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Given increasing access to the internet and rise of social networking it is becoming imperative for museums to understand not only how people are using the internet, but their motivations. Previous ways of classifying users typically used demographic data or analysed search and visiting patterns. However, these methods often lack the depth of information needed to understand why people engage in certain behaviours. This paper will explore recent examples of types of on-line participation and classifications, reporting on three recent studies undertaken at the Australian Museum.

Keywords: audience, research, on-line, museums, social media

The increase in internet use and the rise of social networking has increased the need for museums to understand not only how people are using the internet, but their motivations (Russo et al, 2008). Previous ways of classifying users typically used demographic data or analysed search and visiting patterns. However, these methods often lack the depth of information needed to understand why people engage in certain behaviours. An additional challenge for museums is to consider the relationship between on-line and physical visitors, and what characteristics and behaviours may be shared across both.

This paper will explore recent examples of types of on-line participation and classifications. It reports on three recent studies undertaken at the Australian Museum that investigated the impact of on-line visitation and compares these results to data collected in the US (Li, 2006). Some initial findings regarding the relationship between on-line and physical visitation is also considered. Finally, the paper explores the potential for museums to create networks of participation through social media.
Several ways of classifying on-line visitors have emerged recently. Green and Hannon (2007) investigated how young people understood and employed digital technologies. From their discussions they identified the following four user ‘types’ (p.11):

*Digital pioneers* [who] were blogging before the phrase has been coined;
*Creative producers* [who] are building web sites, posting movies, photos and music to share with friends, families and beyond;
*Everyday communicators* [who] are making their lives easier through texting and MSN and
*Information gatherers* [who] are Google and Wikipedia addicts, ‘cutting and pasting’ as a way of life.

The Forrester Group surveyed 4,556 US youth in October, 2006 and 4,475 US adults in December 2006 to learn about their social computing technology use (Li, 2006). As a result users were grouped into six different categories of participation as follows:

52% were *inactive*
33% were *spectators* (read blogs, watch peer-generated videos and listen to podcasts)
19% were *joiners* (use social networking sites)
15% were *collectors* (tag web pages)
19% were *critics* (comment on blogs, post ratings and reviews)
13% were *creators* (publish web pages, publish or maintain a blog, upload video to sites like YouTube).

Apart from Inactives, these categories have resonance with museums, given the shift to more active engagement with audiences via the tools that Web 2.0 offers. Creators, Critics and Joiners, in particular, present a useful and exciting way for museums to think about the different kinds of on-line audiences they are catering for now and in the future.

In order to both unpack the Forrester findings further and seek more qualitative information three studies were conducted by the Australian Museum during 2007: an on-line survey of Australians’ internet behaviour; five focus groups with adults aged 18-30 recruited specifically using the Forrester categories; and a workshop with high school students aged 12-18 years. The aim was to understand users’ motivations and behaviour in more detail in the on-line, as well as physical, context.

What are Australians doing on-line?
An on-line survey of 2,006 participants across eastern Australia was undertaken in November 2007 using a similar set of questions from the Forrester study in order to make some comparisons (Australian Museum, 2008). Respondents were asked about the kinds of on-line activities they had undertaken in the previous month, as well as where they accessed the internet, how comfortable they felt with technology and demographic information.

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Figure 1 shows the kinds of activities Australians were engaged in over the previous month. Most related to watching videos; reading customer reviews; participating in discussions; and reading blogs.

Some of the differences in specific activities undertaken between Australians and Americans on-line were that significantly more Australians participated in a discussion board/forum (32% compared with 21%) and watched videos (43% compared with 18%). However, the latter could be due to the timing of the study with the rise in YouTube usage and content over the previous 12 months since the Forrester study was conducted in 2006.

These results were then grouped into the six categories identified by Forrester to compare data across both the Australian and US samples. As shown in Figure 2, the survey revealed that more Australians fell within in the Creator, Critic and Spectator categories, with significantly less being Inactive on-line.

Museum visitors and on-line behaviour
Given the substantial increase in the kinds of on-line experience museums are offering how do they reconcile their internet and physical experiences? Are those who interact with museums on-line different to general internet users? From 1990-2004 a major telephone survey of Sydney adults was undertaken to understand both the demographic and psychographic profiles of museum visitors to a range of cultural institutions across Sydney, including the Australian Museum, Powerhouse Museum, National Maritime Museum, Art Gallery of NSW, as well as the local zoo and aquarium (Hall, 2005). An analysis of over 13,000 respondents found that those more likely to visit museums agreed with the statement “I am more interested in abstract ideas”. However, as the Web may be seen as a place for abstract ideas, could this mean that there are closer links between physical and on-line visitors to museums?

In the on-line survey of Australian internet users, 41% (n=829) reported that they had visited a museum/gallery in the previous six months. The data from this group was separated to compare against the total sample to see if there were any differences in on-line behaviour (Table 1). The data shows that museum/gallery visitors participated at higher levels across all activities. Apart from using social networking sites, statistical tests revealed that these differences were highly significant across all categories.
These findings have broad implications for museums and their relationships with both their on-line and physical audiences. The data suggests that, not only do those who visit museums participate in more on-line activities, they are engaging in activities that are participatory and two-way. This raised the question of whether these visitors may bring those expectations and modes of behaviour and learning to their physical visit? In considering this question, the two in-depth studies undertaken by the Australian Museum provided the opportunity to not only look more closely at the Australian on-line survey findings, but investigate possible implications for the physical museum experience.

In-depth study 1: on-line users aged 18-30 years
It has long been demonstrated that people aged between 18 and 30 years are under-represented among Australian Museum visitors (Australian Museum, 2007). Given the rate of internet usage across this age group (Australian Bureau of Statistics, 2007) it has been suggested that maybe the on-line environment could be one way to engage this group and perhaps entice those living in Sydney to actually visit the Museum through new ways of on-line marketing and promotion. Therefore, the aim of the first in-depth study was to understand how those aged 18-30 behave on-line.

Five focus groups were held with a range of participants recruited using the Forrester categories (Vivid, 2007). However, when interviewing participants during the recruitment phase it was found that people could be identified as belonging to Creators, Spectators, and Joiners, but not to the Critics or Collectors groups. On reflection, it was decided that Collectors didn’t yet exist in Australia and that many of the Collector characteristics, such as tagging and bookmarking, formed part of how people manage their on-line lives rather than being an end in itself. Also, another group emerged that was called Commentators, rather than Critics. It was felt that Critic was too strong a label for this typology, and Australians tend not to be comfortable with debate (outside of sports). Also, “commenting” is the most common term given to a collection of random thoughts on a subject and are usually quite brief.

From analysing the transcripts across the groups, overall it was found that the typologies were not mutually exclusive and are often influenced by life stage and personality. Users move in and out of categories depending on their age and personal/social circumstances, as well as their levels of comfort with using technology. It was also found that people either had a one-dimensional relationship with the internet, using it as a transaction or information
source, or a two-dimensional relationship that was more about participation and exchange. Certain characteristics of each group did emerge as discussed below.

It was found that *Spectators* have a one-dimensional relationship with technology. Their key driver is efficiency – the internet makes their lives easier through activities such as banking, looking up movies, restaurants, etc. They typically don’t spend much time on-line outside of work and study, and tend to have a negative view of technology and distrust it. In their personal lives they may have niche interests but not enough knowledge about them and faith in the internet to use it to feed their passion. It was suggested that it wasn’t a technology issue, it was a personal characteristic. Spectators belong to their segment for two main reasons – their relative lack of trust in the internet, it’s security and content coupled with a relative lack of interest or areas they are passionate about sharing and learning more.

*Joiners* utilise the internet for work, study and general organising of their lives, but are quick to point out that the most important aspect is socialising. The internet is their social lifeline through sites like Bebo, MySpace and, more recently in Australia, Facebook. It was found that use of Facebook in particular has become compulsive for many Joiners, as they checked it many times a day. They also reported that their work, study and general life administration was suffering because of it. Joiners demonstrate a high level of trust in the on-line world and are very optimistic about the potential of technology. Compared with Spectators, their relationship with the internet is two-dimensional and, although they are more engaged with technology, it is quite shallow, being limited primarily to social networking sites as a means to keep in contact with friends and family. Joiners have been swept up in a social movement that is easy to access, fun and rewarding to be a part of, yet could it be a phase for most users?

In discussions with *Commentators* two types of behaviour were uncovered. The first was deliberate, focussed around interest areas as a way to maintain and explore their interests and where they will comment in most on-line sessions. The other was spontaneous, where they sporadically commented on anything and anyone, usually stemming from a negative provocation or experience. The driving force behind Commentators’ internet usage is a fuel for their passions. Although they use the Web for other functional activities, doing so gives them more time to devote to their passion Web sites. Like Joiners they have a two-dimensional relationship with the Web, however, they see it as a give and take relationship. They acknowledge the gratification the internet has provided them and in turn feel the need to return the favour. They are comfortable with debate and tend to revisit the same sites rather than explore new ones.
Creators use the internet as a personal development tool. They are hunters and harvesters of information which they then share with others. Unsurprisingly, they spend the most time on the Web compared with other categories, using the language of addiction to describe their internet usage. They are trusting of and optimistic about the potential of the internet, without being naïve. They are typically passionate people and driven to be at the forefront of their passion. They recognize that knowledge equals power and value the importance of being published in order to leave a record of themselves, their opinions and their activities. Overall, it is intellectual rather than social fulfillment that Creators seek on-line.

What do these findings mean for museums, their on-line presence and as sites for visiting? Some preliminary ideas emerged when discussing these findings with Museum staff. As Spectators use the Web for information museums could advertise through information sites such CitySearch to ensure they are connected to museum events more readily. In this way, museums could collaborate with commercial and not for profit organisations to create a trusted cultural network through which audiences could participate in cultural activities. As Joiners are driven by social engagement museums could promote social activities and events through social networking sites. They could provide incentive to promote on-line ‘advocates’ or ‘fans’ to encourage others to participate. Additionally, museums could create on-line community spaces for those with like-minded interests to discuss and debate issues relevant to museum collections and events. As Commentators are driven by somewhat obscure passions and interests, museums could promote their physical offer through professional or specialist Web sites. They could then cultivate those with interest in their content areas and collections (such as science, the environment, culture, social history and art) to contribute to the museum’s Web site on a deeper level. As the Internet is so much a part of a Creator’s life and used as a personal development tool, perhaps they are the least likely segment to physically visit, yet have the most potential for on-line engagement as professionals contributing to content areas.

In-depth study 2: students aged 12-18 years
Both Green and Hannon (2006) and Li (2006) argued that the ease and affordability of on-line connection are having a profound effect on social structures and learning and that peer-to-peer interaction is increasingly being perceived as a source of information as opposed to some central pedagogue or authority. For those young people with easy access to technology, the links between social behavior and the knowledge economy are becoming more diffuse. These data sets reveal to us that young people learn to use a huge range of digital technologies in their homes and other sites in the community beyond schools. (does it say anything about how many of them then use that knowledge in their personal lives?)
The Museum has worked with students from the Coalition of Knowledge Building Schools since 2003 on a variety of audience research projects (Groundwater-Smith and Kelly, 2007). The Coalition consists of around 20 public and privately-funded schools across New South Wales who have joined together to undertake research across a broad range of topics, both specifically related to school activities and informal learning projects. The schools cover the spectrum of years from Kindergarten (students aged five years) to Year 12 (aged 17-18 years), as well as representing a broad range of socio-economic circumstances and geographic locations.

Given that learning through social media and digital resources is increasingly becoming a core function in the learning repertoire of today’s students (REF) it was decided to run an e-Kids’ College with participants recruited from the Coalition to investigate how they were using the web and in particular, social media. An important component of the research was the need to seek feedback and advice about how the Museum’s research and collection could be better utilised through digital media to match audience needs and interests.

Twenty-four students were recruited from nine schools across New South Wales, covering a range of socio-economic circumstances, public and private, with a gender mix. Students were consulted on a range of issues encompassing their use of digital technologies in leisure and for learning. They undertook a behind-the-scenes tour of the Museum, spoke with a number of scientific staff and experienced the public areas of the Museum in order to provide feedback about the Museum’s potential on-line offer. Prior to their visit they interviewed ten of their peers, again using the same questions from the Forrester study, with other aspects included that asked about their general views of the internet, where they accessed it and how comfortable they felt with technology generally.

Unsurprisingly, all students reported that they felt totally comfortable with technology in general, giving interesting perspectives about the internet, for example:

I enjoy using computers and digital technologies to learn because there are so many possibilities and it is a lot more interesting than a pen and paper. But technology can be tricky and break down very easily and it isn’t always reliable. But with technology, almost anything can happen.

Surfing the net is fast, exciting and surprising and different. Without the internet the world would be bland.

When asked to complete the sentence “Not being able to access the web is like not being able to …” respondents likened it to not being able to breath, live, eat, talk, socialise and Get access to water, as well as Travel around the world, explore my inner self or broaden my horizon.

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One interesting finding was that the students had mixed views about the Museum’s presence on social networking sites such as MySpace and content-sharing sites like YouTube and Flickr. Some felt that it would make the Museum look too “try hard” or “uncool” and others thought that these sites were primarily for socialising and leisure, not associating them with education:

I don’t really see how you can use things like MySpace, YouTube etc. Most people would not even consider watching a video from the museum. I think the best thing to do would be to keep the Museum Web site always up to date and accurate. Make sure it comes up the top of search engines, with actual paging. People never click on the sponsored links.

However, on reflection, several students felt that the Museum could utilise social spaces in a number of unexpected ways, for example showing movie trailers of upcoming exhibitions and events, and even developing a page for a number of animal species as a way to promote the Museum’s work in a fun and light-hearted way:

The Australian Museum should have a trailer and a page about their tours and expedition. Videos would be effective but trailers would be better.

The Museum could set up a MySpace, with bulletins, to keep contacts up-to-date, set as public.

For Bebo, have a Bebo bank (make a page just for the Australian Museum). I think it would be interesting to set up a MySpace type profile for the different specimens, and use this to provide information. It would allow you to make it visually appealing with bright colours, and even movie and music clips. This would appeal to young audiences.

Overall, they felt that content should primarily sit on the Museum’s Web site, for example: MySpace is more for advertising value than viewing content. Whatever I put out on the internet, it should be able to all be linked back to the Museum’s Web site for credentials – accuracy and reliability.

In one of the day’s activities, they were asked to answer the question: “If the Museum were a Web site …”. The overall consensus was that the site should be uncluttered, pleasing to look at, advertisement-free, jargon-free, simple and easy to use:

If the museum was a Web site, it could be either boring or fascinating depending on the way that designers approached it. For a younger audience it is crucial to break up the factual information, and present it in an interactive, appealing and creative way. It would be important to have it set up by a representative of the target audience, as ‘second guessing’ often proves inaccurate.

If the Museum was a Web site it would need a variety of ways used to get the message across e.g. videos, pictures, podcasting. I would need to have a dedicated site for younger people, because different target markets respond to different things, so only one type/theme site
would not work. Primary, secondary and public would be good because of different reasons for using the site.

They believed that there should be a discussion board where questions could be asked and opinions mooted, games, interactivity and more personal and informal staff information: [a] question of the week, where children are able to write in and ask a question, the best question will be chosen and will be posted in a blog, this way people can comment on it. *An interactive touch screen that would show different types of animals (e.g. marine) and let you design a pattern on the animal.*

*Have a link on your Web site called ‘scientists are people too’ and have a character version of a scientist and maybe try and portray their quirky ways.*

*On your Web site you could have an interview like the one we did with the scientist and just written, like a meet the scientist page where you can learn about their work, why they do it, what they hope to achieve, etc.*

These findings resonate with an earlier study that examined students’ and teachers’ needs and wants relating to the internet generally, and museum Web sites specifically (Kelly and Breault, 2006).

A number of others also made a distinction between visiting the Museum itself and visiting the Museum’s Web site. For example, one student who had participated in previous research projects with the Museum had this to say:

_Last time I came here we focused mainly on new technology and we were constantly saying we needed more screens, games and interactive displays, but since then I have been thinking: I can do that at home, I can watch movies, play games etc at home. If I come to the Museum I want to be able to get information, read it and be able to learn from it. It is good to have these things (screens etc) but I guess, like all things, in moderation. The Web site needs to suit all audiences. I got the feeling that you were trying to find out what we want but we are not the only people that use the Museum. A section on the site, with bright colours, games etc could be good, but it is unlikely that the reason we are at a Museum site in the first place is to play the games. We can do that anywhere. If we are there we are probably looking for information of some kind. So it needs to be easy to read and access without being too dry._

When reflecting on the outcomes of this work with the Coalition over the years it has been suggested that when it comes to designing fantastic physical and on-line museum experiences for young people, the principles are the same and include a range of elements: experiences that encourage discovery, interaction, cater for the unexpected, provide many pathways to explore, give a taste for what happens behind-the-scenes and are fun.
content that is challenging, real, authoritative, meaningful, encourages questions and is well-organised and easy to navigate.

staff that can relate to young people, are respectful of their ideas and views, are knowledgeable in their field and are easy to talk to.

opportunities to socialise, hang out with their friends and learn together.

From ladders of participation to networks of participation through social media

The Forrester report provided useful data and classification tools to determine the ways in which audiences participate in on-line activities. Yet, it did little to extrapolate these findings in relation to cultural participation beyond broad genres of interactivity. The Australian data suggested that people who were actively engaged in physical museum visitation tended to be involved in on-line museum activities in greater numbers than those who didn’t. The work with students demonstrated many similarities between what they wanted from the physical and on-line museum. Existing museum communication systems such as exhibitions, public programs, outreach and learning programs have, for a long time, aimed to provide complex cultural interactive experiences. Social media can be used to encourage audiences to respond to museums and relate their experiences back to themselves, to communities of interest and to the museum itself in ways that are meaningful to them. Using the Forrester categories to survey the 18-30 year olds resulted in a range of options regarding cultural engagement with visitors both physically and online.

It is here that the opportunities to create networks of participation through social media can be usefully explored. Recent research by Russo et al (2008) demonstrates how social media facilitate knowledge exchange by taking advantage of ‘network effects’ and creating a new forum through which diverse audiences can participate with museums to explore issues and voice these reflections on-line. Social media are an exceptional platform from which to establish dialogue with and between users, to build relationships with and between audiences, to bring together communities of interest, and to enhance external and internal knowledge sharing. With recent technological changes they are a simple and cost-effective way to enhance and extend audience experience through networks of participation.

Changes to the centrality of collections within museum programs have set the scene for authentic learning through social networking. Social media could be useful in stimulating audience engagement as some of its forms, particularly the newer complex sites such as My Space and Facebook, break down conventions of information sharing. When social media such as blogs, podcasts and wikis are used by museums, they provoke the systems of authority and custodianship which museums have, over history, tried to establish. This has both positive and negative

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implications. For example, the use of audio tours has recently been deconstructed as individuals offer their own perspectives or audio tours via podcasts or via blogs. In the USA an independent media group, ArtMobs\(^1\) works with young people to offer a platform through which audiences can upload their own podcasts of their visits to the Museum of Modern Art, New York (MOMA). While supported by the museum, this stand-alone website provides what ArtMobs describe as ‘unofficial guides’ to museum content.

MoMA itself offers a forum through which young people can offer their opinions and experiences in relation to museum content. ‘Talk Back\(^2\)’ encourages young people to ‘…read about what other people have to say about art and share your own opinions’. While these types of ‘youth engagement’ initiatives are increasingly popular in large museums, it is rare to find them extending to reflections and additions to curatorial expertise.

Kelly et al ( ) have demonstrated that young people visiting museums are increasingly interested in taking experiences which are relevant and authentic to them and creating experiences which illustrate this engagement to their peers. If this is the case, then museums could operate as hubs of a cultural network and engage communities of interest in conversation, collaboration and co-creation. The Pew Internet report suggests that a non-scholarly online knowledge base is far and

\[^1\] \url{http://mod.blogs.com/art_mobs/}
\[^2\] \url{http://redstudio.moma.org/talkback/}
away the most-accessed online reference in the USA precisely because it acknowledges and encourages community voice. (Rainie and Tancer, 2007).

As museums attempt to make their collections and expertise more accessible on audience terms, certain concessions to experimentation will need to be made, allowing audiences to express what it is that they value as opposed to being offered a learning environment focused exclusively on institutional views. The challenge for museums is in its ability to support multiple representations and critical examination in a public forum.

Social media have the potential to encourage participation in a sector of learning which has historically been uni-directional; shifting from knowledge transmission to audience engagement and participation. This shift has the potential to leave informal learning environments such as museums open for public criticism. For example, Hales (2006) reviewed changes to the Cooper Hewitt National Design Museum where an innovative program of democratic access and community engagement/co-creation is challenging traditional museum autocracy. Hales doesn’t necessarily provide much encouragement on this issue citing that technology can let web users and museum visitors create their own content thus reducing the institution to the role of go-between. We would argue that social media open new opportunities for museums. They provide a real possibility to lead audience engagement and interaction with collections by providing the infrastructure and training to enable digitally literate cultural audiences to engage with knowledge in meaningful ways. At the same time, when curators start blogging, audiences can engage in cultural debate with experts. There is an implicit notion that when museums enable audiences to participate in knowledge sharing, they challenge the expert research and development work undertaken by curators and other professionals. In reality, social media are in a sense, self editing as audiences decide who they will share experiences with and on what terms.

Conclusion
For institutions which are not used to responding to technological or social change in short time frames, the challenges of providing on-demand experiences will require some adjustment in the conceptualization and development of learning programs. Informal learning environments such as
museums are well-positioned to draw young people into their cultural collections by designing interactive experiences which take advantage of the opportunities of social media while introducing curatorial knowledge. While museums are not able to compete with commercial leisure activities there is the potential to enable young people to engage in live experiences and accentuate their online learning with physical experiences.

Forrester’s research points to how this could be achieved. The research undertaken at the Australian Museum goes some way to providing evidence of how innovative programs of cultural engagement might be developed and how they might be perceived by both the physical and online visitors. The potential for museums to create new types of cultural participation, acknowledging the levels of engagement which these results demonstrate is still in its infancy. Over the next year, as the Australian Museum undertakes a major redevelopment of its website, it will trial social media initiatives based on some of the issues identified throughout the research. This will provide opportunities for future evaluation and discussion.

References


