Archivists to Activists: The Changing Role of Museums as Guardians of Culture and Empowerment

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Abstract
Traditionally, museums have displayed their collections with a tendency towards a single, authoritative interpretation. Many contemporary museums, however, now design their exhibitions to be approached as a dialogue between artifact and audience so that the visitor can "complete the meanings of the object-technology interface through their own emotional and experience-based responses" (Andermann and Arnold de-Simine 2012). Such dialogue can be deconstructive and indicative of a postmodern approach to analyzing culture. As a result of this shift in the museum's mission, many have become "collaborative, hybrid institutions that are also part community center, part contemporary art space, part digital information hub, and part city plaza" (Tisdale, 2013). This has resulted in a radical reinterpreting of history, culture, and the arts, questioning mainstream acceptance of cultural concepts and giving a voice to alternative views and minority interpretations. Museums thus need to adapt to change through architecture, layout, curatorship, display methods, technology and educational policy. In this study, we report on a survey comparing two United States museums with two Japanese museums (in the historical, arts and design, and cultural museum genres). The survey was designed to address a question concerning what the changing educational roles and responsibilities of contemporary museum educators are, incorporating such ideas as those of Gardner on multiple intelligences, Housen and Yenawine on visual thinking strategies, Dewey on experience and education, and Piaget on cognitive development. A model for identifying external causative factors precipitating changes in museum curatorship and education is presented.

Keywords: museums, museum educators, museum literacy, learning theories, cultural studies, postmodernism

Morphing of Museums from Passive to Participatory Places

Quite radical changes, which amount to almost a "big bang" in the museum world, have dramatically altered how museums have positioned themselves in their educational role. Partly, this has been initiated by visitors who arrive expecting to be entertained as much as educated. But it has also been motivated by curators, many of whom come from a postmodern background, see themselves not so much as guardians of artifacts but rather as choreographers of exhibitions. This has resulted in changes in museum identity, architecture, curatorship, artifact collection, and exhibitions. And education has begun to play a more prominent role in the mission of museums, returning again to the classical idea that a museum is a place for learning. Behind all these developments are movements such as postmodernism and intermediality driven by technical and digital developments. This article considers a number of disparate factors affecting change in museums and shows through a model which draws on literature reviewed, visits to museums, and a pilot study, how these factors are driving new museum educational initiatives.

Museums Past and Present: Redefined and Remodeled

The traditional function of museums has been to store, preserve and present cultural artifacts, to serve as centers of academic research, and educational institutions. The artifacts that museums do preserve, and how they present them, has been changing over the past thirty years. Levin (2002) points out that by "the 1990s, museums were using focus groups to ascertain how they might compete with other attractions" and even goes on to say that museums are "essentially a neutral medium that can be used by anybody for anything" (Levin, 2002).

Museum Visitor Expectations and Evolving Museum Identity

So what began with a gradual broadening of the functions of traditional museums has recently exploded into a variety of functions. "In addition to exhibiting art or natural history, museums now provide places for shopping, eating, performance, and community activities; they have also become an important urban-renewal opportunity for cities" (Newhouse, 1999). Museums have thus become places of social interaction and innovation where visitors can become more involved with exhibitions and other visitors.

Even more recently, Earle (2013) argues that this has almost become a predicament noting that "…cultural education, with 'cultural inclusion' as its main objective, has evolved in the context of an existential crisis in the museum sector over the past 30 years, appearing to offer a means through which they can redefine their role and value in the society as anti-elitist organizations supporting social change."
Together with this identity issue, especially in an era which places emphasis on accountability, goes the question of how successful the emerging identity is in its development. A contemporary answer to Getty's famous question, "How does one measure the success of a museum?" is Filler's (2014) suggestion that "The most basic task of any museum must be the protection of works of cultural significance entrusted to its care for the edification and pleasure of future generations." However, some such as

Ellis (1995) and Message (2014) extend this in recognizing that museums should include elements of surprise and even disjunction, of seeking to enhance the quality of the visitor's life, of blurring disciplinary boundaries, promoting multiple interpretations of exhibitions, and involving visitors in social interactions with artifacts and other people.

An Activist Curatorial Approach

Since museum visitors are expecting a more interactive, collaborative postmodern experience, the curator's role has been expanding exponentially (Shea, 2015; Maciejunes, 2014; Roos-Brown, 2013). Visitors want to be engaged on a variety of levels; educational, entertainment, emotional and participatory. Satisfying all of these can prove to be a monumental task for curators. The pressure to mount a successful exhibition or the specter of failure looms constantly. For these reasons the curator's actual job has evolved from archivists to activists who "must be at once aestheticians, diplomats, economists, critics, historians, politicians, audience developers, and promoters" (Brenson, 1998). Just as Lau Tzu observed, that life is a series of natural (and spontaneous) changes, curators in the contemporary museum world are being also being constantly challenged by natural change. The curator's mission is thus no longer predicated on how well architectural reconstruction projects have impressed the museum stakeholders and visitors. Instead, the curator's new challenge is "to diagnose need in their communities, seek out new and unusual settings for their work, forge partnerships with a wide array of disparate stakeholders, and, in some cases, cede a certain amount of artistic control in order to gain broader impact (Brown, 2013).

How do we define this shift to a postmodern paradigm among curators? On the more critical end of the spectrum, some scholars have expressed dissatisfaction with the notion that "anything goes" in art (Baudrillard, 2005; Smith, 2010). Baudrillard argued that: "The idea of art has become rarefied and minimal, leading ultimately to conceptual art, where it ends in the non-exhibition of non-works in non-galleries -- the apotheosis of art as a non-event." Other scholars, on the opposite end of the spectrum, appreciate the worthiness of artistic freedom associated with postmodernism (Lyotard, 1984; Jameson, 1991; Lee, 2012). Lyotard, for instance, describes the freestyle experimentation of postmodernism, by characterizing it as "a shattering of belief" of conventional notions.

As a result of this postmodern shift, we have seen a proliferation of multicultural events incorporating music and dance performances, interactive art installations, technology-based gadgets and interactive tools, performativity or live performance art installations, all of which have become standard offerings throughout local, national and world renowned cultural museums. As museum curators continue to cast themselves as "caretakers of our cultural past and present", curatorial practices will continue to evolve as curators become concert maestros, conducting and orchestrating change in our "larger cultural ecosystem" (Weil, 2012).

Financing the Evolving Participatory Approach

Curators also play the role of a modern day Robin Hood by taking art from wealthy art collectors and positioning them in their galleries. If individual gifts to museums are an indication of a brighter economic future for museums, in this regard the recent $1.1 billion gift to New York's Metropolitan Museum of Art in 2013 from cosmetics executive Leonard Lauder is a notable example. But despite these gains, art museum administrators remain cautious. Principally due to the nature of funding sources, a steady stream of income is never assured (Alexander 1996; Skinner, 2009). In 2012, for example, a majority of the museums surveyed in a study by the American Alliance of Museums complained of "economic stress", (almost 70% out of a total of 347 U.S museums).

Conversely, it can be said that spending too much time focusing on the fiscal blueprint can also be counterproductive, especially in the case of some museums, where it impedes the overall purpose and mission of the museum itself (Weil, 2000; McCarthy, 2005). Historically, museums in the 1950's were not called upon to adopt anything like a business model so it appears that we have reversed gears, moving slightly backwards (Hudson 1998). As Smithsonian scholar, Stephen Weil, aptly put it, "museums matter only to the extent that they are perceived to provide the communities they serve with something of value beyond their mere existence" (Weil, 2012).

While money is, of course, an essential means of survival for museums, in the long run, communities are enhanced and museums themselves have the opportunity to enrich the quality of individual lives (Weil, 2000; McCarthy, 2005). Yet funding has a crucial role to play in artifacts collected, exhibitions opened, remodeling and commissioning of buildings, equipment purchased and education programs initiated.

Experiential Education in Museums for Visitors

Museums are not primarily schools, and offer education as an informal adjunct in addition to collecting and presenting artifacts. Nevertheless, there has been an increasing emphasis on the role of education in museums, e.g., "UK Government announced an investment of £15 million (over 3 years) in 'Cultural Education' in England" (Earle 2013). Yet the notion that museums are schools dates as far back as the classical world. Solinger (1990) reminds us that, "when the ancient Greeks referred to a museum (Greek: *mouseion*), the word primarily defined a center of learning." Garcia (2012) notes that museum learning is "unique, multi-faceted and inspires higher-order affective and cognitive development." Merritt (2012) details "core skills of critical thinking, synthesizing information, ability to innovate and think creatively, and collaboration" as being at the forefront of museum learning.

Associated with this concern for visitor education is the distinction between formal, non-formal and informal education. Differentiation between these types of learning has been highlighted by researchers such as Eraut (2000), Livingston (2001), and Colley, Hodkinson and Malcolm, (2003). Formal learning is that which is administered by

teachers in a school in a systematic way. Nonformal learning is semi-structured such as classes leading to the acquisition of a skill, seminars, or community college type, while informal learning takes place at the volition of the individual in a less structured environment than a school or class. Museum education thus falls between non-formal and informal learning, depending on the level of formality of the visit, and ties in with Dewey's (1938) philosophy that educators should understand the connection between education and personal experience, and that experience develops from empiricism and experiment.

To present artifacts in ways which will provide stimulating and educative experiences, so that visitors can construct their own understandings, Hein (1988) adds that experiences must be not only "hands-on" but also "minds-on." He further emphasizes that these experiences must also be organized to be educative.

Hence the need for learning models, to provide a framework for structuring the learning experiences. Ebitz (2008) conducted a survey of learning theories used by museums and found that, out of a list of twenty approaches, those at the top of the rankings were: "Gardner's theory of multiple intelligences, Csikszentmihalyi's flow or psychology of optimal experience, stage theories of development beginning with Piaget, and constructivist theories of learning and meaning making beginning with Dewey, Vygotsky, and Falk and Dierking's contextual model of free choice." There are learning theories associated particularly with museum learning such as Housen and Yenawine's (2001) approach based on Piagetian theory which posits that "through extensive experience looking at art there will be a development from storytelling to considering new kinds of information such as art history."

Merritt (2012) sees a future for museum education as "one characterized by self-directed, passion-based learning. Some envision a knowledge economy in which schools are supplanted by personal learning communities, where the teachers' role as facilitators is as important as their status as experts, and students and faculty engage in self-directed research and accomplish real work. In this future, museums can play a crucial role in helping learners discover their passion, providing resources and opportunities to pursue this passion and training educators in the skills of experiential learning."

Architecture of Museums: From Classical to Postmodernism

Classical: The British Museum, London

Postmodern: The Hoki Museum, Chiba

In some cases the building itself becomes the reason for people to visit as Pogrebin (2015) notes: "The Guggenheim building, of course, is a draw in itself because of Frank Lloyd Wright's spiraling architecture." As the museum buildings need to be understood by the visitor, some commentators draw a parallel with the understanding needed on the part of the visitor viewing the exhibitions; "understanding principles of place is crucial, so that we can make sense of the world" (Leach, 2007). The effect of architecture on the activities that take place within the buildings has never been disputed by architects although lay people may not always be conscious of this. As a result, many museums have become "collaborative, hybrid institutions that are also part community center, part contemporary art space, part digital information hub, and part city plaza" (Tisdale, 2013). Some new museum architecture often surprises, startles, and astounds. We might note that city libraries are also becoming increasingly hybridized places.

Participatory Engagement and Museum Technology

Naturally, as changes in the exterior of museums occur, so too does their interior design, as well as the adoption of new technology, which in turn drives changes in exhibitions. There have recently been many articles in popular media highlighting the deployment of technology such as using iPads, mobile phones, pens with memories and 3-D technology in museum exhibitions (Lohr, 2014). To investigate specific technologies being used in museums, in a recent study we explored innovations in 30 New York and Washington D.C. museums and found that technology serves to broadcast, augment and project information through screens and tablet devices, and engage visitors and encourage them to self-reflect and even create new identities through stimulatory quizzes, simulation machines and performances (Natusch, 2015).

More detailed analysis suggests that museums "cannot simply rely on the aura of the authentic object as a window onto the past, but must deploy multimedial technologies and performance as narrative strategies associated with art forms such as literature or film" (Andermann and Arnold-de Simine, 2013). An example of this is Google's initiative to allow ultra-close up views of paintings, an example of technology which takes virtual museums in a different direction to actual museum visits.

What is the effect of this incorporation of technology into museums? At a curatorial level, technology has become a stimulus for curators to design exhibitions to draw different kinds of visitors and to "think further about participatory, interactive features and question prompts" (Helal, et al., 2013). Pogrebin (2015) cites an example: "…teenagers have been particularly attracted to the Immersion Room, which allows visitors to design their own wallpaper and project it on the walls."

Technology is also helping museum educators "to create, and deliver a broad array of teaching resources, from online interactive media" and help teachers in schools to "use tools to create their own resources" (Wetterlund, 2009). These resources are not only available to museum teachers and visitors but museums going online are becoming e-learning centres, as Paquin and Barfurth (2007) put it, "virtual museums provide supplemental learning resources."

The adoption of technology is not without its problems though. Helal et al. (2013) note that "wayfinding, increased interactivity, social media, and uploads of new content" continue to be challenges. Even while the New York Met is pushing ahead with digital exhibitions, the Brooklyn Museum has decided to invest less in its virtual identity (Lohr, 2014). Thus museum websites should be navigable following criteria of usability such as layout, hierarchy, consistency, clarity, breadcrumbs, maps, menus, and anchors (Bezerra, 2014 and Doss, 2014), particularly as these relate to the design of museum websites (Sylaiou, et al. 2014). The end result of technology should be to involve the viewer in engaging in a dialogue with the exhibition, or as Andermann and Arnold de-Simine (2012) put it, to invite museum visitors to "complete the meanings of the object-technology interface through their own emotional and experience-based responses."

Museum Education Questionnaire Results: A Pilot Study

In addition to site visits of more than 30 museums in the U.S. and Japan visited during 2014 and 2015, a pilot study with a questionnaire for museum curators and education officers was carried out. Data was collected from two major U.S. museums (Natural History Museum in Washington D.C. and the Los Angeles County Museum of Art) and two major Japanese museums (National Museum of Western Art 国立西洋美術館 *Kokuritsu Seiyō Bijutsukan* and National Art Center Tokyo 国立新美術館 *Kokuritsu Shin-Bijutsukan*) who responded to requests to participate in the study. Some questions gathered quantitative data using a five-point scale, others gathered qualitative data using open-ended questions. Data gathered from questions asked of staff at the four museums is summarized in Table 1. Questions focused on both curatorial and educational issues.

In terms of broad commonalities, the four museums were representative examples of larger museums in both the U.S. and in Japan. The characteristics they shared were those of scale, presentation, organization and innovation. However, the U.S. museums were overall larger and had more items in storage (the Natural History Museum has 99% of its total of 149 million artifacts in storage). Websites of all museums are professionally executed and maintained, although the Natural History Museum offers through its Dashboard website the most extensive access to its statistical data and graph-generating tools offering in-depth analysis of Smithsonian museums data.

Some notable differences were also apparent between the museums. U.S. museums were in general more accepting and even welcoming of photography than Japanese museums, even to the point of encouraging selfies. But the most noteworthy difference lay in education resourcing. The two U.S. museums reported 25 to 30 permanently assigned education officers and several hundred part-time and volunteer education staff. This compares with the Japanese museums reporting only one or two full time education staff and 6 to10 part-timers. U.S. museums thus seem to have a policy to be well resourced and have active educational and outreach initiatives in place. The Natural History Museum reported a deepening and broadening of relations between museums, schools and communities. NHM also reported that since D.C. is an international community, multilingual resources for 30 languages are offered. It addresses untraditional issues and gives a voice to discriminated minorities such as girls in science fields and African-Americans. Internationally, consciousness of culturally sensitive issues such as race and religion is important in the U.S. LACMA has many initiatives within the community, including a gallery at Charles White Elementary School. The reasons for these differences between U.S. and Japanese museums lie in space available, attitudes to education, backgrounded by cultural orientation.

Table 1 Results from Museum Education Questionnaire

	Natural History Museum	Los Angeles County Museum	National Museum of Western Art	National Art Center Tokyo
1. No. of Full-time Educational Officers	22	21	2	1
2. No. of Part-time Educational Officers	900 (including information desk)	5 staff, 80 teaching artists, 200 docents	2	2
3. Dedicated Floor space to Learning Activities	1%* (10,000 sq. ft.)	16%	2%	1%
4. Multipurpose Areas	99%	11%	5%	0.5%
5. Incorporation of Learning Theories into Exhibitions Always, Frequently, Sometimes, Rarely, Never	Always Frequently	Always	Sometimes	Rarely
6. Partnerships with Schools for Educational Sharing	Yes George Washington U. DC public schools MAO	Yes Gallery at Charles White Elementary School	Yes	na
7. Change Anticipated in Museum due to Websites and Virtual Exhibitions in 5 years Markedly, Considerably, Somewhat, A little, Hardly at all	Markedly Considerably	Somewhat	Hardly at all	Somewhat
8. Can	Yes*	Yes*	na	Yes*

Education Program be Expanded Yes, Maybe, No				

Table 1 summarises data from 8 of the 20 item questionnaire relating to curatorial and educational matters.

Museum officials were invited to suggest one of their most successful projects to date. The Natural History Museum regarded their Ocean Exhibition as successful within the museum itself because it derived energy from other departments throughout the entire museum. Natural History also cited their Q?RIUS project which encouraged experience of science using museum resources and theaters.

LACMA has developed initiatives that incorporate technology as a tool for art-making. The impetus for inventing these new programs was the proliferation of technology in everyday life that has bred tech-savvy audiences who desire alternative, hi- and low-tech ways of learning and engaging with the creative process. The LACMA Education department increasingly felt a need to respond to this growing phenomenon and responded by creating animation and documentary workshops for middle school students, professional development programs that help teachers incorporate technology into their classroom, as well as filmmaking and multimedia classes for adults.

The National Arts Center Tokyo reported on a digital project they had initiated: The Electronic Resource Portal called "Sou-IMAGINE" which links paintings to data about the work.

A Model Linking Social, Educational and Business Trends and Museums

Arising from the pilot study, we propose a three-component model for contemporary museums, which notes how trends in the community, the arts, interactive learning, business, and economics are forming a combustible mix to ignite a big bang in the museum universe.

The first component (Figure 1) relates to involvement on both visitor and institutional levels. Visitors may participate personally (such as engaging in a game) or in a public context (such as playing the role of a TV news reporter) as the Washington D.C. Newseum offers opportunities for. Resistance to photography is breaking down as it becomes more acceptable and even selfies (though without the selfie sticks) are actually encouraged at places such as Museum of Art and Design in New York and Newseum. And just as companies enter into joint ventures to leverage their resources, so too are museums and schools entering into agreements to support each other in educational roles.

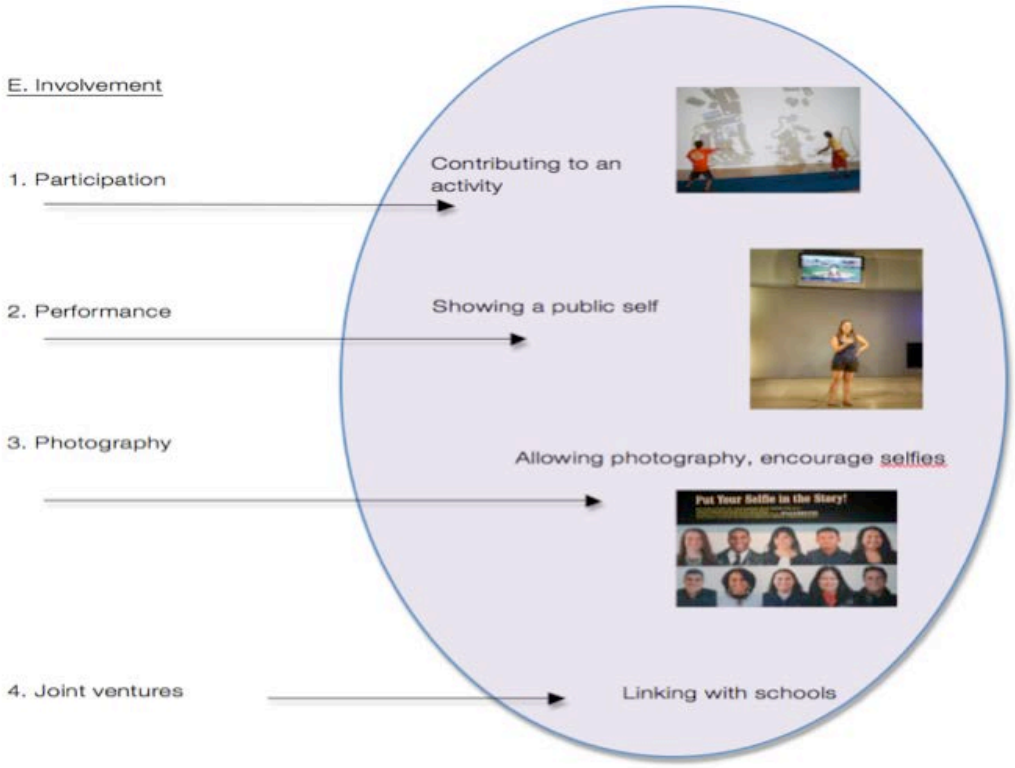


Figure 1 Involvement influences on museums

A second component of the model (Figure 2) relates to accessing the museum whether by physically walking around the exhibitions, or using a virtual museum tour. Tablets are appearing as ubiquitous devices used by museum staff such as guides to highlight exhibition features, and these, as well as cellphones, are also used by visitors themselves to navigate. Picking up, storing and forwarding information along the way is achieved through devices such as Cooper Hewitt's "The Pen" which guests can use to tap on an artifact label and have extra information sent to their email. And there is software such as purpose-designed apps downloadable to cellphones to help a visitor chart their pathway through an exhibition.

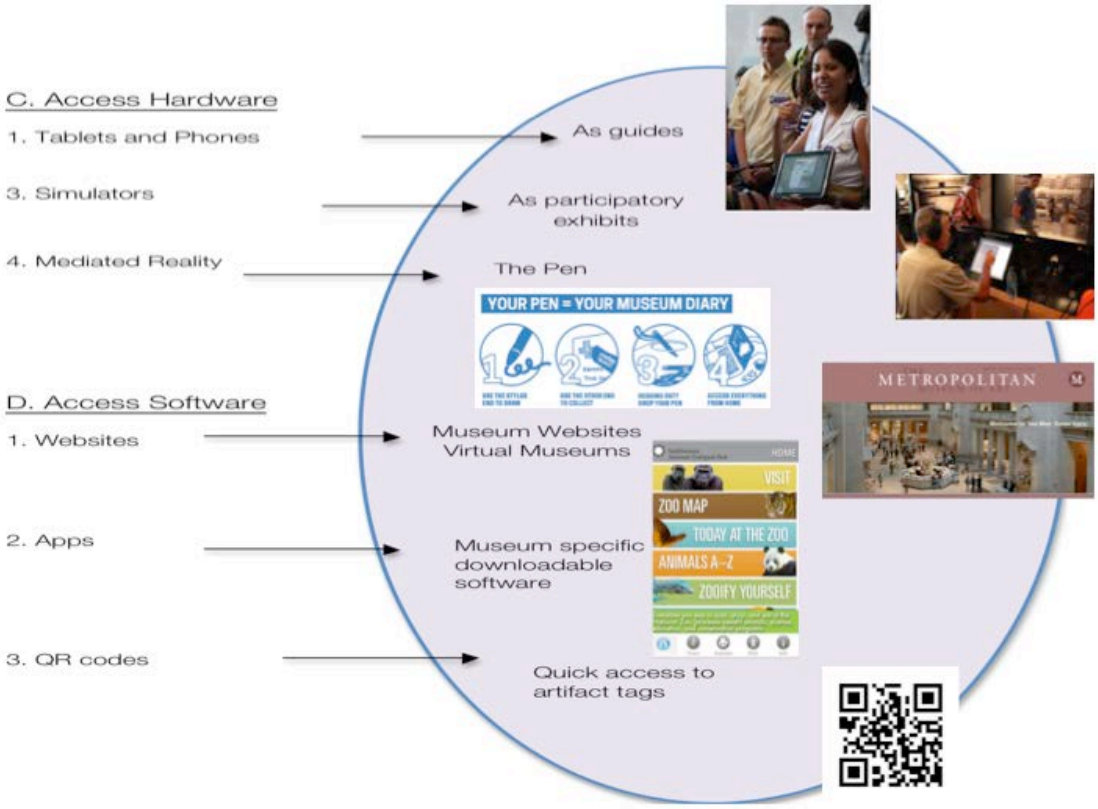


Figure 2 Access hardware and software being adopted by museums

The third component of the model (Figure 3) shows how business enterprises (both free internet services and commercial media enterprises) are impacting on museums. Examples of the adoption of free internet models are hyperlinks which can be clicked on when nearby a museum artifact which generates augmented reality tags; or the way that museum visitors can now rate their impressions and leave detailed comments on their visit in a similar way that travel sites such as Tripadvisor do. Movies on DVD often offer background interviews with the director and actors about the production, something which museums are increasingly including. Digital games are another medium being adopted in museum participatory activities.

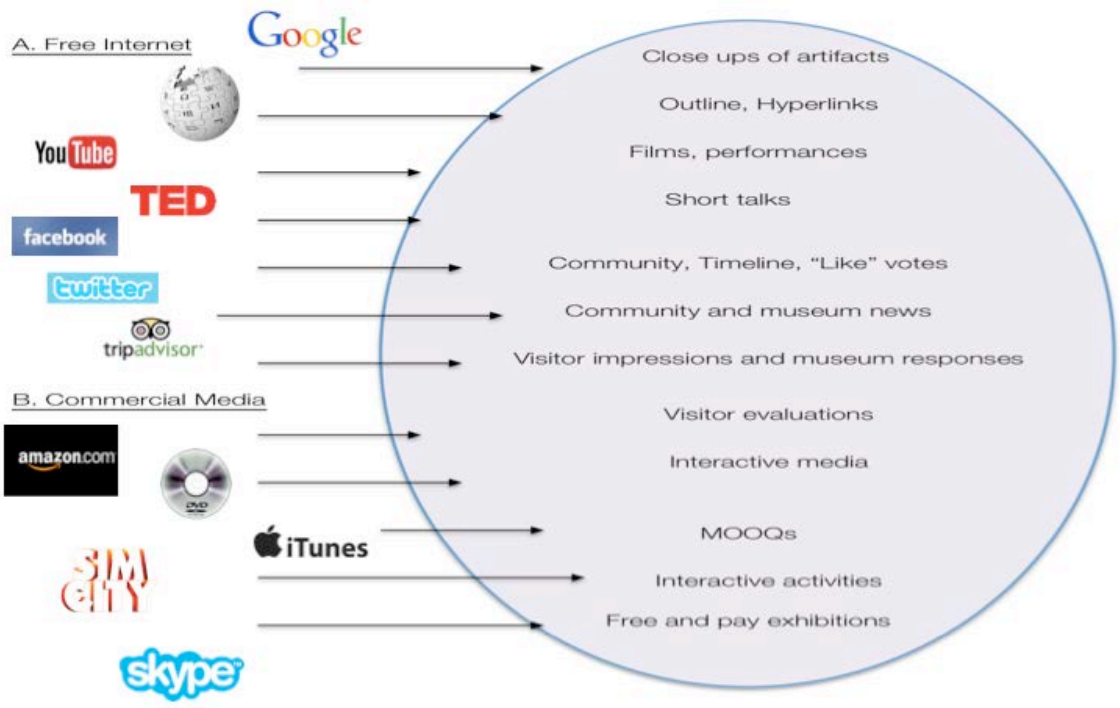
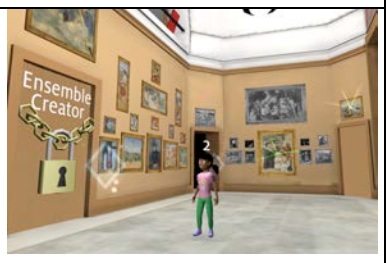


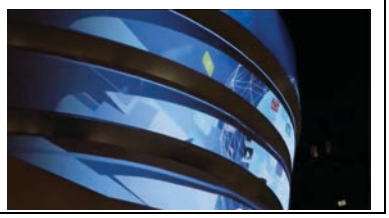
Figure 3 Free internet and commercial media influences on museums

Examples of the Model Linking Social, Educational and Business Trends and Museums

Models provide a theoretical base but the practical bottom-line question is what actual examples of this newly-born progeny of the big bang business-museum union are we witnessing? Table 2 below lists some examples. To highlight four: the 3D interactive art adventure (1) is a device adopted from the video game industry, while the online video chat (3) is an approach owing its origins to TED talks. The Twitterchats (5) derives from social media exchanges and the video competition (8) draws on the democratization of film and video-making.

Table 2　A Glimpse into the Future of Museum Education: Linking with Universities and Schools

Education Activity	Museum	Activity Goals	
1. 3D Interactive Art Adventure Mini Game Series KEYS TO THE COLLECTION	**The Barnes Foundation** Philadelphia, Pennsylvania Has other Collaborations with Lincoln University and University of Pennsylvania	Game-based learning Avatar art collector searches for clues Goal: Find the Gold key Youth-oriented	
2. **Interdisciplinary Digital Learning** Art & Environment/ Youth	Wexner Center for the Arts Ohio State University, Columbus, Ohio Also Collaboration with Central Ohio	Contemporary artists and environmental issues	
3. Online Video Chat Ask Big Questions—Conversation with Thought Leaders	The Metropolitan Museum of Art New York city	"Flipped approach": lectures and demonstrations online Also events onsite	
4. Writing Competition **"Words on Canvas"**	**Harn Museum of Art** University of Florida, Gainesville, Florida Also Collaboration with Santa Fe College	Writing poetry or prose about a work of art	

5. **Twitter Chats** **#BREAKFORART**	**Phillips Collection, Washington D.C.**	Virtual discussion about one artwork Mon.:1pmEST	
6. Online Collection Linked Open Data service	**Yale Center for British Art, New Haven, Conn.**	University-wide open access to collection online including paintings, sculpture, rare books, prints	
7. Artists and Hip Hop Artists Joint Events Project 15 Inter-Sessions talk series	**High Museum of Art** Atlanta, Georgia	Collaborative live performance and dialogue event featuring artists, art scholars and hip hop artists	
8.Worldwide Online Video Competition YouTube Play	**Guggenheim Museum** You Tube	The best 25 you tube videos (selected from 25,000 entries) were livestreamed and celebrated at a museum event	 

References for Table 2 are listed in Appendix 1

The Contemporary Art World: Crossing Borders into Intermediality

Another implication arising from the changes in museums can be explained as a proliferation of intermediality within contemporary art as evidenced in the actual museum programs described in Table 2. Blurring the lines between art and media is a commonly accepted definition of intermediality, or as Rajewsky (2005) puts it, in a broader sense, intermedial can be explained as the "configurations which have to do with a crossing of borders between media."
Initially, intermediality first became the focus of research inquiry among German art and media scholars in the 1980's (e.g. Joachim Paech 2010). Chief among them was Jürgen Müller's influential perspective that "any single medium harbours within itself the structures and operations of another or several other media", which attempted during this earlier period (the 1980's) to recognize the emerging complex relationships between technology, media and "Western visual arts" (Müller, 2010).

Among the recent wave of intermediality sub-theories which have emerged in scholarly discourses, the concept that is most relevant for this study focuses on its practical application as a tool of analysis. The kind of art analysis necessary in museum education is more closely akin to Rajewsky's focus on intermediality as a "critical category for the concrete analysis of specific individual media products or configurations. In practice, this concept means that we not only analyze each medium used in a multimedia art piece, but also the relationship between the various media. In this regard, intermediality then offers museum educators, visitors and scholars a means to delve more deeply and acquire a better understanding of multimedia installations, computer and digital art, sound art and other types of intermedial phenomena.

More recently, art critic Terry Smith (2010) espouses this same view and goes one step further by adopting a new paradigm, "contemporaneity" or the "contemporary condition" to explain the current state of the art world. "Contemporaneity" exists on two levels – (1) the predominance of intermediality in artwork and (2) the escalating growth of art from diverse non-Western cultures.

Conclusion

This article has looked at a variety of factors influencing changes occurring in forward-looking museums, particularly how it impacts on education. This transformation from preserving the past through static displays to designing exhibitions based on surprise and interaction was precipitated in part by museum visitors who have prodded museums to become participatory, postmodern, intermedial and entertaining.
We have shown that museums still play a central role in storing and preserving cultural artifacts. The way that curators present artifacts in exhibitions deeply influences the narratives attached to the artifacts. Previously, the trend was to present single viewpoint descriptions of artifacts; now many museums are trying to encourage multiple interpretations. The museum educators' role is crucial in working together with curators. As museums seek to increase the number of visitors, they need to become less elitist and appeal to a greater diversity of visitors' backgrounds.

At a less profound level, some visitors will see the museum as an alternative to visiting a movie theater or a theme park. Museums cater to these visitors by dressing up educational exhibitions with the costume of entertainment. Some visitors will be expecting their own ethnic affiliations and beliefs to be represented, and not just those of the dominant culture in a community. Some visitors will be looking for non-traditional views of history, and multiple interpretations of an event to reassure themselves that they are being presented with an objective viewpoint. Given the prominent position museums occupy in communities, in terms of history, education, architecture, their education programs need to be as grounded as school curricula and syllabi. Museum curators may well be expected to be creative directors as well as businessmen but within the museum hierarchy, archivists will find their role extended to include elements of activism.

The museum visits and pilot study also revealed that at least in the United States, museums are increasingly developing their educational role by (a) partnering with schools, (b) offering resources to schools and (c) in the case of the larger museums competing with schools in formal learning leading to academic qualifications. Several researchers describe necessary steps in collaboration between schools and museums and conditions for successful collaborations" (Bobick and Hornby, 2013; Somerville, 2013; Egan and Baulier, 2015) such as preparing students for museum visits, use of professional teachers in museums, improving logistics such as crowd control, use of third-party organizations, developing formal qualifications and strengthening relations with key administrators.

Not all museums have full-time educators on their staff. Taking on the role of educator is something often taken on by curators or other museum employees, even docents (Somerville, 2013). Making the leap from museum expert to actually teaching a group of visitors is not something that comes as naturally as walking as Bartlett (2003) notes. As we have seen from data presented, the role of a museum educator becomes more clearly defined when they know their visitors, when they are informed by learning theory, and when they have competence in deploying appropriate technology.
Well-endowed museums, for example the Met, MoMA and Smithsonian museums are actively deploying extensive educational programs. These initiatives may be characterized as (a) informal learning, (b) non-formal learning such as in-museum workshops, or (c) formal learning such as online course offerings leading to a qualification in museum research, librarianship, curatorship, or art appraisal or technique.

In considering the educational role that museums are taking on, it must be borne in mind that educational programs require funding and resourcing. Although it is obvious that money is essential for survival, museums nevertheless have the capacity to enhance communities and simultaneously, "enrich the quality of individual lives" (McCarthy 2005; Weil, 2000). In the past, school parties were the focus of educational programs but now this has extended to a broader demographic of visitors.

Smaller museums lack the resources of the larger museums and follow a different approach but nevertheless shadow the larger museums' educational developments. They increasingly offer resources to assist with individual and school visits and are attempting

to improve their websites to complement their collections. Pamela Lee (2012), comments that the speed of change in the art world “is both escalating and accelerating, appearing to turn so fast — always on the brink of its next obsolescence — that its maps can no longer be read as fixed or stable, its borders blurred at best.” This applies to all museums facing the future and racing to keep up.

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