy are relevant to efforts to introduce social media to enhance youths' participation in museum visits as interaction with museum objects as well as in activities of sharing and reflection with peers.

Current debates in educational research call for a shift from analysing representations and their meanings, towards a focus on relations and the becomings that are important parts of literacy performance (Leander & Rowe 2006). An emerging body of literature calls for a re-conceptualization of learning as not merely situated, but also as processes of networking bringing resources, people and places into relationships (Nespor 1994, Leander 2010). These discussions on the changing social spaces for learning propose a focus on the role mobility, space and place (Leander et al. 2010). As well as focus on the role that material relations

(Scollon & Scollon 2003) and artefacts (Waltz 2004) have for childrens' composition of learning environments. These discussions are related to a growing interest across social science disciplines in material practice (Fenwick 2009) as well as to discussions on how to include the account of how humans and nonhumans interact in our understanding of social actors (e.g. Callon 1986, Latour 1987, 2005, Law 1991). The integration of cultural-material networking theories into educational studies is based on the argument that critical learning theories fail to describe how artefacts play a role in the social dynamics of learning, as treating non-human as representatives of humans ends obscures the complex ways in which they interact (Waltz 2004). The argument is that to understand the relational processes of learning, objects, artefacts, the nonhuman and materiality must be thought of as not merely being tools or vehicles, but as integral and participatory actors that are introducing own effects.

The perspective on interactions between humans and nonhumans actors has especially been developed within actor-network theory (ANT). The human and nonhuman are integrated into the same conceptual framework and assigned as actors with equal amounts of agency. By framing this in a generalized symmetry (Callon 1986) ANT captures how relations between human and nonhuman develop in networks of actors. A focus on translation is central in order to understand how heterogeneous interest, needs or strategies are negotiated and aligned by actors in the network. These translations cross the boundaries between the social and the material and assemble heterogeneous actors into a network.

While the ANT perspective is not a theory on learning in museums, it may help us to integrate materiality in our understanding of museum participation. ANT perspectives help us to understand the exhibition as an assembly that in part is constituted by the translational activities of visitors and in part by the material object that make up the exhibition (Yaneva 2003). Conceptualising visitors' participation as translations and activities of assembling, also helps us to put focus on the role of technological artefacts, such as mobile phones and social media. Consequently, participation with digital technologies in museum visits may be understood as enactments of museum objects with technologies (Stuedahl & Smørdal 2011). We will in our analysis apply this perspective on the pilot described below.

The pilot set-up

The Viking Ship Museum in Oslo hosts the famous Viking ships and boats from three main excavations in Norway: the Tune ship, the Oseberg ship and the Gokstad ship with the two smaller boats. The permanent exhibition narrates the official account of a Norwegian past, and has changed little over time. The exhibition offers few inherent possibilities for interaction, which is a challenge for the museum pedagogue. Meanwhile, the Viking Ship Museum does invite to taking photos and make video recordings, which is highly popular among tourists as well as school classes visiting. In terms of our research the pilot set-up in an exhibition space that contains no other technologies, gave an opportunity to follow the visitors' activities with mobile phones and blogs without being disrupted by other technologies.

We have based our pilot on experimental design methods, that historically have been the province of the artificial and sciences such as architectures, engineering, medicine and design, while not well established within Humanities. In social science and learning research there has been a discussion on the methodological implications of the made-up situation of design experiments (Brown 1992, Gorard et al. 2004). Our departure point is that the critical point is not the validity of data – but the way data are produced and analytically connected to real life contexts. This approach is found in the field Participatory Design, which uses methods from action research and ethnography to study the real-life context of technology use to understand cultures, identify diversity and differences of use (Mörtberg et al. 2010). Our pilot was based on these perspectives in the endeavour to capture the heterogeneity of use of social media and mobiles in a museum context.

The media used

The experiment was set up with a temporary media centre with 5 computers installed on the balcony that runs around the museum. The museum has no wireless connections, therefore Bluetooth was used to upload content from the phones and a mobile Internet connection gave access to the blog connected to the research project's online resources. In the media centre two members of the research team assisted the teenagers with uploading the material they had collected, and to publish on the blog.

The visit

The focus group was a class of 13 year olds from a school nearby the museum. The visit lasted for two hours, and was part of a whole day excursion. The museum visit required no pre-visit school preparation, except that the young people had agreed to take part in a research pilot. Arriving at the museum, they were briefly informed about the programme for the visit; this introduction covered central issues on Viking ships related to our knowledge of Viking times, and were then introduced to the ethnologist that was take them a short guided tour, based on his research on reconstructing a Viking boat. Due to the acoustic conditions of the museum building, we set up group interviews outside as both starting and ending the pilot. In the first interview, the teens confirmed their competencies with mobile phones; all owned one, and they knew mobile functions such as music and video recording, SMS, MMS, uploading and downloading from Internet, sampling and re-mixing, composing songs with keys, photo editing, Bluetooth and infrared.

The visitors were given 9 mobile phones with a camera that could take still photos and video, and formed groups of two and three. The visit started with a guided tour with Terje, the ethnologist, asking the young visitors to reflect upon how we can gain knowledge about a past so many centuries away, and with limited amount of written or visual material. The tour was structured around three stops, connecting objects to on-going debates in Viking time research; the mysterious Buddha-bucket, the building competencies that he could recognize “reading” the boats from the Gokstad excavation and the question why the Viking ships was buried. While talking, he pointed to objects in the exhibition, that unsolicited was documented by the groups. The tour lasted for 15 minutes in total.

At the end of the tour, the teens were handed a working sheet with two tasks to fulfil:

- Collect information and hypotheses that you find about the Gokstad ship in the exhibition. Remember that ships, boats, objects and texts are all relevant. You should also document the discussions, ideas and possible answers that your group finds during the visit.
- Make a fictional narrative about what the Gokstad boat was used for. Take pictures of objects and texts to build up your narrative.



Fig. 1. Terje, the ethnologist, explains how historical reconstruction of Viking ships and boats are based on interpretations.

The remaining 1,5 hour the teenagers used the camera and video functions on their mobiles to collect documentation in the exhibition and to fulfil the tasks by writing their blog entries.



Fig.2. At the media centre the teens could edit and upload the photo and video recordings that they had collected and produced in the exhibition.

Afterwards, a short group interview was conducted summarizing their experience with the set-up and the visit. The two interviews conducted gave secondary empirical material supporting the focus in the analysis.

Participation in the Viking Ship Museum

The following analysis will be based on excerpts from video recordings of the teens' collaborations in solving the tasks, interacting with the mobiles and the museum objects. We video recorded the introduction by Terje and the whole tour in the museum. We then followed one of the groups with a camera and recorded their interactions while solving the tasks. The two group interviews were also video recorded. We saved all the uploaded videos that the teens produced for their blog-posts. Together this constitutes our empirical material. We have defined three themes related to the participatory activities and interactions we observed; a) the use of camera phones during the guiding tour, 2) the use of phones in the collaborative activities of reinterpretation, 3) the editing and result of their blog entries.

Participating by use of camera phones during the guiding tour

During the guiding tour all groups used the mobiles to capture photos related to issues in Terje's talk.



Fig.3. Young visitors explore the exhibitions with their camera phones.

In the last part of the tour, Terje discussed how practices of archaeological approaches are based on interpretations of material objects. He illustrated this by reminding them of the Buddha bucket from earlier in the tour and asked which material they thought it was made of:

Excerpt 1: *Integrating photo representation as an actor in the guiding tour*

(Terje and the group have come back to the gallery, and the last part of the tour starts summarizing and reflecting upon the knowledge gained on the objects in the museum.)

C: brass?

Terje: brass...yes....and what do you think the bucket was used for?

C: carrying water?

Terje: yes, that would be easy with buckets...[...], what other things could it be used for?

(plural): for crabs?

carrying fish?

To carry things in?

For food?

Maybe to pray on board of the ship?

Terje: Yes....yes....the bucket is quite interesting because of the Buddha-figure...does anybody know about Buddhism?

M: yes we learned about him....he was holy....and someone people prayed to....

C:he was good

Terje: Yes, he was good [...] and he sits in a special way! Look at your pictures of it on your phones.....what do you see?

(they all focus on their camera and scrolls their photos)

not identifiable1:he sits in lotus position

Terje: yes.....and when the Oseberg was found, this bucket was immediately called the Buddha bucket because of this [.....]

[.....]

Terje: Hey....maybe they have robbed the bucket...

not identifiable2 :..from India !

Terje: look closely at the picture, on the one side.....what do you see? Do you see a sign....? On the stomach?

not identifiable1:.....a flag

Terje: yes....a flag. Do you see...that if you take away pieces of the sign....it becomes a swastika?....

not identifiable3: the symbol they used as....?

Terje: yes.....here you see in the middle

(points to the sign on Henjas' phone.....[.....])

Terje:hey.....listen!.....We understand what see in relation to what we know.....we know buckets for carrying water.....and we think it is Buddha because the figure sits in this position.....But, what has this bucket been used for?

(Terje continues the dialogue with the teens, one of them suggests that the bucket may have been used for carrying offerings.....in the end of the sequence he reveals new theories on how the bucket might have been used in child offering ceremonies.)

Excerpt 1 shows how Terje actively integrates the mobiles by having the teens find photos they captured in the tour. By doing this, Terje established their documentation material as an important part of the tour and of his dialogues. The mobile aligns Terje's narrative, the teens' suggestions, their

photos and their answers to his questions. Also, the mobiles connect Terje's talk with exhibition objects and enhance the collaboration between the teens related to their photos. The participation is in this excerpt based on the way the mobiles are integrated as material actors supporting the teens' alignment of own reflections with Terje's narrative.

Participation with phones in collaborative activities of reinterpretation

The teens used the mobiles to collect images and video footage to fulfil their tasks. We observed several ways of mobile phone employment as an actor in their collaborative activities. They were compelled to negotiate the structure of recording activities and decide on which objects in the exhibition they should photograph and whether these objects would constitute clues related to the task. They negotiated the form their productions should take, either as enacting interviews, or where one was reporting to the camera while the other took care of the recording and directing the focus of the camera. We observed how the mobiles actively were appropriated to assemble information in the exhibition, combining re-representations of board texts in reading them loud while recording (Excerpt 2 below).

Excerpt 2 Integration of the mobile phone as an actor in collaboration

(Henja and Christine stand in front of one of the text boards. Christine holds the phone towards the board and records the text, while Henja is reading).

Henja: (reads with a dialect)...it is rebuilt in 1889....[...] but was originally built year 890 and got [...] with the dead

Christine: [.....]

(Eira stops behind them and takes a photo of the board text with her mobile phone, walks away again)

Henja: (continues to read – unclear)

Christine: (disrupts her....and reads another sentence from the text, still holding the camera in position)

Henja: no...no.....look (points to parts of the text, continues to read and pushes Christine's hand holding the camera further up to cover the right text lines)

Excerpt 2 shows Christine recording the text printed on the board following the lines that Henja is reading. The camera following Henja's reading of the text was obviously an important part of their production, as she redirected the camera when she discovered that Christine did not have the right text in focus. This gives us an example of how the mobile phone becomes a participating actor in the teens' re-mix of the traditional board text, aligning them into shapes of collaborative production. In this trans-

formation they shaped the re-representation, not of the content but of the form. The functionalities of the handheld mobiles made it suitable for making immediate connections between the board text and their re-interpretation and took an active part in their participation.

Uploading, editing and shaping blog entries

Apart from one group, all the teens understood the aims of writing blog entries as part of the visit. The groups produced eight blog entries with various amounts of uploaded material. In this set-up, they were not given any time restrictions and it seemed that several groups were short of time, resulting in few uploads. The limited amount of computers may have been the reason why only two groups uploaded their recordings, while our empirical video material shows that all the groups had been active recording and capturing photos in the exhibition.

The working sheet was re-read, and they collaborated on solving the task they had chosen. Collaborating on producing blog entries contained activities such as: writing the text, making choices of what to upload from their mobile, how to tag their material, how to edit the entries with font-types, *emoticons* and colours, and discussing technical functionalities of how to find photos on the mobile, how to get the uploaded files published on the blog etc.



Fig. 4. The groups uploaded the photos and videos they had recorded in the exhibition, and each group produced blog entries on the visitor blog that was set up. The blog was connected to the website of the research project.

One video sequence documents Amanda and Camilla spending more than 12 minutes on decorative lay-outing: changing fonts, colours, adding smiley's and placing photos in relation to text. They answer the team assistant that they know these decorating functions from using MSN Messenger daily. While these forms of interactions with editing tools and uploading functionalities are interesting for a focus on the digital competencies that the focus group bring to the museum visit, we choose to focus on the participatory and networking aspect of what social media introduce in terms of these competencies. Our further analysis will focus on the way they understand the activity of writing a blog, the way they integrate the blog in their task solving and the way they capture online participation as part of their visit.

Reading the blog entries gives the impression that they understood the blog as a space where they could articulate their hypothesis, and use collected photos and video clips to support this. Meanwhile, it seemed that the rationale for using the blog to share their reflections was understood in different ways. On some of the blog pages the teens mixed their task solving with reporting on their personal experience of the events during the museum visit. Only one group seemed to understand their blog entry as a contribution into an online, public and participatory space:

Julie, Cathrine, and Maria Helena:

We think it was used for short expeditions and fishing. We believe this because the ship is only five metres wide and does not have any space under the deck. It was probably used for shorter voyages because it does not have any luggage compartment. It was rowed because it has 32 holes and seats for 32 rowers. What do you think? Send in your answers to this page and show that you are interested.

By issuing a general invitation to the readers of their blog entry, Julie, Cathrine, and Maria Helena showed their understanding of the blog as a space for sharing their reflections with visitors outside their group. Well aware that production activities of the blog entries was limited by time consuming uploading and too few computers, we still had the impression that the teens did not appreciate producing blog entries in the same collaborative and co-creative manner as when they produced video and photos with the mobiles in the exhibition. The limitation of the computer as collaborative means may be one reason. Meanwhile we were more concerned

about the role of the blog in their participation and whether the blog invited into networking activities they were not interested in.

While we conceptualised the blogs to be networking media that connects to a public, social space outside the physical context of the museum, it seemed that this did not engage the teens. There can be several reasons for this: one can be that the blog pages were not connected to the museum online resources, and might have lacked an identity they could relate to. Another may be that the rationale for publishing on the blog was not relevant for them, making them reluctant to using the blog. The blog then became no actor in the participating network of the teens.

Reflections on the pilot set-up

Methodologically, it was important to focus on how the activities of the young people in the pilot depended not only on features of the digital media, but also on how the media were anchored in the activities of the visit. Setting up such an experiment in a realistic museum setting, requires thinking through the objectives behind the activities that we invited the teens to perform in the exhibition, as well as related to practical issues such as the right spaces and equipment that supports these. These practicalities also become relevant for our methodological reflection on how the technologies and activities were introduced by us, and how it affects the analytical value of empirical material gathered.

We learned that our set-up did not fully fit with the media practices that the youths preferred. We had planned the media session based on the assumption that the visitors would concentrate on taking photos. Meanwhile, most of the groups seemed to prefer recording video clips, which resulted in a very time-consuming uploading process, and congestion at the media centre. The teens needed more assistance for uploading and editing their blog page, as well as for handling the recording functions of the mobiles than we expected. This influenced our gathering of empirical material, as our assistance team became too small. Another issue was the acoustic in the building and consequently the sound quality of our empirical recordings, making it difficult to capture their conversations during their task solving. Apart from these practical issues, the decision to base the pilot study in the real context was valuable for our further collaboration with the museum, where our practical experiences are relevant for the

museums educational department in developing school programs that integrate digital technologies.

Discussion

In the empirical examples presented above, we have described how the teens co-creative, interpretative activities with the mobiles were performed in interactions, and how the phones played an active role not merely in collecting semiotic material during the guiding tour, but also in the social activities of the museum visit. Our impression from the analysis was that the teenagers' production of photos and video footage with mobiles seemed to encourage collaborative activities such as aligning and assembling the social and material dimensions of the exhibition. Meanwhile, the blog activities seemed to direct their participation into writing and reporting on their course. Also, our observations gave us the impressions that their communication on the blog seemed more focused on finishing the tasks given than to engage in networking activities with peers or with future online visitors. The observations made us reflect upon the role that blogs versus mobiles takes and upon the teens' configuration of their participation in the museum visit.

Our impression was that the teens shape different levels and shades of participation into different assembling interactions, according to the affordances that these media provide in the exhibition and during the visit. Inspired by the concept "genres of participation" (Ito et al. 2010), which brings focus upon how different modes, conventions and cultural structures come to play in teens' engagement with new media. It leads us to reflect upon what genre teens' participation in museums may establish, and how this relates to the genres of participation that they engage in outside the museum. The main categories of friendship driven and interest driven genres of participation (Horst, Herr-Stephenson & Robinson 2010) are here relevant to understand teens' participation in museums. In following the fluent activities of assembling and aligning the social, semiotic and material aspects of the museum visit, we observed how our focus groups were sometimes focused on the museum content and sometimes on their visiting friends. This very much reminds of the description of the dynamic activities of crossing boundaries of social driven and interest driven participation, named "messaging around" (Ito et al. 2010). We could say the teens in our pilot were 'messaging around' in the museum.

Genres of participation lead us in this way to reflect upon what kind of participation museums in fact invite to in their youth participation programs and how these actually meet with the conventions and modes of their focus groups. Our focus on the role of social media and mobiles made it necessary to take one step closer to the technical affordances of these technologies. Well aware that the distinction between social media as networking technologies, versus mobiles as personal media is difficult to behold with the advent of smart phones and mobile access to Internet, we need other models to explain the ways teens shaped participation with them. The observed preference of participating by co-creating videos may be explained by how the teens embraced the technical possibilities of mobiles as interactional means that aligned and assembled the social and semiotic aspects of their visit. These possibilities to assemble interactions are less current in the writing of blog pages. Also, it seemed that the teens did not understand neither the rationale behind writing blogs on their visit, nor to whom they were writing these entries.

We have been reminded of the difference between participation *in* and participation *through* media (Carpentier 2007), where “participation *in* media” invites the non-professional production of media output, while “participation *through* media” gives opportunities to participate in the public debate and to produce self-representations beyond the media space in question while keeping ownership of the content. In relation to youths’ participation in museum, this distinction emphasises the difference between participation *in* a museum visit by contributing or co-creating, as these are set within the context of the museum and its legitimate knowledge. Participating *through* a museum visit implies that visitors are provided means for taking part in a public discussion beyond the institutional framework of the museum. To paraphrase Livingstone’s careful question related to young people’s technologically mediated participation in society (Livingstone 2010), we therefore need to ask: if young visitors participate by publishing their re-interpretation of the museum exhibition in social media, what are they participating in, who listens, who is their audience and, not least, what happens to their contributions?

While the media ecology of youths’ participation with digital technologies do introduce an emerging public social ecology that are relevant for youths participation in museums, we have to remember that this is still in transition. Youths negotiate and experiment with new cultural forms and genres that deals with tensions between peer-based learning dynamics, and those embedded in formal education (Lange and Ito 2010). For museums

to have teens participating in their online activities with social media during and after their visit, it seems relevant to follow the developments of youths' media ecologies closely.

Accordingly, it is important to gain awareness of how young visitors' participation through re-interpretations, co-creation or sharing – in exhibitions or online are framed by institutional legitimisation and integration of multiple forms of knowledge. As our pilot study shows: young visitors do bring their media practices into the exhibition space. But as a consequence, they also bring expectations of responsiveness, of having a clear role as contributor and of contributing with issues that are relevant for the museum – but most important for themselves and their friends. Also, we find that the experiment indicates the need to explore how museums conceptualise youths' participation.

The pilot study highlights how the debate about social media, young visitors and museums is pivoting around the institutional policies for participation and dialogue – asking teens to participate *in* museums. Rather than to ask how the museum might participate in the multiple communities of teens outside the museum. As an outcome of this pilot study we therefore propose to turn the questions of youths' participation in museums upside down, and ask how the museum visit could have been related to the teens' on-going activities outside the museum. This would establish a concern with participation *through* museums. These are issues we suggest should be further explored in terms of developing youth participation in museums. We need a closer understanding of the dynamics between museum participation and youths' media practices to understand what participation in museums in fact becomes meaningful to youths, and if and how social media may meet with these, and bridge the diverging networks and participatory genres in which they are involved in their everyday life.

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References

- Black, G. 2010. Embedding civil engagement in museums. In: *Museum Management and Curatorship* 25:2: 129–146.
- Brown, A. 1992. Design experiments: theoretical and methodological challenges in creating complex interventions in classroom setting. *Journal of the Learning Science* 2(2): 141–178.
- Buckingham, D. 2000. *After the Death of Childhood: Growing Up in the Age of Electronic Media*. Cambridge: Polity Press.
- Callon, M. 1986. Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St. Brieuc Bay. In: J. Law, ed. *Power, Action, and Belief*: 196–233. London: Routledge.
- Cardiff, R. 2007. Designing a website for young people. The challenges of appealing to a diverse and fickle audience. Museums on the web 2007, April 11–14, San Fransisco, California. From <http://www.archimuse.com/mw2007/papers/cardiff/cardiff.html>. Visited April 20, 2011.
- Carpentier, N. 2007. Participation and media. In: B., Cammaerts & N. Carpentier. *Reclaiming the Media; Communication rights and Democratic Media Roles*. European Communication Research and Education Association, Intellect Books, Bristol UK: 87–92.
- Drotner, K. 2008a. Leisure is hard work: Digital practices and future competencies. In: D. Buckingham, ed. *Youth, Identity and Digital Media*. The John D. & Catherine T. MacArthur Foundation Series on Digital Media and Learning. Cambridge MA: The MIT Press: 167–184.
- Drotner, K. 2008b. Boundaries and bridges. Digital storytelling in education studies and media studies. In: Knut Lundby, ed. *Digital Storytelling, Mediatized Stories. Self-representations in New Media*. Peter Lang Publishing, Inc. New York: 61–85.
- Drotner, K. 1991. At skabe sig selv: Ungdom, æstetik, pædagogik. [Self Creation: Youth, Aesthetics. Pedagogy]. Copenhagen: Gyldendal.
- Ellenbogen, K.M. 2002. Museums in family life: An ethnographic study. In: G. Leinhardt, K.Crowley & K.Knutsen, eds. *Learning Conversations in Museums*. Mahwah: Lawrence Erlbaum Associates: 81–101.
- Erstad, O. 2010. Educating the digital generation. *Nordic Journal of Digital Literacy* 1(5): 56–71.
- Erstad, O., Gilje, Ø. & de Lange, T. 2007. Re-mixing multimodal resources: Multiliteracies and digital production in Norwegian media education. *Learning, Media and Technology* 32(2): 183–198.
- Falk, L. 2004. Paintings and stories: Making connections. *The Journal of Museum Education* 29(1). Reading the World: Museums and Literacy (Winter, 2004): 16–18.
- Falk, J.H. & Dierking, L.D. 2000 *Learning from Museums: Visitor Experiences and the Making of Meaning*. Walnut Creek, Calif.: AltaMira.
- Fenwick, T. 2009. Reading Educational Reform with Actor-Network Theory: Fluid Spaces, otherings, and ambivalences. *Educational Philosophy and Theory*: 2–21. Doi: 10.1111/j.1469-5812.2009.00609.x
- Geijer, L., Insulander, E. & Gottlieb, H. 2006. “It felt as if one was there”. Visitors’ response to an interactive museum exhibition as an example of learning in informal settings. Paper for First International DREAM conference, Odense 21–23.september 2006. From media.digitalheritage.se/2010/07/Odense-Dream-2006.doc. Visited January 11, 2011.

- Gilje, Øystein 2010. *Mode, Mediation and Moving Images. An Inquiry of Digital Editing Practices in Media Education*. Dissertation submitted for the degree of Ph.D. Faculty of Education, University of Oslo.
- Gorard, S., Roberts, K. & Taylor, C. 2004. What kind of creature is a design experiment? *British Educational Research Journal* 30(4): 577–590.
- Hein, G.E. 1998. *Learning in the Museum*. London & New York: Routledge.
- Hein, G.E. 1995. The constructivist museum. *Journal for Education in Museums* 16: 21–23.
- Herr-Stephenson, B., Rhoten, D., Perkel, D. & Sims, C. 2011. *Digital Media and Technology in Afterschool Programs, Libraries and Museums*. The John D. and Catherine T. MacArthur Foundation Report on Digital Media and Learning. The MIT Press, Cambridge Massachusetts, London, England.
- Hooper-Greenhill, E. 2000. *Museum and the Interpretation of Visual Culture*. London: Routledge.
- Horst, H.A., Herr-Stephenson, B. & Robinson, L. 2010. Media ecologies. In: Ito, M., Baumer, S., Bittani, M., Boyd, D., Cody, R., Herr-Stephenson, B., P.G.Lange, D.Mahendran, K.Z.Martinez, C.J.Pascoe, D.Perkel, L.Robinson, C.Sims, and L.Tripp. 2010. *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. Cambridge, Mass.: MIT Press.
- Hsi, S. 2002. The electronic guidebook: A study of user experiences using mobile web content in a museum. In M. Milrad, U. Hoppe, & Kinshuk, eds. *Proceedings of IEEE international workshop on wireless and mobile technologies in education*. Vaxjo, Sweden.
- Ito, M., Baumer, S., Bittani, M., boyd, d., Dody, R., Herr-Stephenson, B., Lange, P.G., Mahendran, D., Martinez, K.Z., Pascoe, C.J., Perkel, D., Robinson, L., Sims, C., Tripp, L. 2010. *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. Cambridge, Mass.: MIT Press.
- Jørgensen, G. 2011. Den vanskelige dialogen – om universitetsmuseenes praktiske utfordringer i møtet med web 2.0-samfunnet. *Nordisk Museologi* 2011(1): 81–97.
- Kahr-Højland, A. 2011. Hands on, mobiles on. The use of a digital narrative as a scaffolding remedy in a classical science centre. *MedieKultur* 50: 66–83.
- Kahr-Højland, A. 2007. Brave new world: Mobile phones, museums and learning – how and why to use Augmented Reality within museums. *Nordisk Museologi* 1: 3–18.
- Kelly, L. & Fitzgerald, P. 2011. Cooperation, collaboration, challenge: How to work with the changing nature of educational audiences in museums. In: N. Mockler, J. Sachs, eds. *Rethinking Educational Practice Through Reflexive Inquiry, Professional Learning and Development in Schools and Higher Education* 7: 77–88.
- Koke, J. & Dierking, L.D. 2007. Museum and Libraries Engaging Americas Youth: Final Report of a Study of IMLS Youth Programs, 1998 – 2003. From: <http://www.imls.gov/assets/1/AssetManager/YouthRe>. Visited Aug 20, 2011.
- Lange, P.G and Ito, M. 2010. Creative production. In: M. Ito, S.Baumer, M, Bittani, d.boyd, R.Dody, B.Herr-Stephenson, P.G.Lange, D.Mahendran, K.Z.Martinez, C.J.Pascoe, D.Perkel, L.Robinson, C.Sims, L.Tripp. *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*. Cambridge, Mass.: MIT Press.
- Latour, B. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford, UK: Oxford University Press.
- Latour, B. 1987. *Science in Action*. Cambridge, MA: Harvard University Press.
- Law, J., ed. 1991. A sociology of monsters: Essays on power, technology, and domination. London: Routledge: 103–131

- Leander, K., Philips, N. C., Taylor, K.H. 2010. The changing social spaces of learning: Mapping new mobilities. *Review of Research Education* 34: 329–394.
- Leander, K. M & Rowe, D. 2006. Mapping literacy spaces in motion: A rhizomatic analysis of a classroom literacy performance. *Reading Research Quarterly* 41: 428–460.
- Leinhardt, G., Crowley, K. & Knutson, K. 2002. *Listening in on Museum Conversation*. Lawrence Erlbaum, New Jersey.
- Livingstone, S. 2010. Youthful participation: What have we learned, what shall we ask next? Keynote. *First Annual Digital Media and Learning Conference*, University of California, San Diego Febr. 18–20 2010. From <http://www.scribd.com/doc/27906764/Sonia-Livingstone-2010-Digital-Media-and-Learning-Conference-Keynote>. Visited July 20, 2010.
- Lüders, M. 2008. Conceptualizing social media. *New media and society* 10: 5: 683–702.
- Løfgren, L. B. 2010. Designing for critique, designing for reflection: The (re)emergence of aesthetics in current design practice. In: Walther, B. K., ed. *Designing New Media: Learning, Communication and Innovation*. Århus: Gyldendal Akademisk: 73–84.
- Message, K. 2006. *New Museums and the Making of Culture*. Berg, Oxford.
- Mörtberg, C., Bratteteig, T., Wagner, I., Stuedahl, D., & Morrison, A. 2010. Methods that matter in digital design research. In: I. Wagner, T. Bratteteig, D. Stuedahl. *Exploring digital design : multi-disciplinary design practices*. Springer: 105–144.
- Nespor, J. 1997. *Tangled up in School: Politics, Space, Bodies and Signs in the Educational Process*. Lawrence Erlbaum, Mahwah, NJ.
- Nielsen, A.T.S., & Nygaard, T. 2008. Teens connect to art and each other at young peoples laboratories for art. In: J. Trant & D. Bearman, eds. *Museums and the Web 2008*. Proceedings, Toronto: Archives and Informatics. Visited July 7, 2010.
- Paris, S., ed. 2002. *Multiple Perspectives on Children's Object-Centered Learning*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Pierroux, P., Krange, I. & Sem, I. 2011. Bridging contexts and interpretations: Mobile blogging on art museum field trips. *Mediekultur* 50: 25–44.
- Rider, S. & Illingworth, S. 1997. *Museums and Young People*. Report Artswork for The Museums Association.
- Ross, Max 2004. Interpreting the New Museology. *Museum and Society* 2(2): 84–103.
- Russo, A., J. Watkins, L. Kelly & S. Chan. 2008. Participatory Communication with Social Media. *Curator*. 51. Pp. 21-31. Published online 15.jan 2010. From http://pdfs.altamirapress.com/Cu/rat/CuratorV51N1sample_article.pdf. Visited June 5, 2010.
- Schauble, L., Leinhardt, G., & Martin, L. 1998. A framework for organizing a cumulative research agenda in informal learning contexts. *Journal of Museum Education* 22(2, 3): 3–8.
- Scollon, R., & Scollon, S. 2003. *Discourses in Place: Language in the Material World*. New York: Routledge.
- Smith, R., and Iversen, O.S.2011. When the museum goes native. *ACM Interactions Magazine*, 18(5) Sept-Oct 2011, pp 15-19
- Stuedahl, D., & Smørdal, O. 2011. Designing for co-composition of doubts and reflections in cultural historical exhibitions. *Computers and Composition; Developments in Interaction and Communication Design* 2.
- Vavoula, G., Sharples, M., Rudman, P., Meek, J., & Lonsdalee, P. 2009. Myartspace: Design and evaluation of support for learning with multimedia phones between classrooms and museums. *Computers & Education* 53(2):286–299.

- Vygotsky, Lev S. (1986). *Thought and Language*. Newly revised and edited by Alex Kozulin. Cambridge, MA: The MIT Press.
- Walker, K. 2008. Structuring visitor participation. In: L. Tallon, L. & K. Walker. *Digital Technologies and the Museum experience*. Altamira Press, Lanham.
- Waltz, S. 2004. Giving artifacts a voice? Bringing into account technology in educational analysis. *Educational Theory* 54:2: 157–172.
- Wertsch, J 1991. *Voices of the Mind. A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.
- Yaneva, A. 2003. When a bus met a museum: Following artists, curators and workers in art installation. *Museum and Society* 1:3: 116–131.
- Zipsane, H. 2007. Cultural learning as key word in transition from social client to learner. In *The times they are a-changing – researching transitions in lifelong learning – Conference Proceedings*. CRL – University of Stirling 2007.

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