DOTTORATO DI RICERCA IN DESIGN
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DESIGNING FOR PARTICIPATION WITHIN CULTURAL HERITAGE

Participatory practices and audience engagement in heritage experience processes

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ABSTRACT

The research has the overall aim to envision novel paradigms for audience engagement within cultural heritage, starting from the assumption that the emergence of new patterns for culture transmission opened to new possibilities for participatory approaches in the design of heritage experiences.

Concepts such as public access, public participation, sharing, interactivity, culture as entertainment, and participatory design are not new within museums and cultural institutions at large. On the contrary, as many of the assumptions that shape most of the contemporary cultural programs are rooted in the last century, it is noteworthy not the novelty of the idea of public participation within the museum studies domain, rather the fact that it is not yet structurally integrated in the contemporary approaches of design practices in museums, although an extensive bibliography is available and several best practices have been developed in recent years.

The research relies upon the main hypothesis that, although through diverse participatory modalities and design approaches, the active engagement in cultural programs might enhance the visitor's experience of heritage and respond to the emerging expectations of contemporary audiences. In fact, within the contemporary socio-cultural context – also thanks to the current development of the participatory web with its fundamental characteristics of interactivity, sharing, and common authorship – the traditional portrait of the public as a passive spectator is inapplicable to the contemporary user, and the changing relation between audiences and cultural institutions increasingly needs to be reconsidered. The research investigates the emerging role of cultural institutions, which are shifting from being provider of content and designer of experience, to becoming facilitator of experiences around content, often supported by

the potential that digital technologies have in enabling novel practices of audience engagement within heritage.

These issues are regarded from the design perspective that bridges the instances of the other domains that the research intersects: cultural learning, digital technologies, and social issues related to community engagement, empowerment, and development within cultural institutions.

Exploring both projects in which audience participation is the final outcome of the design process, and projects based on participatory design methods, in which the participation occurs during the design process, the investigation is aimed at identifying and assessing novel design approaches that might support practices of heritage valorization that is socially sustainable for the community that might benefit of that heritage.

The final output of the research is a general design framework aimed at supporting and facilitating the work of designers and museums professionals within an effective design process that is capable of catalyzing the multiplicity of the voices involved in the project, including those of institutional staff, external stakeholders, and visitors.

PUBLICATIONS

During the research, the following papers, partially based on the work described in this thesis, have been published:

2014 (forthcoming)
Radice, Sara. 2014. "Designing for Audience Participation within Museums. Operative Insights from the Exhibit Everyday History." In *The International Journal of the Inclusive Museum*.

Lupo, Eleonora, Lucia Parrino, Sara Radice, Davide Spallazzo, and Raffaella Trocchianesi. 2014. "Migrations and Multiculturalism: A Design Approach for Cultural Institutions." In *Migrating Heritage. Experiences of Cultural Networks and Cultural Dialogue in Europe*, edited by Perla Innocenti, 65-78. Ashgate Publishing, Ltd.

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Radice, Sara. 2013. "Patrimonio Culturale Digitale: Visitatori, Utenti, Partecipanti - Digital Cultural Heritage: Visitors, Users, Participants." In *Progetto e Memoria del Temporaneo – Design and Memory of the Ephemeral*, edited by Eleonora Lupo and Raffaella Trocchianesi, 69–82. Design & Cultural Heritage. Milano: Electa.

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INTRODUCTION

The first chapter introduces the general framework within which the research is framed, explaining the research hypothesis and questions, the main objectives, and the expected results. The last section of the chapter then describes the research phases and methodology, and the structure of the thesis.

1.1. Framing the research: hypothesis and research questions

Concepts such as public access, public participation, sharing, interactivity, culture as entertainment, and participatory design are not new within museums and cultural institutions at large. On the contrary, many of the assumptions that shape most of the contemporary cultural programs are rooted in the last century. What is then noteworthy is not the novelty of the idea of public participation within the museum studies domain, rather the fact that it is not yet structurally integrated in the contemporary design approaches within museums, although an extensive bibliography is available and several best practices have been developed in recent years. For example, AAM's publications document since the 1980s[1] the trend of a paradigm shift in museums' institutional values, governance, management strategies, and communication ideology that focuses on positive accountability and audiences' outcomes.

Within the contemporary socio-cultural context – also thanks to the current development of the participatory web, with its fundamental characteristics of interactivity, sharing, and common authorship – the traditional portrait of the public as a passive spectator is anachronistic and inapplicable to the contemporary user, and therefore the relation between audiences and cultural institutions increasingly needs to be reconsidered. With the emergence of the concept of a participatory public, in fact, the traditional top down model of knowledge transmission from an authoritative source to a passive audience has increasingly moved toward a "transactional model" (Hooper-Greenhill 1995) based on multidirectional flows of information between the cultural institution and its visitors, which are regarded as cultural producers and participant in the process of creation and dissemination of museum practices (Bodo, Gibbs, and Sani 2009).

The research investigates the emerging role of GLAMs, Galleries, Libraries, Archives, and Museums, which are shifting from being provider of content and designer of experience, to becoming facilitator of experiences around content.

This novel approach is often enabled by the enormous potential that digital technologies have in allowing innovative practices of audience engagement within heritage. The abundance of international conferences that have emerged in recent years,[2] investigating the impact of new

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1   *Governments Performance and Results Act; Model of Social Enterprise; Museums for a new Century; Excellence and Equity* to cite some examples.

2   "Museum and the Web", "MuseumNext", "International Cultural Heritage Informatics Meeting", "Archeology and Intelligent Cultural Heritage", "Computing Archeology", "Electronic Visualization and the Arts" to name a few of the established conferences.

technologies within museums, is indication of a greater interest on this theme. Moreover, some of the research projects recently developed by the research group Design for Cultural Heritage (DeCH) of the Department of Design, Politecnico di Milano, within which this research is framed, are also evidence of the strategic importance of the topic.

For example, the project PRIN 2008 "The design of the cultural heritage through history, memory and knowledge. The Intangible, the Virtual, the Interactive as a design subject in a time of crisis"[3] investigates the potential of the virtual as exploratory field in creating new spaces of culture, new ways of enjoying the intangible dimension of the web, and the application of multimedia tools and languages in physical spaces where the virtual is considered not only as language of representation but also as 'consistency' of project.[4]

Moreover, the work of Research Field 05 "Exhibition Design, Technology of Representation and Experimental Actions" of the European project "MeLa-Museums in an Age of Migrations"[5] is aimed at developing experimental design proposals for museum exhibitions and user-centered approaches focusing on the role of digital technology in innovating the understanding and practice of diversity in the museums of the twenty-first century.[6]

However, even though the adoption of digital technology in the design of cultural experiences have become emblematic of the emergence of novel communication models focused on democratizing the interpretation of cultural contents, often, even when digital media replace traditional ways of conveying meanings, the modalities by which visitors might

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3   The project is characterized by interdisciplinary contributions that involve diverse research units of Politecnico di Milano, Università degli Studi di Palermo, Università degli Studi di Genova, Università degli Studi di Bologna.

4   To deepen the topic see the final project's book *Design and memory of the Ephemeral* (Lupo and Trocchianesi 2013).

5   "MeLa-Museums in an Age of Migrations" is a four-year interdisciplinary research project funded in 2011 by the European Commission under the Socioeconomic Sciences and Humanities Programme (Seventh Framework Programme). The research reflects on the role of museums and heritage in the twenty-first century with the main objective of identify innovative museum practices that reflect the challenges of the contemporary processes of globalization, mobility and migration (http://www.mela-project.eu).

6   The MeLa Book 05 *Representing Museum Technologies* (Allen and Lupo 2012) constitute the first outcome of the work carried out by Research Field 05, led by Copenhagen Institute of Interaction Design, and including staff members from the research group Design for Cultural Heritage (DeCH), Design Department, Politecnico di Milano, the Newcastle University, Museu d'Art Contemporani de Barcelona, Muséum National d'Histoire Naturelle, National Research Council, L'Orientale University of Naples, The Royal College of Art, and University of Glasgow.

engage with heritage remains essentially the same (McLean 2007). There is therefore the need for a greater understanding of the relationships, differences, and possible synergies between the different emerging technologies to meet visitors' expectations of experiencing heritage interactively thanks to the integrated use of diverse media in a continuum of actual[7] and virtual spaces.

Letting visitor actively participate in cultural programs does not imply that the skills of the specialists are no longer important in establishing the authority of a museum's program or exhibition, but rather, as museums give more credence to the diversity of ideas, cultures, and values in contemporary society, museum professionals are becoming increasingly conscious of the need to presenting offerings that incorporates both the perspective of stakeholders and current and potential visitors and involve choice, personal reflection, interaction and customized elements.

The research regard these issues from the perspective of the design discipline, and, without excluding the technical competencies typical of the exhibit design, underpins a more comprehensive notion of heritage valorization design oriented, in which the designer assumes the strategic role of mediator among the actors involved in the design process.

The research stems from all these remarks and relies upon the main hypothesis that, although through diverse participatory modalities and design approaches, visitors' active engagement in cultural programs and exhibitions might enhance the experience of heritage and respond to the emerging expectations of contemporary audiences. From this main hypothesis derive the research questions that guide the research discussion:

1. Which theories of learning can be fostered in the development of participatory programs and exhibitions?

    a. How the communication style used in exhibitions might influence visitors' engagement?

2. Can audience participation in cultural programs foster intercultural dialogue among participants?

3. What are the possible roles that visitors could assume while experiencing heritage in a participatory way?

    a. What level of social engagement can be pursued?

    b. Do diverse participatory models influence it?

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7   The term "actual" is here used as opposed to "virtual," according to the terminology defined by Gilles Deleuze for which it is not correct to oppose the 'real' to the 'virtual' because it is instead the opposite of "possible". In fact: "the virtual is fully real in so far as it is virtual" (Deleuze 1968, 208). The "possible" is what do or does not occur, and the "real" is the "possible" that come true. The "virtual" does not have to be realized, but actualized. For a further discussion of the topic see also Lévy, Pierre. 1997. Il virtuale. Milano: Raffaello Cortina. PP. 132-136.

4. Are digital technology effective tools in enabling and mediating participatory experiences of heritage?

   a. Which technologies should be preferred?

   b. And in what contexts?

   c. What are the relationships, differences, and synergies between emerging digital technologies?

5. How multiple personal interpretations of heritage could not imply an abdication of curatorial, educational or design responsibility?

6. Are participatory design methods and tools needed if designing *for* participation?

7. What could be a general framework to support the design of a participatory experience of heritage?

   a. Which are the main constrains to consider while designing a participatory experience and how are they interrelated?

   b. What process could best support the design of a participatory experience of heritage?

   c. Which competences are required?

Design is the point of view that informs the approach of the research and bridges the instances of the other domains that the research intersects: cultural learning, digital technologies, and social issues related to community engagement, empowerment, and development within cultural institutions.

1.2. Objectives and expected results

The outlined scenario requires a redefinition of the cultural spaces, opposing the terms 'physical', 'fixed', and 'closed', to the terms 'virtual', 'mobile', and 'open', as well as a redefinition the role of GLAMs as facilitators of dialogue among diverse audiences through heritage interpretation.

The research has the overall aim to envision novel paradigms for audience engagement within cultural heritage, starting from the assumption that the emergence of new patterns for culture transmission opened to new possibilities for participatory approaches in the design of heritage experiences.

Critical and analytical objectives include the definition of the theoretical framework, as well as the selection and analysis of case studies in order to identify interpretative guidelines useful for the development of the design scenario.

The research explores those projects in which audience participation is the final outcome of the design process, as well as projects based on

participatory design methods, in which innovation is in the process. In both cases the discussion is aimed at identifying and assessing novel design approaches that might support a process of heritage valorization that is socially sustainable for the community that might benefit of that heritage.

Specific objectives include the declination of the identified participatory models into a pilot project in order to verify the theoretical assumptions. Expected results include the definition of a general design framework and a practical meta-design tool for the design of effective participatory experiences of heritage aimed at supporting and facilitating the work of designers and museums professionals within a design process that is capable of catalyzing the multiplicity of the voices involved in the project, including those of institutional staff, external stakeholders, and visitors.

1.3. Phases and methodology

The three-years long research is structured into four main phases articulated in several substeps summarized in Figure 1:

1. Definition of the theoretical framework;
2. Study of cases;
3. Envisioning;
4. Editing.

Methodology encompasses different strategies of research that have been selected in order to achieve the specific goals of each phase.

The first phase is aimed at investigating the theoretical context within which the research is framed and identifying the research hypothesis, questions, and objectives. In this phase, specific literature review investigated issues related to the change of patterns for cultural transmission in the contemporary "participatory culture" (Jenkins 2009, 5–6), as well as the changing constituencies of cultural audiences and the social role of cultural institutions as places for cultural encounter, toward the definition of the notion of audience participation as intended within the research. Secondary research is the method chosen to address these issues in order to identify the tools useful to the study of cases and to gain insights for the definition of the general design framework. This preliminary investigation was approached from a design perspective and has been used to support and inform the design scenario. In order to maintain the theoretical framework up to date, desk research continued throughout the research, transversely to the specific objectives of the other phases.

The second phase has the goal of mapping diverse approaches to participation within cultural institutions in order to outline the current

PHASES	OUTCOMES	METHODS
1. FRAMING THE RESEARCH		secondary research
1.1. GENERAL LITERATURE REVIEW	*hypothesis, questions, and objectives*	
1.2. SPECIFIC LITERATURE REVIEW	*definition of the theoretical context*	
2. STUDY OF CASES		case study
2.1. PRELIMINARY ANALYSIS OF CASES	*mapping of diverse approaches to participation within GLAMs*	
2.2. ANALYSIS OF SELECTED CASES	*methods and tools enabling participation in diverse cultural contexts* *operative insights*	
3. ENVISIONING		participatory activities / qualitative surveys
3.1. DEFINITION OF DESIGN FRAMEWORK	*desing-oriented scenario* *recursive design process* *meta-design tool*	
3.2. PILOT PROJECT	*assesment of the design framework*	
4. FINAL EDITING	*assesment of results* *editing*	

Figure 1. Research phases, outputs, and methods

tendencies for what concern methods and tools that enable audience participation in diverse cultural contexts, ans isolate and analyze the most meaningful cases. Case study is the strategy of research used in this phase, relying on literature search, interviewing, and observation. The outcome of the study of cases is the identification of operative insights that inform the design framework developed in the following phase.

The third phase moves from the development of a design-oriented scenario, which is drawn upon the theoretical assumptions discussed in the previous research phases, and has the main goal to define the meta-design tool that supports museums' planner and designers to control the most critical issues related to the design of participatory experiences of heritage. In this phase, one pilot project has been structured following the proposed design framework. The research strategies used in this phase include participatory activities with actual audiences and qualitative surveys conducted by means of interviewing and observation aimed at assessing the results of the pilot project for having feedbacks on the effectiveness of the design framework.

Finally, in the fourth phase, the results are assessed and framed within the up-to-date theoretical context, toward the final editing of the research.

1.4. Structure and chapters

The structure of the thesis broadly follows the steps described in the previous section and is organized in three parts.

The first part presents the literature review and is aimed at framing the research.

- Chapter two addresses issues related to the change of patterns for cultural transmission within the contemporary socio-cultural context in which open models for the production and sharing of knowledge have increasingly affirmed in many disciplinary domains;

- Chapter three presents the implications of the emergence of novel audience's motivations and expectations for visiting museums, looking forward the adoption of participatory approaches in cultural projects;

- Chapter four introduces the concept of social inclusion within cultural institutions and discusses the need of a redefinition their role as facilitators of dialogue among diverse audiences through heritage interpretation;

- Chapter five, which ends the first part of the thesis, aims at defining the notion of audience participation as intended within the research and presents diverse participatory models.

The second part is structured in three chapters that illustrate the analysis, mapping, and discussion of data through case studies.

- Chapter six describes the preliminary selection and analysis of projects featuring participatory processes in the collection and experience of heritage, with the goal of outlining current tendencies for what concern the main methods and tools that enable audience participation in diverse contexts;

- Chapter seven systematizes and discusses the main data collected through the preliminary analysis of cases, highlighting the main tools that enable participatory experiences, participants' role and their level of social engagement, and the diverse modes of participation in respect to the desired institutional goals to be achieved;

- Chapter eight, the last chapter of the second part of the thesis, presents the further analysis conducted on fifteen cases that have been identified as of particular interest for the research;

Finally, the third part presents and discusses the results.

- Chapetr nine proposes a critical elaboration of the main operative insights drawn upon the analysis described in chapter eight and presents a design-orienting scenario. The objective is helping outline guidelines useful for the development of the general design framework;

- The general design framework, which is the final output of the research, is described in chapter ten along with a practical meta-design tool aimed at facilitating the design of effective participatory experiences of heritage;

- Chapters eleven describes and discuss how the design framework has been applied to the development of the pilot project;

- Finally, the last chapter summarizes the research contribution and discusses the limits as well as the future works.

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> *"We need to accept that the visitor day may require greater ranges of experience to maintain their engagement.*
>
> *And we must acknowledge that, while the experience is in our control, the visitor outcome is not.*
>
> (Braden, Rosenthal, and Spock 2005)

BACKGROUND AND LITERATURE REVIEW

2

THE CHANGE OF PATTERNS FOR CULTURAL TRANSMISSION

Chapter two aims at framing the research within the contemporary socio-cultural context in which open models for the production and sharing of knowledge have increasingly affirmed, allowing a shift from hierarchical to networked social and organizational models.

The first section presents the current development of the participative web, which, with its fundamental characteristics of interactivity, sharing and common authorship, is seen as facilitator of coordination and collaboration whitin systems in which producers, amateur and consumers can all produce or consume at the same time.

The following sections then outline opportunities and critical issues of web-based participatory models in the contexts of museums and cultural institutions at large, with the goal of outlining if and how these models may be transferred to actual cultural spaces.

2.1. Interaction, sharing and common authorship as key words of a participatory culture

The research fits into a socio-cultural scenario in which the widely distribution and relatively cheapness of the tools needed for producing information, knowledge, and culture has led to a shift from a mass-mediated public sphere to a networked public one, with greater opportunities for the community to participate to the social and political life.

In *The rise of the network society*, Spanish sociologist Manuel Castells highlighted, among the firsts, the shift from social and organizational models composed of groups and hierarchies to models based on the metaphor of the network as a representation of the social morphology of the contemporary society. A little over a decade since its first publication in 1996, the hypotheses set out in this groundbreaking books have largely been verified.

> The shift from traditional mass media to a system of horizontal communication networks organized around the Internet and wireless communication has introduced a multiplicity of communication patterns at the source of a fundamental cultural transformation, as virtuality becomes an essential dimension of our reality. (Castells 2010, xviii)

The new social structure, conceptualized by the author as the "network society", is made of networks in all the key dimensions of social organization and social practice. Open source software, wireless communication, and the fast development of transmission capacity in the telecommunication networks are among the factors that in recent years intensified the transformation of communication technologies. These factors and the simplification of the processes of on-line publishing through Wikis, blogs and social networks, blurred the boundaries between mass-media communication and different form of communication, leading to the creation of "mass self-communication" (Castells 2010, xxx), a new form of multimodal communication self-generated in content, self-directed in emission, and self-selected in reception by many who communicate with many. Shifting the focus of knowledge from individual expression to community involvement, the contemporary socio-cultural scenario is what MIT researcher Henry Jenkins defines as "participatory culture" characterized by:

> (1) Relatively low barriers to artistic expression and civic engagement, (2) strong support for creating and sharing creation with others, (3) some type of internal mentorship whereby what is known by the most experienced is passed along to novices, (4) members who believe that their contribution matter, and (5) members who feel some degree of social connection with one other. (Jenkins 2009, 5–6)

These theories may be effectively exemplified by the metaphor of the starfish, representing leaderless organization based on collaborative systems enabled by the network, as opposed to the spider, representing traditional top-down organization, like Brafman and Beckstrom (2006) propose (Table 1).

Traditional top-down organization	Leaderless organization
The boss	A peer
Control	Trust
Directive	Collaborative
Order	Ambiguity
Organizing	Connecting

Table 1. Comparison between the main features of traditional top-down organizations and "starfish organization". Adapted from Brafman and Beckstrom 2006, 130

Leaderless organization shows evidence of the crowd behavior enabled by the network, a medium that for its nature activates the crisis of the hierarchical structures and challenges the notion of a centralized intelligence in favor of forms of distributed or "collective intelligence" (Lévy 1994), namely a group of individuals acting collectively in certain contexts showing behaviors that seem to respond to a form of intelligence. Malone, Laubacher, and Dellarocas (2009) provide a definition of collective intelligence answering to four key questions associated with a single task in a collective intelligence system: who is performing the task and why; what is being accomplished and how.

In traditional organizations the answers to the questions "what is being accomplished" and "how" are the mission and the organizational structures and processes. In collective intelligence systems, people can create something new (e.g. a piece of software, a blog entry) or evaluate and select alternatives by means of individual decision (e.g. deciding whether to delete a Wikipedia article) or group decision (e.g. reCAPTCHA). The different members of the crowd may make their contributions and decisions independently of each other (e.g. Flickr), or may exist strong interdependencies among the modules submitted by different contributors (e.g. Linux and any other open source software project).

While traditional organizations have relied more heavily on money as a motivating force, in systems based on collective intelligence, important motivators for people to participate include recognition (e.g. "Power seller" on eBay or "Top reviewer" on Amazon), the desire to be recognized by peers for their contributions, the opportunities to socialize with others, and the desire to contribute to a cause larger than themselves.

All these concepts have emerged thanks to the current development of the so-called web 2.0. The expression, often also used in other domains than the Internet, was coined in 2004 by Tim O'Reilly as the label for a

series of conferences organized by his publisher. Defining the web as "an application that gets better the more people use it" (O'Reilly 2005), his project was to use the content produced by users in different forms, and organize it in ways that made it attractive for the advertising market. The instrumental nature of web 2.0 and its commercial aims are evident and have been followed by the emergence of new intermediaries (who decides how to organize contents and for what purpose) between the users and the contents. However, accepted the labile – and not always positive – nature of this label, it is possible to ascribe to the 2.0 phenomenon all the participatory tools that facilitate collaborative relationships and that have led to a greater ease of knowledge sharing and production. In fact, although on the one hand, user-created content are suitable to be object of commercial exploitation, on the other hand, a wide range of different approach may be included within the 2.0 umbrella, such as the social tagging[1] for the categorization and the sharing of contents, data aggregation, participation and openness in terms of data and intellectual property.

Given these considerations, it is nevertheless worth to highlight that people who actually create original contents only represent a small percentage of the web users, which also include who just enjoys, comments, and shares such contents. A survey by Forrester Research, Inc. on U.S. adult online consumers in 2007, defined six social technographics groups of users in a ladder of increasing levels of a participation, including (Li 2007, 4–6):

- "Creators" who publish blogs, maintain web pages, and upload videos and other multimedia contents at least once per month. They include only 13% of the adult online population and are generally young, evenly split between men and women.

- "Critics" who comment on blogs and post ratings and reviews using other blog post or product as the foundation for their contribution. They represent 19% of all adult online consumers and on average are several years older than creators.

- "Collectors" who tag pages and save URLs on social bookmarkings. They contribute to aggregate contents being produced by creators and critics because they create metadata that are shared with the entire community. They represent 15% of the adult online population and are male-dominated.

- "Joiners" who use social networking sites and engage in other social computing activities. They represent 19% of the adult online population and are the youngest group.

- "Spectators" who read blogs, watch peer-generated video and listen to podcast. They represent 33% of the adult online population and

1   Or folksonomy from the contraction of the words 'folk' and 'taxonomy'.

CREATORS 13%	publish or maintain web pages or blogs; upload original video
CRITICS 19%	comment on blog; post ratings and reviews
COLLECTORS 15%	use rss; tag web pages
JOINERS 19%	use social networking sites
SPECTATORS 33%	read blogs; watch peer-generated video; listen to podcast
INACTIVES 52%	none of these activities

are the main audience for the social content made by everyone else. Creators, critics, collectiors, and joiners can also be spectators.

- "Inactives" who do not participate but are affected when the activity of others gets covered in the news media. More likely to be women, they are 52% of online adults and have an average age of 50.

These data basically confirm the "90-9-1 principle" or "participation inequality" in an online context (Nielsen 2006), according to which 90% of the participants of a Internet community view contents without actively participate (*lurkers*), 9% edit content, and just 1% actively create new content.

However, though not necessarily creators of original contributions, the users of web 2.0 are increasingly starting to build horizontal and multimodal networks of communication based on their initiatives, interests, and desires. Thanks to free or bargain softwares and services that made online publishing easy and accessible to everyone, today millions of bloggers publish daily for an audience that is collectively larger than any single media outlet can claim. Only to cite an example of this trend, the "distributed narratives" (Walker 2005) are a novel participatory approach to storytelling created by Internet users. Compared to the authorial, these narratives are characterized by novel communication patterns and languages, developing the story on multiple media and reducing or amplifying the narrative independently for what concern space, time, and actions. The ability of anybody to produce, or "producerism" (Searls 2006), is blurring the boundary between professionals and amateurs in a new two-way marketplace, where it is possible recognize an "architecture of

Figure 1. Social technographics groups of consumers in the participation ladder. Segments include consumers participating in at list one of the indicated activities at least montly. Source: Forrester's NACTAS Q4 2006 Devices & Access Online Survey. Adapted from Li 2007, 5

Figure 2. Architecture of
participation. Adapted
from Anderson 2008,
84

participation" (O'Reilly 2004) emblematic of the systems designed for user contribution in which producers, amateur and consumers can all produce or consume at the same time.

> We are witnessing the migration of millions of formerly passive consumers of content onto the web, where they are become active participants in a freewheeling, sprawling, argumentative and distributed conversation. […] Readers are participants, not audience being messaged. (Boyd 2009)

Although the contemporary cultural landscape may be described as a continuum of mainstream hits and underground niches with commercial and amateur content competing equally for attention, the majority of the blogs have zero comments. From this aporia – that questions interactivity as the main feature of web 2.0 – media theorist Geert Lovink (2008) starts his critics to the free access to knowledge through the Internet and to the so-called participatory democracy, questioning the economic model of web 2.0. Similarly, with the sentence "you have to be somebody before you can share yourself", American writer and computer scientist
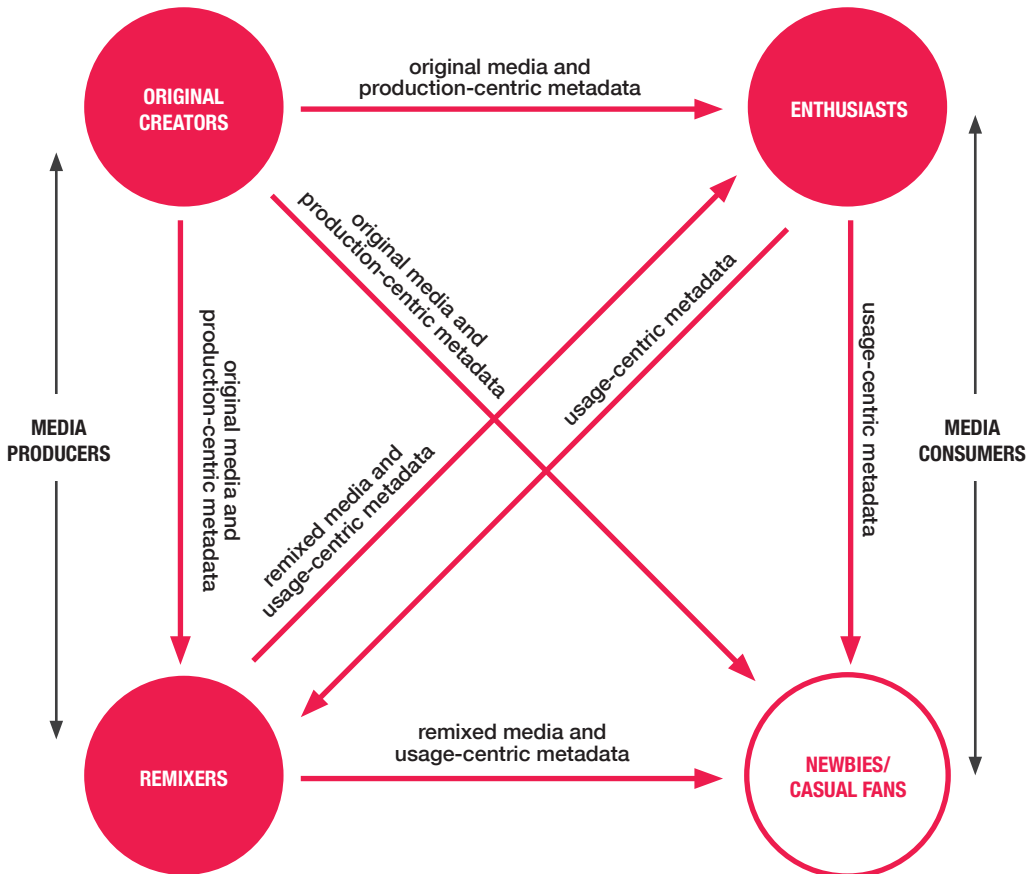
Jaron Lanier (2010, xiii) raises important questions about the quality and authorship of user-created contents, and sets key issues about intellectual property and authors' reward. Why users should continue to publish private data, and share for free original contents, while few web 2.0 entrepreneurs are making profits? What price are users willing to pay for their free access to contents?

The free availability and use of user-created contents would activate an non-capitalistic economic model – in a world dominated by capitalism – unsustainable in the long-term because it would not allow authors to move from amateurism to professionalism. According to these authors, instead of celebrating amateurism, Internet culture should therefore help amateurs to become professionals, and sharing original contents for free should be a voluntary act and not the only available option. Moreover, if on the one hand the use of open cultural content may encourage the creative remixing and increase the diffusion of ideas, on the other hand the continuous fragmentation of the contents and the progressive disconnection between these fragments and their source – the original work or the author – would lead to the impossibility of refer to the original idea.

Philosopher and sociologist Theodor Nelson proposed instead an economic model in which bits have value and everyone would have access to everyone else's creative content at reasonable prices, so that anyone – amateurs and professionals – might be able to get money from their work, accordingly to the number of access. Along the line proposed by Nelson, Lanier suggests the use of dongles (an electronic content protection device that may be coffee mug, bracelets, promotional items, souvenirs, etc.) to provide a physical approach creating artificial scarcity for digital cultural expressions, which in this way would be monetized through "a universal, democratic and level micropayment system" (Lanier 2010, 202).

This model is in contrast with the economic model of the Long Tail first theorized by Chris Anderson in a *Wired* article on October 2004[2] according to which we are turning from a mass market to a global economy of online distribution where products with low demand and poor visibility may collectively comprise a market that rivals the mainstream products. Anderson (2008, 52–57) distinguishes three factors, or "forces" that cause the emergence of Long Tails and that allow this economic model to be sustainable (Table 3): (1) the democratization of the tools of production that lengthens the Tail; (2) the democratization of distribution that allows more access to niches reducing the costs and fattens the Tail; and (3) the connection between supply and demand that introduces consumers to new available goods, driving business from the head to the Tail of the curve of demand.

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2   http://www.wired.com/wired/archive/12.10/tail.html.

Force	Business	Example
Democratize production	Toolmakers, producers	Digital video cameras, desktop music and video, editing software, blogging tools
Democratize distribution	Aggregator	Amazon, eBay, iTunes, Netflix, blogs
Connect supply and demand	Filters	Google, blogs, customers' reviews, iTunes' recommendation

Tools like iTunes' recommendation, blogs, and websites collect customers' reviews helping people to find what they want in this new superabundance of variety, and drive the business from hits to niches. In this way, million of regular people are the new tastemakers, acting as individuals (e.g. Amazon reviewers), as parts of group organized around shared interests (e.g. bloggers), and also automatically tracked by software watching their behavior and drawing conclusions from their actions (e.g. taggers on Flickr). Even for what concern non-digital products, consumer behaviors may be described with oxymoronic terms such as "massclusivity" or "mass customization" (Anderson 2008, 11), highlighting the shifting from bargain shoppers who buy branded commodities to mini-connoisseurs who set their taste apart from others.

It is noteworthy the possibility of transferring the logic of the Long Tail to the market of cultural heritage, characterized by restrictions in the distribution access to cultural assets and experiences. In fact, in the Long Tail economy the influence of people's opinions mediates supply and demand, and in the cultural domain the spontaneous word of mouth is already the most effective communication channel to share information among visitors of galleries, museums, and libraries. Introducing cultural institutions in targeted niches of communication, as well as leaning on existing networks (like blogs, online communities, social networking etc.) to convey information and contents, and identifying alternative ways for attracting dispersed audiences aggregated by common interests, represent therefore some of the main challenges for those who deal with heritage marketing and valorization (Bollo 2008, 152).

2.2. Opportunities and critical issues of open models for knowledge production and sharing within cultural institutions

The outlined cultural scenario, characterized by a "convergence culture" (Jenkins 2006), underpins the recognition of the notion of open culture, a philosophical approach that reject the notion of proprietary and exclusive

knowledge and the traditional categories of copyright (Parente and Lupo 2008), because everyone can appropriate of user-created contents, modify and free redistribute them back into the community. To deeply analyze this concept and its implications in the cultural domain, it is essential to understand the key concepts of open source from which open culture derives and other phenomena enabled by the Internet in which – although in different ways – it is the choral action of a group of people that generates value and innovation.

In the following paragraphs the phenomena of open source and peer production will be briefly described, without pretending to consider the vast literature about the subjects, but with the precise goal to clarify why and how these concepts may apply to participatory models of audience engagement within the context of cultural institutions.

2.2.1. OPEN SOURCE AND THE NON-AUTHORITATIVE NATURE OF USER-CREATED CONTENTS

Open source is a philosophical approach born in the computer domain, where open source software is any software distributed under a license that allows users to change or share the software source code. It is the opposite of traditional intellectual property systems like patents and copyrights, which pursue to keep knowledge restricted to the creators and people they choose to sell the knowledge to.

The Open Knowledge Foundation (2010) sets the conditions of distributions for which a work (music, films, books, scientific, historical, geographic data, government and other administrative information) may be defined open, including in particular that the work shall be available as a whole and at no more than a reasonable reproduction cost in a convenient and modifiable form, and that the license must allow for modifications and derivative works to be distributed under the terms of the original work.

Of course open source philosophy is not a new concept: the same ideals can be seen in the 1948 work *The Human Use of Human Being* by Norbert Wiener, in which the author raised the question of how knowledge could be regenerated only through its free and open transmission. His idea was that the information could not be regarded as a commodity like any other because it was the result of a dynamic process (Fiormonte, Numerico, and Tomasi 2010, 34–36), anticipating today's debates about methods of protection of digital works and copyright. The rise of the Internet as infrastructure[3] has made possible for new knowledge to be developed,

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3   It is to note that the Internet itself is an open source project: the researchers who collaborated in the development of ARPANET collectively worked to the improvement of common tools (free of patent protection), contributing without any personal gain except the reputation among their peers, built through the success of their interventions (Fiormonte, Numerico, and Tomasi 2010, 52).

shared and refined in ways that emphasize its character as a common good, rather than as something to be owned and enclosed.

Even if strictly speaking it is therefore incorrect to call 'open source' anything that do not have a source code, there are many evolutions of open source methods that have been applied to other sectors than computer softwares. Adapting the open source fundamental principles of "sharing the goal", "sharing the work", and "sharing and the result" described by Goetz in his 2003 *Wired* article "Open Source Everywhere"[4], the common value of the knowledge being created is the primary concern to be pursued through the partition of the projects into smaller tasks distributed among volunteers who recognize the same goals and agree on how to meet it.

For example, it is worth to report the definition of "Open Source Design" given in the issue 948 of the magazine *Domus*, as "[…] an emerging paradigm describing new procedures for the design, construction and operation of buildings, infrastructure and spaces" (Antonelli et al. 2011). This definition underlies the three main categories of activity that may be observed in projects inspired by open source ideas: "open knowledge", "open team working", and "open (online) conversations" (Mulgan, Steinberg, and Salem 2005, 28).

Similarly, Bauwens (2009) defines "open design" as a process based on:

1. The voluntary participation of contributors who do not have to ask permission to participate and have free access to the raw material;

2. Design for inclusion based on low thresholds for participation with freely available modular activities validated by peer governance;

3. The creation of commons using licenses that insure that the result is available to all without permission.

According to the open Knowledge Foundation (2010) "[…] a piece of data or content is open if anyone is free to use, reuse, and redistribute it – subject only, at most, to the requirement to attribute and/or share-alike". Within cultural institutions, this means that web-based digital open collections should not have restrictions of access and use, and should enable a "cultural remix" approach (Eschenfelder and Caswell 2010), allowing any web user to reuse and recombine established artistic or cultural items including images, text, video and audio (digitized or digital born) to create new original works. Starting from these considerations some key issues regarding the use of UCC by museums, galleries, and libraries in institutional contexts arise. Should cultural institutions structure UCC in their archives without a process of mediation or control? And who – and with which resources – could be in charge of this process?

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4   http://www.wired.com/wired/archive/11.11/opensource.html.

Moreover, as GLAMs earned their reputation over the years by preserving the quality and truthfulness of the information they offer by having full control over acquisition, organization and annotation of the items, would cultural institutions retain their authoritative position or it would be questioned when lettin audiences to participate in these activities?

In open projects, the process is then as important as any goal, and can only occur within an open community of peer production and in a market of free peer-to-peer (P2P) distribution enabled by mass volunteerism and amateurism. Harvard Law School professor Yochai Benkler (2002), first introduced the notion of "commons-based peer production" describing a new model of production practice depending on individual actions self-selected and decentralized, in which the creative energy of large numbers of people is coordinated into large projects without traditional hierarchical organization. According to the author – who expanded significantly these ideas in his 2006 book *The Wealth of Networks* – peer production would have systematic advantages over markets and managerial hierarchies especially when the object of production is information or culture and forecasts a possible redefinition of economic relations based on the distribution of individuals' responsibilities.

In fact, while in vertical hierarchies relationships are defined by power, in P2P Communities hierarchies are defined by the reputation (measured by the amount of attention a product attracts) that becomes a centripetal force of influence toward the other producers (Menichinelli and Valsecchi 2007, 4) and can be converted into jobs, tenure, audiences, and other lucrative offers, to the extent that it is possible to speaks of "reputation economy" (Anderson 2008, 73–74) within the peer-to-peer domain. Wikipedia is a successful example of a project based on radical decentralization and self-organization, in which ten of thousand of people ranging from real experts to amateurs curate the entries, improving the quality of the encyclopedia over time. Wikipedia is a emblematic case that demonstrate the most surprising characteristic of decentralized systems: albeit for various motivations, if people are allowed to participate in an open system, they want to contribute and their contributions are outstandingly accurate (Brafman and Beckstrom 2006, 74).

However, although being arguably the bigger and more up-to-date encyclopedia in the word, Wikipedia should be only the first source of information and not the last, because at the individual entry level the quality varies. This is the nature of user-created contents, which are uncertain, variable and diverse at the microscale (i.e. one customer review on Tripadvisor), although successful at the macroscale (i.e. the average of several reviews on Tripadvisor).

The Organization for Economic Co-operation and Development defines UCC as content made publicly available over the Internet, which reflects

a certain amount of creative effort in the creation of new material or in the adaptation of pre-existent contents to create something new, and which is created outside of professional routines and practices (Wunsch-Vincent and Vickery 2006, 4).

Issues related to the nature of UCC include how to preserve freedom of expression, while ensuring content quality and accuracy and avoiding inappropriate and illegal content. Moreover there is the need of dealing with new issues surrounding privacy and identity theft and regulatory questions (e.g. taxation, competition etc.) in virtual worlds. Dealing with these issues, since 2002 the non-profit organization Creative Commons has been issuing licenses to allow a flexible use of certain copyrighted works. A Creative Commons (CC) license works alongside copyright and enable authors to modify their copyright terms to best suit their needs (for example giving audiences the right to share, use, and even build upon a work they have created) in order to ensure peer-to-peer propagation of ideas and fame (Creative Commons Organization 2013).

2.2.2. CROWDSOURCING AND SOCIAL ENGAGEMENT WITHIN CULTURAL INSTITUTIONS

The neologism crowdsourcing first appeared in 2006 article "The Rise of Crowdsourcing"[5] on *Wired* magazine, coined by Howe and Robinson, but the concept dates back to the eighteenth century when the British government ran an open contest (the Longitude Prize) to source a decent maritime navigation solution. Other cases of crowdsourcing *ante litteram* are for example the early editions of *The Oxford English Dictionary* that were written collaboratively by volunteers contributors, anticipating by two centuries the Wiki model.

According to Howe (2006) crowdsourcing:

> […] Represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers.

In his definition of crowdsourcing, Brabham (2008) highlights instead some criticisms about this model of distributed problem solving, because the products developed by the crowd become property of the company who requested the collective design. Even thought according to Brabham on the one hand "It is a model capable of aggregating talent, leveraging ingenuity while reducing the costs and time formerly needed to solve problems", on the other hand "[…] we should remain critical of the model

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5   http://www.wired.com/wired/archive/14.06/crowds.html.

for what it might do to people and how it may reinstitute long-standing mechanisms of oppression through new discourses" (Brabham 2008, 87). Governments and industry have indeed embraced crowdsourcing through open prize contests designed to stimulate innovation, particularly in the fields of environment, science and technology. Basically, the crowdsourcing process starts with a company that post a problem online, then the possible solutions to the problem are offered by a vast number of individuals and the winning ideas are awarded, and finally the company produces the idea for its own gain.

Cultural institutions may undertake projects of crowdsourcing, using social engagement techniques to achieve a shared goal by working with online communities collaboratively as a group. There are several examples of crowdsourcing projects in which participants are asked to cooperate performing certain punctual tasks to the creation of a comprehensive project. Library efforts in this direction are for example the "Project Gutenberg",[6] which has already digitized more than 6,000 books thanks to hundreds of volunteers typing-in classical literary works, and the related project "Distributed Proofreading"[7] that employs hundreds of copy editors to make sure the Gutenberg texts are correct. Only to mention some further examples "Transcribe Bentham",[8] "The Oxyrhynchus Project (City of the Sharp-Nosed Fish)",[9] and "World Memory Project"[10] are other projects of crowdsourcing aimed at the transcription of ancient classical text and at the indexing of microfilm.

Although social engagement is not a new concept for cultural institutions, as it shaped most of cultural programs since the pre-digital days, digital technologies may enable more opportunities for the public to effectively communicate with cultural institutions and contribute with concrete activities. For example, as libraries have a massive users base and both broad and specific subject areas that have wide appeal, crowdsourcing may potentially bring great benefits to these cultural institutions. Even if in most cases digital volunteers work without any reward, they may be acknowledged through simple and cheap rewarding systems like naming them on the item they have created, rewarding high achievers in ranking tables, or giving certificates of achievement and promotional gifts. In fact, among the factors that motivate digital volunteers, rather than a financial consideration, are the desire to help in achieving the common

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6   http://www.gutenberg.org.

7   http://www.pgdp.net/c.

8   http://blogs.ucl.ac.uk/transcribe-bentham.

9   http://www.ucl.ac.uk/classics/research/research-projects/#OXY.

10   http://www.worldmemoryproject.org.

goals, the aspiration to play an important role in a particular field, as well as spending some time volunteering for the community. Giving users the possibility to interact with data, as well as create their own content and upload it into libraries' collections may increase public ownership and responsibility of the individual towards the cultural assets, while building virtual communities and user groups. At the same time, digital social engagement may help libraries achieving those goals they would never have the time, financial or staff resource to achieve on their own (Holley 2010). The contribute to the cultural institution by the online community requires different types of interaction including correction and transcription tasks, contextualization, complementing collection, classification, co-curation, and crowdfunding (Oomen and Aroyo 2011), depending on whether it is intended to pursue the quantity or quality of the contributions (Uribe and Serradell 2012), as summarized in Table 3.

Table 3. Examples of the types of tasks requested to users, depending on the purpose of the project of crowdsourcing and explanatory examples

Goals	Crowdsourcing type	Tasks
Quantity	Classification	Gathering descriptive metadata related to objects in a collection (social tagging)
Circumstantial quality	Correction and transcription	Finding and marking the errors in catalogues
		Transcribing and correcting digitized texts
		Rating the reliability of information
Strategic quality	Contextualization	Describing items that are not accessible if not described, like digitized photographs
	Complementing collections	Adding user-created content to be included in exhibits or collections
	Co-curation	Using the expertise of non-professional curators to advantage the cultural institution
	Crowdfunding	Supporting initiatives gathering money or other resources

2.3. The transfer of web-based participatory models to actual cultural spaces

As seen in the previous chapter sections, there is an undeniable trend toward users' active engagement, open source products and open culture enabled by the Internet. The way audiences interact with online content have changed audiences' expectations also for what concern their experience

within GLAMs, both online and in actual settings. Nevertheless, while the Internet is made up of virtual communities that act in the digital space, often without any physical connections, the contexts in which the design discipline operates are physical and connected with local communities and territories, and the digital space is used almost exclusively as a means of communication and to access to resources.

The research introduces the idea of embracing in physical settings the modalities of audience participation that characterize digital ecosystems with the aim of going beyond the distinction between virtual and actual spaces in designing the visitors experience.

In recent years cultural institutions have recognized the enormous potential that digital technologies may provide for attracting visitors and allowing them to explore their collections at different levels of engagement. In fact, appropriate digital technologies can assist those involvement strategies that museum educators and docents have applied for many years. The abundance of international conferences[11] that investigate the impact of digital technologies within museums is evidence of a greater interest on those themes.

According to Witcomb (2007, 37) these development have become emblematic of the emergence of a new model of museum focused on providing both intellectual and physical access and democratizing the interpretation of its holding. However too often even when digital media replace traditional ways of conveying meanings, the visitor experience remains essentially the same (McLean 2007), even in the case of digital collections that in most cases are displayed reproducing the same curatorial and display models of physical galleryies, without promoting novel kinds of user experiences. There is therefore the need for a greater understanding of the relationships, differences, and possible synergies between the different emerging technologies to meet visitors' expectations of experiencing heritage in an active way thanks to the integrated use of diverse media in a continuum of actual and virtual spaces.

Within the emergence of a public increasingly likely to expect to be part of the narrative experience, cultural institutions – that have traditionally been based on linear models of knowledge transmission from an authoritative source to a contemplative audience – are now forced to rethink this model. It is in fact not possible to ignore the paradigmatic shift enabled by the Internet, in which "absorption" is replaced by "interpretation" (Valsecchi 2009, 76) in a circular model of knowledge sharing (Figure 3).

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11   For example "Museum and the Web", "MuseumNext", "International Cultural Heritage Informatics Meeting", "Archeology and Intelligent Cultural Heritage", "Computing Archeology", "Electronic Visualization and the Arts", to name a few of the established conferences.

TRANSFER	SHARING
TRANSMISSION	TRANSMISSION
⬇	⬇
ABSORPTION	INTERPRETATION
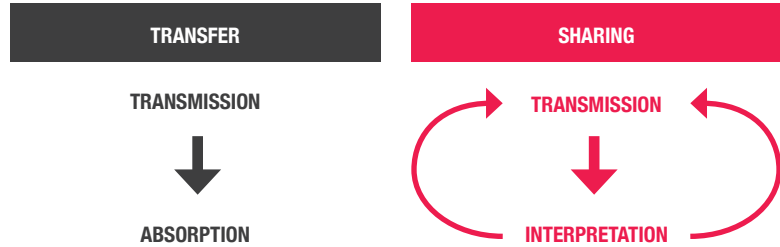
Audiences, in fact, increasingly expect from GLAMs higher level of inter-activity and programs tailored to individual needs, including:

> [...] "flexible, co-created, immersive experiences that enable connection be-tween individuals" [...] "multiple ways to engage in meaningful social and civic interactions" [...] and [...] "an 'architecture of participation' that en-ables broad-based collaborative engagement among all institution audienc-es and stakeholders". (Institute of Museum and Library Service 2012, 500)

To cite an evidence of this trend, the American Alliance of Museums outlines a future scenario in which a "creative renaissance" driven by tech-nological tools will result in the prevalence of online distribution of cul-tural content, and in the centrality of users' active role in the interpretive and educational processes. Within this context, museums as incubators of creative expression will "play an even greater role as economic engines in their communities, helping harness the value generated by the emerging wave of creative-driven commerce and exchange" (Center for the Future of Museum 2008, 17).

The Dutch branch library of Haarlem Oost represents an exemplary case of the so-called library 2.0, a model for library services in which the re-lational models of the participatory web may find their application in the physical context (Casey and Savastinuk 2006), thanks to a bi-directional flow of information between users and the library that uses customer's contributions to improve library services. The 2006 project by the archi-tect Jan David Hanrath provides a system of physical tagging of books by readers embedded into the normal use of the library. The return area has variously-labeled boxes for patrons to use with tags which range from "inspiring", "nice", and "insipid", to "highly recommended", "great family books", and "just returned". When returning a book, patrons just have to drop it in box labeled with the tag they consider most appropriate. In this way users don't have to add anything to their standard library routine, not even log on to the library's online catalogue because the self-RFID logistics automatically assigns the tag to the book in the database.

Although the key principles of library 2.0 have been part of the ser-vice philosophies of many libraries since the 19th century, web 2.0 technologies – both in physical spaces and through a dynamic OPAC

Figure 4. The phisical tagging system by Jan David Hanrath at Dutch branch library of Haarlem Oost. Image retrieved from http://www.archadia.nl/?p=295

interface – may help libraries to create a customer-driven environment, where library services are tailored to best meet customers' needs.

Similarly, Nina Simon, executive director of the Santa Cruz Museum of Art & History, explores how web 2.0 philosophies can be applied to museum design to make them more engaging and community-based, proposing the notion of museum 2.0. In her 2010 book *The Participatory Museum*, Simon gives a definition of a participatory cultural institution as "[…] a place where visitors can create, share, and connect with each other around content" (Simon 2010, ii). She envisions the museum as an interactive place, where visitors actively debate and construct knowledge, with a fundamental change of perspective in the object and purpose of the museum's mission.

Both the approaches of library and museum 2.0 stress the role of community participation as a cornerstone in re-establishing the role of these institutions. In fact, from being the expression of traditional and established institution's authority, a participatory cultural project becomes the instruments through which visitors acquire a crucial role in the interpretation of contents, and co-create novel ways to enhance their museum experience.

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3

VISITORS, USERS, PARTICIPANTS

This chapter begins outlining the need for cultural institutions to target their audiences with a more holistic approach that takes into account the motivations for which visitors decide to visit a museum.

The second section discusses the experience of visit focusing on the transformative and affective discovery of meaning that occurs through the objects on display.

The third section then presents the four main learning theories with the goal to outline how they influence the communication style used in exhibitions, leading to four main museums archetypes along the scale between the extremes of transmission and construction of knowledge.

Finally, the last section of the chapter discusses the tension between museums' educational function and public voices, highlighting how letting visitor actively participate in cultural programs does not imply an abdication of curatorial, educational or design responsibility, but rather implies presenting cultural offers that incorporates both the perspective of stakeholders and current and potential visitors.

3.1. Visitors motivations, expectations, and needs

Within communication system outlined in the previous chapter, in recent years in the field of marketing there has been the spread of terms such as 'dialogue', 'experience', and 'connection', which shifted the focus from 'consumers' to 'users' as individuals increasingly aware and critics in their buying decisions (Iabichino 2009). In fact in the contemporary "cross-media age" (Giovagnoli 2009, 34) – characterized by the spread of user-created contents enabled by the proliferation of free platforms for sharing – the traditional portrait of a passive and predictable audience is now anachronistic and inapplicable to the case of the contemporaneous *prosumers* or "Consum-Authors" (Morace 2008). In the marketing domain, while the term 'consumption' implies degradation, the term 'use' implies repeatability in relation to commercial goods; in the cultural domain, in which words such 'use', 'fruition', or 'experience' – which imply a relationship between cultural assets and users – already have replaced the term 'consumption' because of the renewable intrinsic value of heritage. In fact the notion of 'relational good' rather than 'durable good' better describes the nature of cultural assets characterized by proprieties of relational identity, reciprocity, simultaneity, and openness.

In the cultural domain, there is thus the need to focalize on the linking value of objects, instead than on their use value, in order to outline novel clusters of users' profiles belonging to "consumer tribes" (Cova, Kozinets, and Shankar 2012) that can be defined as a network of people who are linked by micro-cultures, such as a shared belief around a brand, similar system of values, lifestyle, etc., rather than social hierarchies. These new audiences have for example the characteristics of the contemporary flâneur outlined by Nuvolati (2002), or of the "barbaro-mutante" (mutant-barbarous) portrayed by Baricco (2010), expression of eclectic and syncretic individuals who proceed with flexible and wavering pathways, more and more guided in their choice of consumption by the frivolous, the excitement, the pleasure of the senses, and the futile. The "mass liturgy" (Polveroni 2010) that performs in art museums and cultural institutions at large often has a strongly tribal, but not necessarily uncritical, connotation produced through emotional experiences, which allow the individual to feel part of a community.

In the blog entry "The audience is dead – let's talk participants instead",[1] Jim Richardson introduces a third term to the established shift from 'consumers/visitors' to 'users', discussing the need to consider the new audiences as 'participants', and looking forward the use of participatory approaches in museums for marketing strategies and project of exhibition:

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1   http://www.museumnext.org/2010/blog/museum_audience_development.

> In terms of the audience being the receivers of a performance or service, 'audience' does not seem like the best way for us to describe the modern museum consumer. These are people who live increasingly digital lives, where they are not spectators, but active participants, positively engaged through outreach programs and projects. While it is unlikely that the use of the word 'audiences' will change, I think it is useful for us to think of the people who choose to interact with museums either digitally or by making a visit as 'participants'.

Focusing on users – or participants – of museums, there is the need to understand the constituency of these new audiences of cultural institutions. Being sensitive to museums' visitors, determining who they are and how they perceive the visit experience, is in fact the first step for helping museum staff to improve the quality of their offer.

In marketing and user-centered design, *personas* are fictional characters created to represent the different kind of users inside a specific demographic segment that potentially can use a service or a product. The system of *personas* is a useful tool for the evaluation of the user's desires and restrictions that may effectively be used to orient the decisions in a design process also within the cultural domain.

In particular museums professionals need to understand the constituency of both "actual audience", which are the people who go to the museum and participate in museum's programs, and "target audience", which are the people the museum is addressing (McLean 1993, 3–4). This distinction is particularly strategic in a time in which, as museums seek to attract and engage greater numbers of visitors, they are faced with increasingly diverse audiences.

Why do some visitor profiles have a track record of not using museums? What can museums do to become a vital part of the lives of people they don't serve now?

Although formal visitor research within GLAMs started in the 1930s, this discipline began to take root only in the 1980s in United States, driven by expectations of funding agencies that museums were able to demonstrate with real evidence their claims of audience impact (McLean 1999).

Today cultural institutions are economically, socially, and politically compelled to think seriously about who their visitors are and why they visit. Especially after 2008 worldwide financial crisis, governments are in fact increasingly cutting financial supports to cultural institutions and grant supports are becoming more challenging to obtain. Moreover, museums and libraries need to compete for audiences and resources not only against other non-profit institutions, but also against a rising number of for-profits institutions, which often have greater available funds.

3.1.1. DEMOGRAPHIC AND SOCIOGRAPHIC PROFILES

Many research that seek to portray the public of the GLAMs are based on the analysis of quantitative variables such as demographic and sociographic categories of age, level of education, gender, geographic provenance, ethnicity, and profession. Actual and target audiences are also categorized in according to the frequency (frequent, infrequent, non visitor, etc.) and the temporal component of the visit (hours, days and year). Marketing analysis also analyze the social arrangements, considering the social group of belonging (families, adults, school groups, etc.) to segment the market (actual audiences) and develop new audiences from those segments (target audiences) thanks to the planning and implementing of new dedicated programs.

Distinct researches about the profiles of museums visitors interestingly highlight pretty much the same demographic patterns, with only slightly differences between researches carried out in the US and in Europe. Women represent a slight majority of museums' visitors, with the exception of visitors to war and space museums (Bollo 2003, 30–37; Ligozzi and Mastandrea 2008, 26–31; John Howard Falk 2009, 27–34). According to a demographic study by the America Alliance of Museum, adults age 45–54 are traditionally the core audience of museum-goers, (Center for the Future of Museum 2008), and similar data provided by the National Endowment for the Arts[2] suggest that 75 percent of visitors to museums in the US are aged under 55, with a small majority in the 45-54 category. Analogously, recent surveys on UK visitors suggest increasing problem in attracting adults under 35, as well as, at the Australian Museum in Sidney, 28 percent of visitors are within the 35-49 age range (Black 2012, 21). A ten years demographic study at the Smithsonian Institution indicates instead a slight diverse pattern suggesting that adults between the age of 25 and 44 are disproportionally represented among museum audiences, with a prevalence of older visitors to art and history museums in respect to science museums (John Howard Falk 2009, 27–34). Similar data also emerges from a research at the Minneapolis Institute of Art with 34 percent of visitors included in the age group up to 45 (Ligozzi and Mastandrea 2008, 27), and a study on museum visitors in Canada reveals comparable attendance with a majority of adults visitors in the 35-44 range (Black 2012, 21). Up to 33 percent of museum visitors are under 16, making it likely that more than 60 percent of visitors include children in the group, either as families or school trips (Black 2012, 21). All these data highlight that senior citizens are significantly under-represented within the museum population, even if they could be an important

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2   US independent federal agency (http://arts.gov).

target group for specific services and promotion of events, as they represent a segment of population characterized by increasingly high levels of education, which is expected to grow numerically (Bollo 2003, 30–37).

The analysis of the levels of educations and the occupational categories confirms that lower class groups and citizens characterized by a lack of specialized knowledge and a cultivated aesthetic taste are largely extraneous to the cultural offer. Demographic and sociographic studies in fact reveal that the majority of museum visitors are better educated, wealthier, and hold better-paying jobs than the average citizen, and value worthwhile leisure time experiences that focus on learning and discovery (Bollo 2003, 30–37; Ligozzi and Mastandrea 2008, 26–31; John Howard Falk 2009, 27–34; McLean 1999, 86; Black 2012, 23–25). It is however important to underline that not all educate people visit museums, and likewise many less well-educated people visit museums regularly. So other factors must play a key role in the scarcity of museum-goers in the lower socio-economic groups, including for example the lack of exposure to museums as a child, high admission charges, and lack of access to private transport in rural locations (Black 2012, 23).

Museum attendance is also affected by the patterns of work and the changing structure of family life. Although these social forces affect all kinds of citizens, demographic categories of ethnicity and social classes shape these structures in ways that may prevent minority groups from visiting museums. In recent year particular attention has been focused about whether museums in US are under-utilized by non-majority population (African American, Asian American, and Latino populations), highlighting that non-Hispanic white Americans are over-represented among adult art museum visitors (John Howard Falk 2009, 29–30). According to the 2001 survey by Ipsos-MORI[3] (Black 2012, 22) a similarly pattern emerges in UK where all groups other than whites (Asian or British Asian, black or British black, mixed ethnicity, and Chinese) are under represented. These differences in museum attendance according to in ethnic patterns may have several explanations, including historically-grounded cultural barriers to participation that make museums feel exclusionary to many people, no strong tradition of museum-going habits, and the influence of social groups to encourage museum-going rather than other leisure activities (Center for the Future of Museum 2008). However, these data must be framed and re-considered in the scenario of the rapid changes in terms of race and ethnic composition, that affect especially the cities of the Western world. For example, in the US the group that has historically constituted the core audience for museums – non-Hispanic whites – will be in the probable future a minority of

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the population (Center for the Future of Museum 2008). There are in fact 214 million migrants worldwide, which could reach 405 million by 2050 and young people represent the demographic group most affected by these changes (IOM 2010), leading to the construction of complex identities and to the formation of novel and hybrid forms of cultural expression, overriding traditional racial and ethnic categories.

Reflecting these issues, the Center for the Future of Museums (2008) have outlined a future scenario for museums and museum visitors, resulting in these main trends:

- The core audience will continue to consist of well-educated professional classes with a higher percentage of white people than in the wider population, even if the population will continue to become more diverse and increasingly fragmented;

- People will live longer and will be more highly educated. They will be more likely to demand for programming that support intellectual activities, and to seek opportunities to volunteer with educational institutions. Moreover issues of physic access will become more critical;

- There will be growing demand for family-focused programming and the social experience of museum visiting will be increasingly important;

- People will look for engaging experiences shaped by their lifelong exposure to the participative Web and they will be less likely to accept a passive role in their visit experiences.

3.1.2. MOTIVATIONAL PROFILES

This short *excursus* on some of the demographic researches conducted in the last ten years, rather than providing a comprehensive picture of demographic and social characteristics of museums' visitors, demonstrates that, although essential, quantitative data do not provide enough information to understand why people decide to visit a museum.

Variables like age, gender, race and ethnicity, being essentially unrelated to museums, tell effectively nothing about how individuals might relate to the cultural institution, which is instead a key information for analyzing how museums can responds to the needs and expectations of their public. Understanding the visitor experience requires a more holistic analysis that tooks into account the "visitor's identity-related visit motivations" (Falk 2009, 35) that are the reasons for which visitors decide to visit a museum and which make sense of their museum experience.

These motivations converge around few main categories identified by Theano Moussouri (Falk, Moussouri, and Coulson 1998) which reflect the social and cultural functions of the museum as perceived by visitors:

- "Llace" representing the reasons related to the museum location (e.g. holiday or day trips);
- "Education" representing the reasons related to the aesthetic, informational, or cultural content of the museum;
- "Life-cycle" representing museum-going as a repeated activity that takes place at certain phases in one's life, usually related to childhood;
- "Social event" representing museum-going as a special social experience with friends or relatives;
- "Entertainment" representing a set of leisure-related reasons for visiting a museum;
- And "practical issues" representing external factors such as weather, proximity to the museum, time availability, crowd conditions, etc.

In recent years, the focus on motivations has resulted in the segmentation of museum visitors in new ways, and most heritage organizations have sought to define motivational profiles based on visitors' motivations and personal identities, rather than on demographic or sociographic information.

Independent researcher John Falk (2009, 190–206) identifies five specific identities of museum goers reflecting visitor individual needs and motivations:

- "Explorers" that wish to satisfy personal curiosity or general interest in discovering more about the topic matter of the institution in an intellectual challenging environment;
- "Facilitators" that wish to engage in a social experience with someone whom they care, satisfying her/his needs and desires in an educationally supportive environment;
- "Experience seekers" that wish to collect an experience mainly for fulfilling the expectations of others, with the desire to be exposed to the ideas that exemplify what is intellectually most important within their community;
- "Professional/Hobbyists" that have very conscious and specific reasons for visitong, like interest in the topic, or the desire to use the visit to extend their professional and vocational goals in a setting with a specific subject matter focus;
- "Rechargers" that wish to experience a physically, emotionally and intellectually recharge in a refreshing environment, avoiding the noisiness and ugliness of the outside world.

It should be noted that the social group types do not imply one specific identity at all cases.

Similarly Sachatello-Sawyer and her co-authors (2002, 8–10) analyze a wide variety of programs from the perspective of planners, instructors, and participants, profiling four main segments of participants in according to their primary motivation for attending museum programs.

1. "Knowledge Seekers" that are the largest subgroup of adult participants in museum programs and seek challenging content, a broad array of learning activities and additional resources that allow them to follow up their interests;

2. "Socializers" that attend museum programs expressly for social interaction with family members or friends, using the visits as an opportunity to spend time together;

3. "Skill Builders" that like to learn by doing and wish to improve specific skills and gain new ones.

4. "Museum lovers" that are the core audience for most adult programs and often also volunteer in several areas of the museum.

Other significant studies in this area include the research conducted by the UK Arts Council England (2008) that breaks down English adult population in terms of their engagement with the arts and identifies 13 distinct segments, also including non-visitors.

1. "Urban arts eclectics" (5%) are highly qualified, wealthy, and in the early stages of their career. They are already highly engaged with the arts and likely to be receptive to new information;

2. "Traditional culture vultures" (4%) have achieved a high standard of living and are at a later stage of life. They are already highly engaged with the arts, and have the time and the financial means to attend arts events;

3. "Fun, fashion and friends" (18%) are in the early stages of their career and just starting families. Although they express interest in the arts, their attendance typically consists of infrequent visits to mainstream arts events;

4. "Mature explorers" (11%) are typically middle-aged, have higher levels of education and display environmental and social awareness through their lifestyle choices. They engage with the arts when they come across them but are unlikely to specifically plan to go;

5. "Dinner and a show" (20%) have progressed to a relatively high position in their work place and are approaching retirement. They are infrequent attenders at a limited number of arts events, responding to offers that position the arts as entertaining, relaxing and sociable;

6. "Family and community focused" (11%) are typically in their 30s and 40s, and have a strong sense of community and family. Their

attendance is infrequent, as they engage through occasional visits to family-friendly arts events;

7. "Bedroom DJs" (3%) are in their late teens or 20s, still living with their parents and either starting out in low-levels jobs or finishing their studies. They express low levels of interest in the arts and do not attend any arts events, while they engage in the arts by actively taking part in creative activities;

8. "Mid-life hobbyists" (4%) are in their 30s, 40s and 50s and are often time-pressured, managing work and family commitments. They spend most of their free time at home with their family, and do not attend any arts events, while they engage in the arts through home-based creative hobbies;

9. "Retired arts and crafts" (3%) are aged 60 or over and favor a regular routine and a slower pace of life. They spend most of their free time at home engaging in home-based arts and crafts activities, and attending arts events does not fit into their lifestyles;

10. "Time-poor dreamers" (7%) are aged 16–34 and they are in the early or mid stages of their career, often managing work and family commitments. Attending arts events or actively taking part in creative activities do not fit into their lifestyles;

11. "A quiet pint with the match" (8%) are typically older, have limited financial means, and a low level of education. They spend most of their free time at home and attending arts events or participating in arts activities is not part of their lifestyle;

12. "Older and home-bound" (6%) is the oldest segment and they have very limited financial means. They do not attend any arts events or engage in any creative activities because of poor health or difficulty in getting to arts venues;

13. "Limited means, nothing fancy" (2%) typically have a low educational level and limited financial means. They do not attend any arts events or engage in any creative activities because of a number of practical reasons, including high cost, lack of transport, poor information, no one to attend with, and lack of opportunities near where they live.

The comparison of the aforementioned motivational profiles defined by diverse authors, highlights that learning is rarely the only reason to visit a museum and visitors want to be engaged, gain new understanding, and be entertained.

Even if it is certainly useful to consider the educative value of any exhibition as an important criterion for its success, museums should also fulfill the full range of motivations for which people decide to visit a museum.

Moreover, motivational studies have indicated that the majority of visitors come to museums as part of a wider social group and social interaction and collaboration are among the most prevalent reasons for which visitors come to museums with others. The desire to establish social relationships is thus an essential element for almost all visitors (Black 2012, 32), and both learning and education are intrinsic to museum's experience because embedded within each profile of museum goers.

By shifting the focus from demographics to identity motivation, cultural institutions can better understanding their audience's expectations, letting to important implication for museum design. This does not mean that museum professionals should design many different activities responding to each outlined profile, rather they should incorporate in the design of museum exhibitions a range of different experiences.

HIGHLY ENGAGED
attend and participate

TRADITIONAL CULTURE VULTURES	URBAN ARTS ECLECTICS

SOME ENGAGMENT
attend and participate

DINNER AND A SHOW	FUN, FASHION AND FRIENDS	MATURE EXPLORERS	FAMILY AND COMMUNITY FOCUSED	MID-LIFE HOBBYISTS	BEDROOM DJS	RETIRED ARTS AND CRAFTS

NOT CURRENTLY ENGAGED
do not attend and participate

A QUIET PINT WITH THE MATCH	TIME-POOR DREAMERS	OLDER AND HOME-BOUND	LIMITED MEANS

3.2. The visitor experience realms

Acknowledged that visitors decide to go to a museum as a place of informal learning as they have not chosen to enter a formal educational setting (such as a school or a university) nor another type of show (such as a theatre or an amusement park), visitors use the content of the exhibition as a source of information, through which they develop and negotiate their ongoing relationships and learn from each other. Intrinsic learning experiences that take place in museums indeed extends beyond content acquisition, and involves the visitor's larger framework of knowledge, expectations and interests. In fact, individual's motivations for visiting a museum, especially education and entertainment, significantly impact how, what, and how much visitors learn (John H. Falk, Moussouri, and Coulson 1998, 114).

In recent years, the boundaries between formal and informal learning are becoming less clear, as teaching and learning may take place throughout life in countless informal location. To cite evidence of this trend a huge educational offer have been made available widely online, creating meaningful dialogues and interactions among expert and interested individuals on an extraordinary scale (Institute of Museum and Library Service 2012, 498). More and more learning is taking place within the context of the "affinity spaces" (Gee 2005) that are public and shared spaces – both virtual and physical – where it is possible to identify peer-to-peer processes of knowledge sharing based on firsthand experiences, and where groups of people are drawn together because they share a particular strong interest or are engaged in shared activities.[4]

Understanding the visitor experience in this way, exhibitions need to be focused on the transformative and affective visitor experience of meaning discovering through the objects on display.

> The purpose of a museum exhibition is to transform some aspect of the visitor's interest, attitudes or values affectively, due to the visitor's discovery of some level of meaning in the objects on display – a discovery that is stimulated and sustained by the visitor's confidence in the perceived authenticity of those objects. (Lord 2002, 18)

Considering museum experiences from the visitor's perspective rather than that of the museum, museum evaluators Falk and Dierking (1992) propose the "interactive experience model", providing a framework for

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4   Researcher James Paul Gee differentiates the concept of affinity spaces from previous theoretical frameworks of participation such as communities of practice by shifting the focus from membership to interactivity. While the notion of community is inherently associated with affiliations and within a sense of bounded membership, affinity spaces are understood in terms of the interconnected activities and interests of a global unbounded collective.

understanding the visitor experience socially, physically, intellectually, and emotionally (Figure 2). According to this model the visitor experience is constituted by three main elements that, though not necessarily in equal proportion, holistically contribute significantly to the museum experience (Falk and Dierking 1992, 5):

1. Visitor's personal interests: visitors learns in a different ways according to their previous knowledge, experience and interests;

2. The social dynamic of the visit: the social group with which visitors came to the museum mediates the process of learning;

3. The museum physical setting: the specific exhibitions, programs, and objects that visitors encounter may contribute to or discourage the learning.

Figure 2. The interactive experience model. Adapted from Falk and Dierking 1992, 5
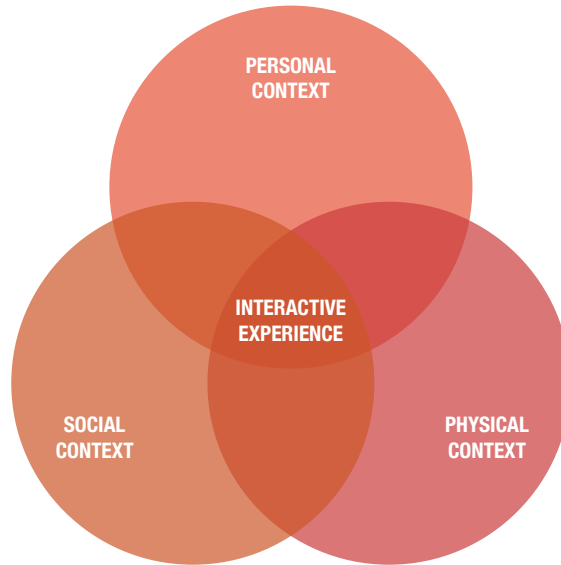
Similarly, the framework proposed by Hassenzahl and Tractinsky (2006) describes the user experience as influenced by (Figure 3):

1. The user's internal state (predispositions, expectations, needs, mood, etc.);

2. The characteristics of the designed system (e.g. complexity, purpose, usability, functionality, etc.);

3. The context within which the interaction occurs (e.g. social setting, meaningfulness of the activity, etc.).

Companies and organizations of all kinds, from theme parks, to retail stores and restaurants, have already structured their products and services

according to these principles, with the aim of establishing a relationship of trust with their audience. Within GLAMs there is a great potential to design distinctive experiences of visit that, giving more importance to audiences and meeting their individual needs and motivations, may attempt to go beyond a traditional and linear model of learning toward visitors' active involvement.

Authors B. Joseph Pine and James H. Gilmore in their renowned book *The Experience Economy* (1999) see experience learning as active in nature, stepping outside the realm of traditional education. According to Pine and Gilmore, any experience may engage people on two most important dimensions: (1) the level of people participation, and (2) the kind of connection or "environmental relationship" that connects the customers with the event. At one end of the spectrum of the first dimension (level of people participation) lies "passive participation" in which people–pure observers–do not direct affect or influence the event; at the other end lies "active participation" in which people–participants–personally affect the event, actively participating in creating their experience. At one end on the spectrum of the second dimension (kind of connection) lies "absorption", in which people attention is taken by bringing the experience into the mind, while at the other "immersion", in which people become a part of the experience itself (Figure 4). The combination of these dimensions defines four "experience realms" (Pine and Gilmore 1999, 30–38):

1. "Entertainment experiences" that occur when people passively absorb the experience through their senses (e.g. viewing a performance, listening to music, reading);

2. "Educational experiences" that involve the participation of the individual, by actively engaging the mind and/or the body;

3. "Escapist experiences" that are at the opposite pole of pure entertainment experience because people are completely immersed in the experience (e.g. theme park, casinos, virtual reality);

4. "Esthetic experiences" that occur when people immerse themselves in an event or environment, but without having effect on the environment (e.g. visiting an art gallery, observing a scenic view).

Referring to the possible ways of exploring museum exhibitions, which reflect both the type and the form (i.e. the used rhetoric narrative) of an exhibition, Barry Lord (2002, 19–22) describes four main modes of visitors apprehensions which–even if with a diverse terminology–broadly correspond to the four experience realms defined by B. Joseph Pine and James H. Gilmore for what concern the type of transformative experience of the visitors (Figure 4).

1. "Contemplation", in which visitors remain relatively passive physically, while may be very actively engaged intellectually and emotionally. The transformative experience of the visitor consist in the appreciation of the meaning and qualities of each individual work in and for itself;

2. "Comprehension", in which visitors are more actively engaged in the process of making relationships, relating and comparing the objects to one other. The transformative experience of the visitor consist in the discovery of objects in their context or in relation to the exhibition theme;

3. "Discovery", in which visitors are visually and intellectually engaged by means of visible storage methods of display. The transformative experience of the visitor consist in the exploration of individual examples of a range of specimens or artifacts, not necessarily in relation with each other;

4. "Interaction"[5], which is the most kinesthetically mode of visitor apprehension in which hands-on educational collections may be used to trigger a visitor response. The transformative experience of the visitor consists in the discovery of meaning that affects her/his interests and attitudes.

The four modes of visitor apprehension can co-exist in different types of exhibitions that may be "emotive", "didactic", "demonstrating phenomena", or "topical" (Belcher 1991, 59–65; McLean 1993, 26–30). Accordingly, the used rhetoric narratives might vary and include aesthetic displays, room settings, dioramas, objects grouped in thematic or contextual relationships, environmental display, systematic display, visible

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5 According to author Barry Lord, participation mode of visitors' apprehension is included in the interaction mode.

ABSORPTION

ENTERTAINMENT
EXPERIENCE

CONTEMPLATION

EDUCATIONAL
EXPERIENCE

DISCOVERY

PASSIVE
PARTICIPATION

ACTIVE
PARTICIPATION

ESTHETIC
EXPERIENCE

COMPREHENSION

ESCAPIST
EXPERIENCE

INTERACTION

IMMERSION
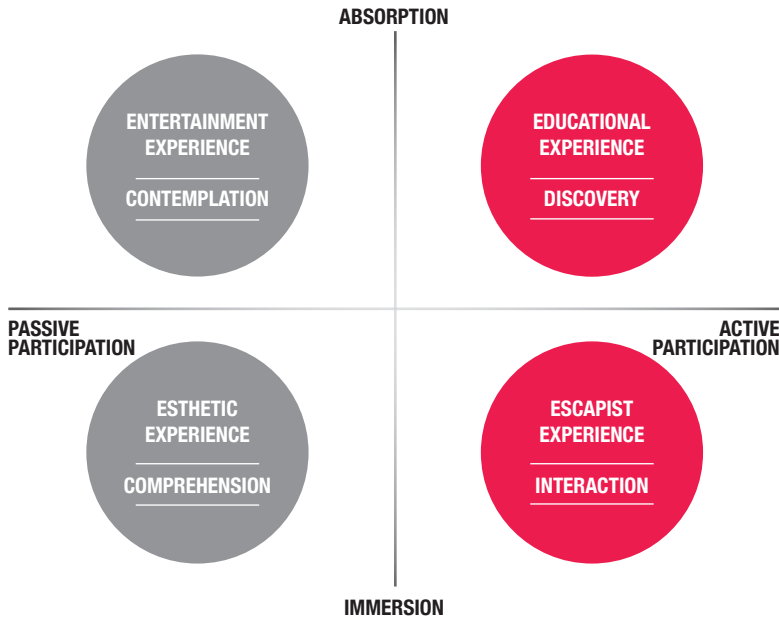
Figure 4. The modes of visitors apprehensions defined by Barry Lord (2002, 19–22) overlapped to the experience realms defined by B. Joseph Pine and James H. Gilmore (1999, 30–38)

storage, interactives, and responsive or dynamic devices (Belcher 1991, 58–66; McLean 1993, 22–30; Bedno and Bedno 1999). Table 1 highlights the existing relations among the modes of visitors' apprehension and the aforementioned narrative approaches of different exhibition types.

Mode of visitors' apprehension	Exhibition type	Rhetoric narrative	Central focus	Major activity
Contemplation	Emotive	Aesthetic displays	Artifacts	Looking
Comprehension	Didactic Topical	Room settings	Ideas Settings	Reading Listening Exploring
		Dioramas		
		Objects grouped in thematic relationships		
		Environmental display		
Discovery	Didactic	Systematic	Artifacts	
		Visible storage		
Interaction	Demonstrating phenomena Topical	Interactive	Activities	Doing Touching
		Responsive		
		Dynamic		

Table 1. Overview of modes of visitor apprehension in relation to exhibitions' types, rhetoric narratives, and visitors' major activities

3.3. Theories of learning and modes of visitor apprehension

The modes of visitor apprehensions and the rhetoric narratives are often the manifest expressions of the diverse educational models that have historically influenced the way museums display their collections and the communication style used in exhibitions, letting to four main museums archetypes: the "systematic museum", the "orderly museum", the "discovery museum", and the "constructivist museum" (Hein 1999), along the scale between the extremes of transmission or absorption and construction of knowledge.

Figure 5. Learning theories as reflected in museums (adapted from Hein 1999, 25), and the correspondent modes of visitor apprehensions

KNOWLEGE EXISTS OUTSIDE THE LEARNER

traditional lecture
SYSTEMATIC MUSEUM
CONTEMPLATION

discovery learning
DISCOVERY MUSEUM
DISCOVERY

PASSIVE PARTICIPATION

ACTIVE PARTICIPATION

behaviorist learning
ORDERLY MUSEUM
COMPREHENSION

contructivism
CONSTRUCTIVIST MUSEUM
INTERACTION

KNOWLEDGE IS CONTRUCTED BY THE LEARNER, PERSONALLY OR SOCIALLY
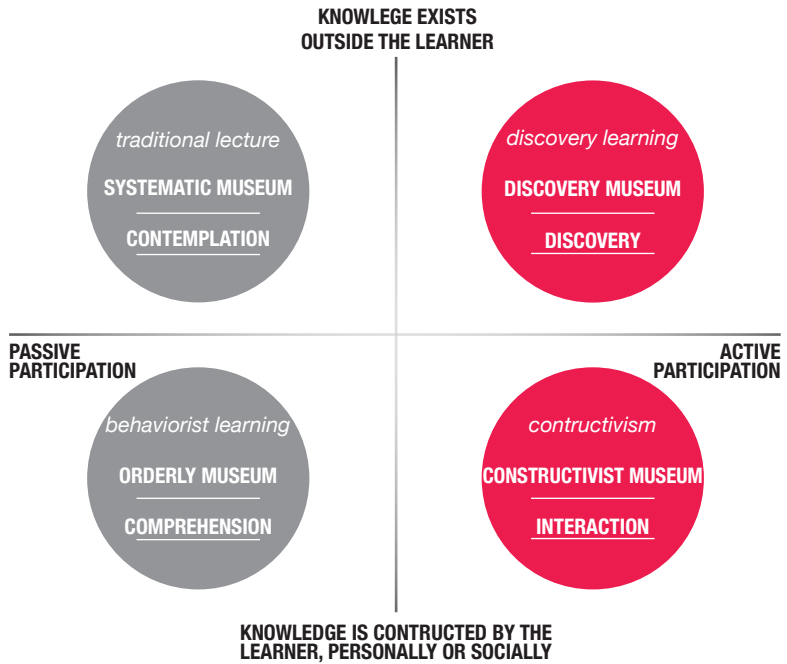
3.3.1. THE SYSTEMATIC MUSEUM

The "systematic museum" (Hein 1999), represented on the top left quadrant of Figure 5, is based on the belief that the content of the museum should be exhibited so that it reflects the true structure of the subject matter and in a manner that makes it easiest to comprehend. The concept of a linear textbook is grounded on this view of learning in which the author presents material in a logical sequence, starting with the simplest elements of the subject and moving on to more complex.

A specific interpretive context, within which the visitor could personally make sense of objects (beyond seeing them as simply beautiful or curious), is largely absent and the relationship between the exhibition and the visitor is largely passive.

Principles of learning	Main characteristics of the systematic museum
It uses a didactic, expository approach typically used in schools	It presents didactic components (labels, panels) that describe what is to be learned from the exhibition
	Specified learning objectives determined by the content to be learned
Organization is based on the subject, and teaching is done in a rational sequence	Exhibits are sequential, have a clear beginning and end, and a directed path
	The subject is hierarchical arranged from the simple to complex
What is taught is the 'true', from the simplest to the most complex subject	It claims the story it is telling is true with no alternative explanation
	There is no any indication that a different one at a later date or in another exhibition may replace this truth

Table 2. The principle of learning mirrored in the approach to exhibitions of the systematic museums (Hein 1991; Hein 1999)

This museum archetype is typical of art museums that become associated with quiet galleries where artistic treasures were displayed for contemplation be-cause of their visibility as symbols of civic pride in the twentieth century. Art museums, in fact, first saw themselves as preservers of rare and beautiful objects of intrinsic value, and their view of collecting has subsequently shaped the col-lections of many non-art museums (Skramstad 1999). Museums developed throughout the late 1800s and early 1900s usually show this kind of approach, as their role was confined largely to collections of art and natural sciences and the museum's major responsibility was to serve as a guardian of irreplaceable objects.

The mode of visitor apprehension that mirrors the systematic museum is the contemplation mode, in which the visitor experience is mainly

aesthetic. Exhibitions are often object-based with a minimum of visual interference and discrete subservient interpretative aids, or the displaying apparatuses are de-signed with the intention of having an effect on the emotions of the viewer.

THE ISABELLA STEWART GARDNER MUSEUM

An emblematic example of this kind of approach is the Isabella Stewart Gardner Museum in Boston, MA, established in 1903 by Isabella Stewart Gardner, an American art collector and patron of the arts, who housed her private collection in a building designed to emulate a 15th-century Venetian palace.

At his death, her will was that the collection would be permanently exhibited "for the education and enjoyment of the public forever" (http://www.gardnermuseum.org) according to the aesthetic vision of the time.

The collection, including significant examples of European, Asian, and American art, from paintings and sculpture to tapestries and decorative arts, is the Museum's strength, and the approach is collection driven, rather than audience focused.

In fact, although the Museum is trying to engage its audience in meaningful dialogues around the collections through lecture series, public tours, and school and community partnership programs, objects are still displayed in a very traditional way, according to Isabella Stewart Gardner's aesthetic vision and intent.

Figures 6 The Isabella Stewart Gardner Museum: the Blue Room. Photo retrieved from http://www.gardnermuseum.org

Figure 7. The Isabella Stewart Gardner Museum: the courtyard. Photo retrieved from http://www.gardnermuseum.org

3.3.2. THE DISCOVERY MUSEUM

The "discovery museum" (Hein 1999), represented on the top right quadrant of Figure 5, subscribes to the same positivist belief about knowledge as the systematic museum, but it takes a different view about how knowledge is acquired. This approach to learning is based on the theory of cognitive development, theorized by Swiss developmental psychologist Jean Piaget, who argued that people construct knowledge themselves, coming to realize concepts and ideas as they build them up using personal mental constructions or cognitive schemata. Learners also can acquire misconceptions that will be corrected as they learns new things, according to predictable developmental stages.[6] The discovery museum acknowledges the theories of psychologist and educational reformer John Dewey, one of the most prominent proponents of experiential education, according to the propensity for meaning-making from experience is intrinsic to human biology.

Principles of learning	Main characteristics of the discovery museum
Learning is as an active process: in order to learn people need to do and see rather than to be told	Exhibitions allow exploration, also without an intended path; There is a wide range of active learning modes.
Learners will arrive at conclusions that are determined by the educators	There are didactic components (labels, panels) that and prompt visitors to find out the answers for themselves; Visitors can assess their own interpretation against the correct interpretation of the exhibitions.

Table 3. Discovery museums responses to cognitive learning theory in their approach to exhibitions (Hein 1991; Hein 1999)

This theory is often reflected in exhibitions where, rather than organize the subject matter from the simplest to the more complex, contents are organizes so that they can be experienced by the use of hands-on learning. However, even if prior knowledge is seen as important, cognitive theory ignores the role of prior attitudes and beliefs, resulting in didactic exhibitions with one view and one voice and linear paths.

Among the first museums that adopted hands-on learning techniques to display artifacts and explain concepts, the Deutsches Museum in Monaco in 1906 used novel techniques such three-dimensional interactive models. Later, only to cite some of the most well known examples, in 1961 the designers Charles and Ray Eames planned the exhibition *Mathematica: A World of Numbers and Beyond* for the California Museum of Science and

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6   Much of the criticism of developmental theories has revolved around the issue of predictable developmental stages, which does not account for all areas of learning.

Industry,[7] where, beyond designing one of the first timelines used in a museum, they included six stations for interactive demonstrations of the displayed concepts.

The discovery mode of visitor apprehension is traditionally found in museums where objects are presented in a visible storage mode with the entire documentation available either on card or screen adjacent to the systematic display. Those familiar with the topic can find their way easily, and those unfamiliar can learn how the material is ordered by experts and find information for themselves, with an approach that mirrors the modalities of contents browsing characteristic of the web.

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7   The exhibition remained open until 1998 at the California Museum of Science and Industry, and it is currently on display at the Boston Museum of Science.

THE SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM

An emblematic example of this kind of approach is the Smithsonian National Air and Space Museum in Washington, D.C., that besides displaying the largest collection of historic aircraft and spacecraft in the world, hosts permanent and temporary exhibitions related to traveling in the air and space, a children's gallery on flight, an IMAX theatre, and a Planetarium show. With the exception of the children's gallery that proposes several interactives aimed at explaining to children the physical principles at the base of the flight, aircraft and spacecraft displayed in the stunning entrance hall are all displayed according to visible storage approach, even if in this case without glazed cases or other protective devices due to the massive dimensions of artifacts. All the other exhibitions present a thematic arrangement in which artifacts are displayed along with engaging labels, interactive cards or screen aimed at stimulating visitors' curiosity during the visit.

Figure 8. Two Russian human waste disposal units displayed in a case with an engaging label. Photo retrieved from http://www.flickr.com/photos/23165290@N00/7275763388

Figure 9. The entrance hall. Photo by the Author, 2013

3.3.3. THE ORDERLY MUSEUM

The "orderly museum" (Hein 1999) on the bottom left quadrant of Figure 5, reflects the behaviorist theory[8] of learning that roots back in the early twentieth century work of the German experimental school[9] and was the major model driving the learning research of the 1950s, based on the belief that knowledge is gained incrementally but need not have existence outside the learner. Traditional behaviorist theory suggests that the environment externally regulates learning with the learner as passive responder to stimuli[10] rather than active participant in the process. The purpose in education is to help a learner build initial schema by adopting knowledge from an instructor through use of the senses.

Principles of learning	Main characteristics of the orderly museum
The learner is seen as a passive responder to stimuli	Didactic components (labels, panels) describe what is to be learned from the exhibition
Knowledge is gained incrementally	Exhibitions are sequential, with a clear beginning and end, and an intended path for pedagogic purposes
There is no claim for the truth and it is more focused on method than subject	Exhibitions have reinforcing components that repeatedly impress the stimulus on the learner and reward appropriate response

Table 4. Orderly museums responses to developmental learning theory in their approach to exhibitions (Hein 1991; Hein 1999)

The main characteristics of the orderly museum result in the comprehension mode of visitor apprehension, typical of didactic exhibitions in which interpretative media specifically undertake instructional and educational functions.

This museum archetype is characteristic of history, archeology, and ethnographic museums, where objects are displayed either in room settings or dioramas, or grouped in thematic or contextual relationships because not intended to be studied as individual artifacts. The concept of environmental displays emerged in the 1970s when several museums started

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8   The behaviorist theory of learning roots back in the early twentieth century work of the German experimental school (John. B. Watson, Burrhus F. Skinner, and Robert Mills Gagné were major contributors to this theory) and was the major model driving the learning research of the 1950s.

9   John. B. Watson, Burrhus F. Skinner, and Robert Mills Gagné were major contributors to this theory.

10   Behaviorist theory of learning fits into this quadrant – in which knowledge is constructed by the learner – since behaviorism was originally a psychological learning theory and made no claims about the status of the knowledge gained from responses to stimuli (Hein 1999).

to substitute the glass barriers and flat-wall presentations with an open presentation, creating for the visitor the illusion of being inside the exhibition, rather than on the other side of the glass, and later putting visitors entirely into replicated or imaginary environments that totally surrounded them on all sides, often providing a whole range of experience – touch, sound, and smell – in addition to the visual.

Thematic exhibitions contain an underlying narrative that connects and relates the artifacts and the experiential exhibit components, making the experience richer for the visitor in comparison to an artifact-based exhibits of the same materials that tend to be narrow and focused.

THE UNITED STATES HOLOCAUST MEMORIAL MUSEUM

An emblematic example of this kind of approach is the United States Holocaust Memorial Museum in Washington, D.C.

Upon entering large industrial elevators on the first floor, and before walking through a chronological history of the Holocaust, visitors are given identification cards, each of which tells the story of a random victim or survivor of the Holocaust. The cards are designed as small booklets to be carried through the exhibition, aiming at helping visitors to personalize the historical events of the time. The exhibition displays video and artifacts, including clothes, pictures, posters, and models that bring visitors very close to the experience of The Holocaust.

Only to cite one example, the "Tower of Faces" is a space three floors high covered with photos of men, women, little children, and elderly people, who were massacred in 1941. Seeing the individual people personalizes the losses in the Holocaust and helps visitors comprehend the scale of the genocide.
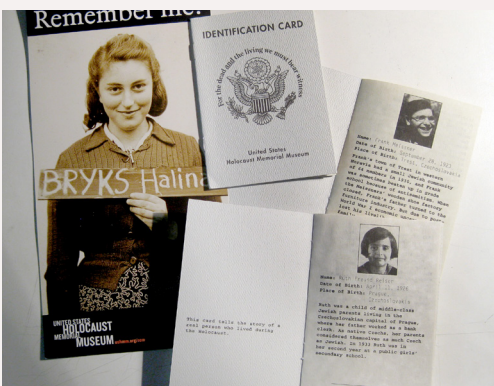
Figure 10. Identification Cards. Photo retrieved from http://www.culturaltravelguide.com

Figure 11. The "Tower of Faces". Photo retrieved from http://www.ushmm.org

3.3.4. THE CONSTRUCTIVIST MUSEUM

Principles of learning	Main characteristics of the "constructivist museum"
Learning is an active process in which the learner uses sensory input and constructs meaning out of it	Active participation of the learner is required People learn through play, including role playing, and engagement with others
Learning is both a cognitive process and a metacognitive process: learning consists both of constructing meaning and constructing systems of meaning	Museum educators teach visitors metacognitive strategies for dealing with museums when they teach them how to look at art, how to read an object, etc.
The crucial action of constructing meaning is mental	Hands-on experience are necessary for learning but not sufficient: museums need to provide activities that engage the mind as well as the hands
Learning is a social activity	Museums need to ask what have they build into the exhibit that encourages visitors to discuss and to share
Learning is contextual as it occurs in a physical and social context	Where visitors are and who they are with have impact on what and how much they learn
The learning process is strongly influenced by prior knowledge, beliefs, and experiences	Museum professionals have to enable visitors to connect with objects and ideas through a range of activities and experiences that utilize their life experiences, including misconceptions and preconceived ideas Museum professionals have to present multiple points of view, without necessarily be the voice of authority Conclusions reached by the learner are not always validated
The learning process is different for different people based on their perceptual preferences, social interaction preferences, age, and other factors	Museums educators need to help learners utilize as many learning styles as possible, appreciating that each learner will have strengths in more than one intelligence area Emotion has a crucial role in the visitor experience
The learning process is not always orderly or sequential	It is important for exhibits to provide different kinds of entry points, using various sensory modes, and different kinds of stimuli

Table 5. Constructivist museums responses to constructivist learning theory in their approach to exhibitions (Hein 1991; Hein 1999)

The "constructivist museum" (Hein 1999) on the top right quadrant of Figure 5, mirrors the constructivist theory of learning that focuses on the concept of meaning-making and advocates that knowledge is not passively received but actively built up by the visitor. This theory of learning underpins that cognition is adaptive and serves the organization of the experiential world: it is not possible to assimilate new knowledge without having some structure developed from previous knowledge on which to build (Gardner 1985; Dierking 1991). The main characteristics of the constructivist museum result in the interaction mode of visitor apprehension, pioneered by many science centers and children's museums in the 1970s and 1980s, and now part of the interpretive framework of many types of museums where the learner actively manipulate – either mentally or physically – the material in order to construct her/his own meaning.

THE EXPLORATORIUM

A well-known example of this kind of approach is the Exploratorium in San Francisco, CA, founded in 1968 by Frank Oppenheimer as a new sort of museum that addressed the interests of visitors about science, art, and human perception, through self-exploration. Oppenheimer, who had spend several years developing hands-on teaching apparatus while instructing physics at the University of Colorado, and who served as Museum first director, envisioned the Exploratorium as a "place where people came both to teach and to learn" (Alexander and Alexander 2008, 101). His vision of the dynamic role museums can play in engaging their visitors is still today a model for cultural institutions worldwide. In fact the Exploratorium was one of the first institutions to design and build hands-on exhibits based on what has since become the "standard model" of learning in science museums.

Oppenheimer's educational approach to exhibits gave central importance to the role of direct experience of phenomena, trying to present the learner with a problematic experience from which he/she could conduct genuine inquiry (Allen 2004, 2). The exhibits facilitate science learning, while supporting a diverse visiting public in making their own personal choices about what to do, and how to interpret their interactions, in order to sustain involvement by an audience who views their visit primarily as a leisure activity. The emphasis is on giving visitors direct experience with natural, physical, and technological phenomena, on the assumption that this would allow them to build the confidence and skills to understand the world around them.

Figure 12 - following page. The Exploratorium: an exhibition setting. Photo retrieved from http://commons.wikimedia.org/wiki/File:Exploratorium_Exhibits_1.jpg

Figure 13 - following page. Children engaged in an interactive learning activity. Photo retrieved from http://www.sfexaminer.com/sanfrancisco/rock-paper-scissors-tournament-at-exploratorium-tonight/Content?oid=2189400
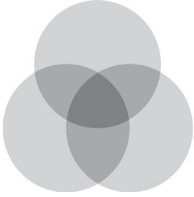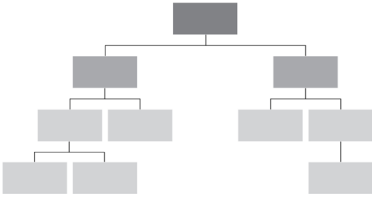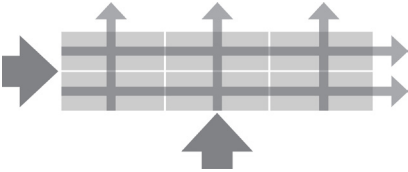
In her work on hermeneutic approaches to understand the process of meaning-making in museums, Hooper-Greenhill (1999) sees meaning-making in museums shaped by visitors' prior knowledge and the capacity to interrogate the past and to distinguish between productive and non-productive preconceptions.
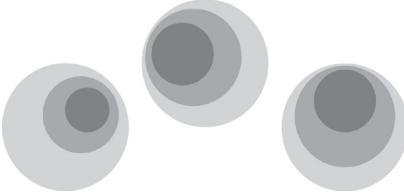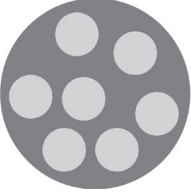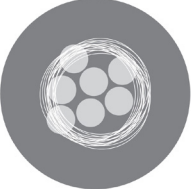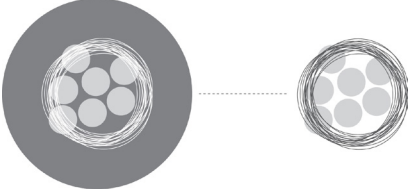
Accepted the idea that learners need to be active, the museum engages the visitors in interactive or participative activities, aimed at stretching visitors beyond their own knowledge, while taking into account previous knowledge and skills they bring to a task. Visitors may respond kinesthetically to stimuli given by live demonstrations or multimedia simulations in a dynamic and hands-on environment; exhibitions may be responsive and automatically respond to the actions of the visitors; and theatrical techniques are also utilized in the creation of interactive environments.

3.3.5. DIVERSE MODALITIES TO ENGAGE VISITORS IN MUSEUM EXHIBITIONS

The four main modes of visitor apprehension here outlined are greatly influenced by the thematic framework of the exhibition that is independent from the museums archetypes. Nicks (2002, 359) describes nine main thematic structures commonly used in museums for arranging the exhibition's core idea, themes and sub-themes: "focal", "hierarchical", "sequential", "parallel", "matrix", "onion", "pizza", "environmental", and "archetypal".

	Focal thematic structure establishes a single major idea or theme, around which are clustered a number of sub-themes that radiate from the core.
	Hierarchical ordering of themes can help to bring order to a complex mass of data and has traditionally being used in the display of typological collections, such as natural history museums.
	Sequential organization assumes that an ordered and controlled presentation is needed to ensure comprehension of the relationships of ideas towards the concluding experience of the exhibition. This model is common in historical exhibitions and artist's retrospectives.
	Parallel thematic structure presents each topic independently, although often using a similar order of presentation in order to facilitate comparative analysis. The order of visit may be random.
	Matrix organization allows visitors to explore the exhibition along different axes, facilitating thematic comparison between different themes presented synchronically along different thematic axis.

Onion thematic structure reveals the core ideas layer by layer. A typical example may be the progressive explication of a single work of art.

Pizza thematic structure addresses individual topic independently within a single gallery or area of the virtual exhibition.

Environmental thematic structure presents topics within a re-created environment (physical or intellectual) that helps to provide context for enriched understanding and meanings.

Archetypal thematic structure mirrors some external reality, which functions as an analogy. Visitors are expected to generalize from the specific to the general.

Accepting the notion that visitors make their own meanings from the experience of visit, many cultural institutions have attempted to present and interpret their collections, satisfying a wider range of cognitive styles. However, this often leads to a more sophisticated version of the Victorian model of transmission of knowledge – in which the museum transmit and the visitor receive – rather than to develop real novel approaches (McLean 2012, 194–195). In fact too often visitors are still seen by museums professionals as belonging only to two categories: as depended, seeking out meanings and interpretations created by museum staff, or as autonomous, valuing their own views above all else.

Research on informal learning in museums would be enhanced by greater knowledge of the distinctive learning styles characteristic of diverse target of visitors. The visitor experience may in fact be enhanced if supported by educational programs and activities consistent with exhibition themes, which use alternative media or techniques to appealing to a

Table 6. Exhibitions' thematic structure. Adapted from Nicks 2002, 359

broader array of preferred learning styles, interest levels, and intellectual capacities (Brown 2002, 297).

Developmental psychologist Howard Gardner (1985), first introduced the theory of multiple intelligences, suggesting that while our society values mostly just verbal, logical, and intrapersonal intelligences, educators need to help learners utilize as many intelligences as possible, appreciating that each learner will have strengths in more than one area, with one or two intelligences probably dominating. He distinguishes between eight abilities that may be considered forms of intelligence that translated in the museums domain suggest the use of different modalities and techniques in order to appeal to as many types of learners as possible.

As summarized in Table 7, the theory of multiple intelligence applied to the design of museum exhibitions implies engaging the whole individuals and all the senses, and represents a challenge for the exhibition designer to go beyond simple interactives or relegating all content to the label texts, and to expand the repertoire of visitor participation through simulations, enactments, role-play, games and immersion (Braden, Rosenthal, and Spock 2005).

Table 7. Different modalities to engage the visitors rendered in an exhibition setting

Type of intelligence	People's attitudes	Exhibition devices
Spatial	Ability to visualize with the mind's eye	Images
Linguistic	Ability at reading, writing, telling stories and memorizing words along with dates	Labels Audio
Logical-mathematical	Capacity to understand logic, abstractions, numbers and critical thinking	Symbols
Bodily-Kinesthetic	Capacity of learn better by involving muscular movement	Interactives Immersive environment Using different senses
Musical intelligence	Capacity of learn better via lecture and the use of songs or rhythms	Sound Audio
Interpersonal	Deep understanding of the self and ability to predict personal reactions and emotions	Respite Resource areas Kiosks
Intrapersonal	Ability of effective communication and empathy with others	Engage social group Social dialogue

3.4. Museum's educational function vs. public voices

Acknowledged that museums have a crucial role as learning environments and that the learning style adopted by museums may influence the visitor experience, there is the need to develop a more strategic approach aimed at facilitating learning and engagement within museums. According to Dierking (1991, 5) a single model may not be adequate due to the complexity of human learning and a desirable approach would be the development of a comprehensive model, that takes into account various key points of the diverse educational models. In the design of the visitor experience, museum professionals should thus consider several factors – mostly derived from the main concepts of the constructive mindset – including: that learning is an active process and a life long experience; that emotion is part of learning; that people learn in social settings and through play and engagement with others; and that visitors make meaning from the experiences the museum provide based on their own framework.

A constructivist approach to exhibitions, in which visitors make their personal or socially mediated sense of experiences, raises important issues about museum's authority and the museum's educational function:

> As museums create more audience-based experiences, who should be the 'authors' of the museum's interpretive messages from exhibitions to public programs? […] What are the messages that the museum should convey? […] Should the audience be engaged in the process and how? (Alexander and Alexander 2008, 15)

Hein (2000) answers these question defining a learning situation based on a "[…] voluntary contract between teacher and pupil to accept the educational approach of the teacher" in which both the teacher and the student work together to develop particular meanings. According to McLean (2000), if we visualize a learning continuum, with the behaviorist experience going off in one direction, and the most expansive notion of personal meaning-making going off in the other direction, then the "voluntary contract" zone that is in between appears to be the most interesting and applicable museums educational approach (Rounds et al. 2000).

Consequently, if designing an exhibition that aims at value visitor's larger framework of knowledge, expectations, interests and concerns, the role of museum is not to monopolize the meaning of the contents. Instead, experience designers "[…] need to suffuse their work with an ethic of flexibility and responsiveness that values the authority visitors brings to their experience" (Braden, Rosenthal, and Spock 2005). This does not mean that the museum authority will be undermined, as well as it does not imply an abdication of curatorial, educational or design responsibility.

Rather, the museum should present offerings that are relevant to its public and that involve personal reflection, interaction and customized elements, incorporating both the perspective of stakeholders – those groups who have an interest in and special understanding of the collections, and audiences – the perspective of the current and potential exhibition visitors.

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4

MUSEUMS AS PLACES FOR CULTURAL ENCOUNTER

Chapter four introduces the notion of social inclusion within cultural institutions, underlying that most of the assumptions that shape numerous contemporary cultural programs, such as public participation and interactivity are not novel concepts, but rather are rooted in the museums practice since the twentieth century. The following section of the chapter focuses on the shift from the model of the modernist museum to the model of "reinvented museum" (as defined by Gail Anderson) or "post-museum" (as defined by Eilean Hooper-Greenhill), discussing the need of the re-definition of the role of GLAMs as facilitators of dialogue among diverse audiences through heritage interpretation.

Moving from these premises, the chapter then discusses the meaning of heritage interpretation, before introducing the notion of 'conversation' that implies a critical shift in perspective in the processes of meaning-making and subtends a process-view of heritage, without which a participatory approach would not be feasible.

Finally, the last section addresses the valuable role of museums in providing an understanding of identity and in fostering a sense of belonging to a community for the visitors, especially when the focus on personal interpretation opens up issues of identity and culture for special-interest community group.

4.1. Public participation and social inclusion: not new concepts

As described in chapter three, historically museum professionals have used different techniques and skills in their practice aimed at embodying particular narratives and representations. Whitehead (2009, 29) describes as a "cultural practice of inclusion and exclusion" whereby the architectural and decorative manipulation of space, the selection, ordering, and placing of objects, and the content of interpretive materials (e.g. catalogues, labels and informative apparatuses) are in accordance with the value they represent. All these media, contextualizing objects and communicating knowledge to the visitors, represent important power tools as can be consciously or unconsciously manipulated (Verboom and Arora 2013) in order to establish and protect expertise and authority which reflect the museum perspective about the interpretation of its collections.

Thes traditional model of museum practices that pervaded the twentieth century, originated in the Enlightenment era, when museums were endowed with the moral obligation to 'elevate' the people and when the museum professionals performed the role of power brokers by determining what was on display and in what context it should have be interpreted. They were identified as experts because their peers recognized them as such, and because they were able to reach consensus in the production of new knowledge within the cultural domain. Expertise were thus contained in exclusive circles where knowledge was mainly discussed and negotiated between curators and their peers (Verboom and Arora 2013), according to a one-to-many communication model that impeded the possibility of evaluation and feedback within audiences. Often museums still see their primary intellectual and cultural authority coming from their collections rather than their educational and community purpose, planning, designing and marketing exhibitions, without having any indication about what messages visitors are taking away from the experience of visit.

However, concepts such as public access, public participation, sharing, interactivity, culture as entertainment, and participatory design are not new in the contexts of museum studies, because rooted in the twentieth century. The 1960s and 1970s witnessed, in fact, the re-evaluation of the purpose of museums, mainly influenced by political activism and postmodernism that made drastic departure from modernisms visions based on clarity and simplicity in favor of complexity and contradiction,[1]

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1   About postmodernism influences on visual culture, it is worth mentioning the 2011-2012 exhibition "Postmodernism: Style and Subversion 1970-1990" at the Victoria and Albert Museum. Through the objects displayed, it showed evidence that while "modernist objects suggested utopia, progress and machine-like perfection,

leading to the emergence of 'new museology' and 'community museology' which envisioned the idea of museums linked to a social purpose, regeneration and development (Davis 2012). While the expression 'new museology' is no longer popular, it is important to look at the motivations behind this paradigm that arose from the redefinition made by the International Council of Museums of museums' role in 1974, and from the 1980 piece "Nouvelle Muséologie" for the *Encyclopedia Universalis* by French museologist André Devallées, who promoted a novel social development vision for museums,[2] and followed by Peter Vergo's edited volume on the same name (1989). In 1985 ICOM institutionalized the researches about these then novel museological notions, establishing the International Movement for a New Museology (MINOM) aimed "at making new museology known throughout the world" (as of October 5, 2013, MINOM-ICOM listed on its website[3]). Currently, the expanded notion of museum audiences and the elevation of public service functions seem to have been institutionalized in the twenty-first century museums.

Modernist museology	Postmodernism	New Museology
Exclusion	Inclusion	Social role
Independence	Interdependence	Networking
Growth	Sustainability	Conservation ethic
Cultural dominance	Cultural difference	Cultural inclusion
Representation	Reality	Multiple voices

Table 1. Key words describing the main principles underpinning 'modernist museology', 'postmodernism' and 'new' museology (adapted from Davis 2012)

As summarized in Table 1, the modernist museum, which emerged during the nineteenth century and reached its apogee by the beginning of the twentieth, represented its visitors as an undifferentiated mass – the general public – intended to act as receivers of knowledge (Hooper-Greenhill 2000b, 125) with a one-way approach to the communication process. Objects from minority ethic groups are usually displayed in the modernist museum either using an aesthetic or an ethnographic approach, as representative of diverse culture. The risk in the aesthetic approach is to minimize the differences in the idea of beauty, while cultural relativism

then the postmodern object seemed to come from a dystopian and far-from-perfect future" (as of October 10, 2013, the Victoria and Albert Museum listed on its website http://www.vam.ac.uk/content/articles/p/postmodernism/).

2   Although he had not meant to coin a new word, it was being adopted at first in French, Spanish and Portuguese speaking countries, and later also in English speaking countries, relating this expression to the museums' theory and practice linked to community heritage projects concerned with social and economic development (Davis 2008, 399).

3   http://www.minom-icom.net.

can led to portray cultures without conflict or negative heritage (McLean 2012, 197). Theorizer of 'new museology' regarded instead museums as social institutions that integrate the museum practices more closely with the social groups that they should represent and serve, questioning traditional museum approaches for what concerns issues of value, meaning, control, interpretation, authority, and authenticity. Knowledge not only come from the museum staff of experts, but also should constitute multiple narratives from different perspectives, encouraging collaboration with network of partners and allowing for public participation. As Sharon Macdonald points out (2007a, 3):

> […] The critique of representations at the level of cultural products and disciplines were part of a broader critique of the way in which the voices of certain groups were excluded from or marginalized within, the public sphere.

In fact, especially in the increasingly multicultural cities of North America and Europe was needed a politics of recognition articulated in terms of the needs and rights of under or misrecognized identities, and museums were thus subject to critical attention as institutions of recognition and identity *par excellence*.

Despite the fact that museums have been defined themselves as keepers of culture because they collect, preserve, and interpret artifacts, the decision they make over what and how to collect, display, and interpret define museums also as makers of culture: this opposition implies the dichotomy between objectivity, in which museums are seen as objective recorders, gathering and delivering accurate information, and subjectivity, in which museums' products are seen as a subjective creation of one or more people (McLean 2012, 196). Museums are indeed deeply involved in constructing knowledge that reflect the society through object, people, narratives, and histories that they bring to visibility or keep hidden, setting agendas for interpretive processes (Hooper-Greenhill 2000b, 13).

At the core of the body of the researchs that have been undertaken under the title of contemporary museum studies, is a set of assumptions about the social and political nature of the ways in which knowledge is produced and re-produced in the museum context, including (Davis 2008; Srinivasan et al. 2009):

- The recognition that reality, truth, and knowledge are dependent on the perspective from which are observed, challenging of the idea of what is valuable and how it is judged, and questioning who has the right to represent others/oneself;

- The re-evaluation of the relationship between objects and the historical records, being recognized their ongoing, contingent and subjective nature;

- The recognition of the importance of engagement with objects as a necessary condition for the generation of knowledge, which involves interpretation rather than cognition;

- The recognition of the importance of the intangible heritage and the expansion of the acceptable museum content (including for example oral history, role-play, live interpretation);

- The challenge of the spatially bounded concept of the museum, and a greater awareness of the utility of the museum as a public and social place, questioning the ethical aspects of museum activities and collections;

- An increased attention given to stakeholders and participants, changing the balance of power between museums, individual collectors and the public.

This holistic approach to interpretation, along with a more democratic vision that opens museums to multiple voices and views, originated an essential paradigm shift from "object-oriented" to "audience-oriented" museums (Hooper-Greenhill 2000b) that leaves space for debate, discussion and engagement, and triggers different responses, meanings and experiences.

Considered these historical premises, here only briefly discussed, it is therefore noteworthy not the novelty of the idea of public participation within museums, but the fact that it is not yet fully and structurally integrated in the contemporary approaches of design practices in museums, although an extensive bibliography and numerous examples and best practices are available. Moreover, in the 1990s, with the introduction of new media technologies, these concepts were strongly supported by a changed approach to communication that enabled new and more effective connections between the museum and its public through the Internet, and in recent years the emergence of the idea of a "participatory culture" (Jenkins 2009)[4] has increasingly highlighted the need of rethinking linear communication models also in the heritage domain within museums. However, as Srinivasan and his co-authors (2009, 267) argue:

> The extension of the 'new museology' into museums, over the past 30 years, has introduced a regime where the educator and the marketing manager control the voices of the museum's presentations for a relatively narrow, selective view of 'public' interest.

Therefore, despite efforts to give the audience more voice, museum staff still consists of expert elites, containing museum knowledge largely within their walls in order to maintain their legitimacy and authority (Verboom and Arora 2013).

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4   See chapter two for a more detailed discussion of the topic.

4.2. Toward novel museum models

Publications and program activities of museums' associations, such as the American Alliance of Museums (AAM), the Association of Science-Technology Centers (ASTC), the Association of Youth Museums (AYM), and the International Council of Museums (ICOM), amply document the shift in emphasis, over the past decades, from collections and collections' care to public service, suggesting to involve museums' audiences in developing public programs and exhibitions and to evaluate programs and exhibitions in terms of their audience impact (Weil 2012a, 173). In particular, several AAM's publications document since the 1980s the trend of a paradigm shift in museums' institutional values, governance, management strategies, and communication ideology that places emphasis on education and focuses on positive accountability and audiences' outcomes.[5]

While AAM defines museums primarily in terms of their activities (to present educational programs that use and interpret objects for the public), ICOM goes further, defining as eligible museums those that have among their characteristics the purpose of serving "society and its development" (International Council of Museums 2007). As a result, museums must assure those funding them that the resources are being used both effectively and efficiently to accomplish the intended outcome, and museum visitors increasingly expect museums to operate only with integrity and competence, but also with a positive outcome in the community intended to be served (Weil 2012b, 131).

Embracing this change in perspective, some museums have even described themselves as "museum different" and "unmuseum" with the aim to separate themselves from the traditional idea of museum and attract new audiences (Alexander and Alexander 2008, 290).

Eilean Hooper-Greenhill (2000b) advocates for the rebirth of the museum, outlining the model of the "post-museum" that must entail the development of an understanding of the relationship between museums and their audiences.

> The post-museum will hold and care for objects, but will concentrate more on their use rather than on further accumulation. In addition, the post-museum will be equally interested in intangible heritage (Hooper-Greenhill 2000b, 152).

5   Of particular note among the other AAM's publications on the topic: *Museums for a new Century*, and *Excellence and Equity* published in the 1980s that placed emphasis on education; *Model of Social Enterprise* published in the 1990s that focused on positive accountability; and the 1993 *Governments Performance and Results Act (GPRA)* adopted by many foundations and funding institutions, that placed emphasis on outcomes.

Moreover, according to Hooper-Greenhill in the post-museum the pro-duction of events and exhibitions should enable the incorporation of many voices, substituting a unified and monolithic idea of knowledge with fragmented and multivocal perspectives.

Mirroring these principles, Gail Anderson (2012) describes the shift from the "traditional" to the "reinvented" museum depicting the assumptions and values that reflect the stances of the reinvented museum opposing them to the ones of the traditional model (Table 2). It is to underline that most museums are not on either end of the scale but are at multiple points along the range of the two extremes.

Table 2. "Reinventing the Museum Tool": assumption and values that reflect the stances of the traditional and the reinvented museum. Adapted from Anderson 2012, 3-4

Traditional museum	Reinvented museum
Institutional values	
Values as ancillary	Values as core tenets
Institutional viewpoint	Global perspective
Insular society	Civic engagement
Social activity	Social responsibility
Collection driven	Audience focused
Limited representation	Broad representation
Internal perspective	Community participant
Business as usual	Reflective practice
Accepted realities	Culture of inquiry
Voice of authority	Multiple viewpoints
Information provider	Knowledge facilitator
Individual roles	Collective accountability
Focused on past	Relevant and forward-looking
Reserved	Compassionate
Governance	
Mission as document	Mission driven
Exclusive	Inclusive
Reactive	Proactive
Ethnocentric	Multicultural
Internal focus	Expansive perspective
Individual vision	Institutional vision
Single visionary leader	Shared leadership
Obligatory oversight	Inspired investment
Assumed value	Earned value

Good intentions	Public accountability
Private	Transparent
Venerability	Humility
Caretaker	Steward
Managing	Governing
Stability	Sustainability
Management strategies	
Inwardly driven	Responsive to stakeholders
Various activities	Strategic priorities
Selling	Marketing
Assumptions about audiences	Knowledge about audiences
Hierarchical structure	Learning organization
Unilateral decision-making	Collective decision-making
Limited access	Open access
Segregated functions	Integrated operations
Compartmentalized goals	Holistic, shared goals
Status quo	Informed risk-taking
Fund development	Entrepreneurial
Individual work	Collaboration
Static role	Strategic positioning
Communication ideology	
Privileged information	Accessible information
Suppressed differences	Welcomed differences
Debate/discussion	Dialogue
Enforced directives	Interactive choices
One-way communication	Two-way communication
Keeper of knowledge	Exchange of knowledge
Presenting	Facilitating
Two-dimensional	Multi-dimensional
Analog	Virtual
Protective	Welcoming

This shift from the modernist museum to the "reinvented museum" (as defined by Gail Anderson) or to the "post-museum" (as defined by Eilean Hooper-Greenhill) is moving the visitors' perception of cultural institutions from order and control toward interpretation and flexibility.

Moreover, as Luigina Ciolfi and her co-authors highlight (2008) "Having the possibility of expressing their own ideas and feelings makes visitors may connect strongly to what they experience, rather than being passive observers of something that is detached and unchangeable".

Within the paradigm of the "reinvented museum", the collection holdings are no longer viewed as the sole measure of value for a museum; rather, the central measure of value has become the relevant and effective role of the museum in service to the society. Having recognized earning public trust as a goal of the museum, members of the communities are increasingly invited to participate at the conversation about the future of the museum providing useful perspective about the content of exhibitions, programs, and collections. For these reasons, regular evaluation of museum operations and public services are needed in order to provide ongoing feedback that keeps the museum responsive to the shifts in public attitudes.

In this perspective, looking at museum exhibitions a distinction should be made between success and effectiveness: the first is related to the achievement of institutional goals and produces the outcomes desired by the institution for the institution, while the latter is related to educational goals and has to be measured through an evaluation that involves visitors. Besides accomplishing educational goals, museums have in fact additional internal motivations for creating an exhibition: for example, they may want to bring-in a specific audience (e.g. a target audience that has been previously neglected) to build membership or increase attendance; they may wish to exhibit items or deal with issues or topics that it have not explored before; or they may wish to establish collaborations between other institutions or individuals through the development of the exhibition. For example, a successful museum exhibition or programme that attracts high attendance and accomplishes to institutional goals, may not be effective in communicating to the audience the information, experience, attitude changes, etc., that constituted the exhibition's educational goals selected by the exhibition staff.

4.3. From interpretation to conversation

The use of the term 'interpretation' within the domain of museum studies, in the sense of explaining an object and its significance, originated in North America in relation to the care of the National Park of historic sites (Ambrose and Paine 2012, 119). Without deeply analyze the vast available literature on heritage interpretation, the meaning of heritage interpretation according to diverse authors is here discussed, before introducing the notions of 'conversation' that implies an critical shift in

perspective in the processes of meaning-making in museums, without which a participatory approach to heritage would not be feasible.

Freeman Tilden set down the principles and theories of heritage interpretation that defined as (Tilden 1977):

> [...] an educational activity which aims to reveal meanings and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information.

Tilden outlined the six principles of interpretation on which most of the literature on interpretation has been based:

1. Any interpretation that does not somehow relate what is being displayed within the experience of the visitor will be sterile;

2. Information, as such, is not interpretation. Interpretation is revelation based upon information;

3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical or architectural;

4. The chief aim of interpretation is not instruction, but provocation;

5. Interpretation should aim to present a whole rather than a part;

6. Interpretation addressed to children should should follow a fundamentally different approach.

The definition of heritage interpretation given by the Association for Heritage Interpretation is clearly based on Tilden's most cited sentence: "[...] through interpretation, understanding; through understanding, appreciation; through appreciation, protection" (Tilden 1977, 38). Interpretation is in fact explained by the Association as:

> [...] a communication process that helps people make sense of, and understand more about, your site, collection or event [...] enhancing visitor appreciation and promoting better understanding. As a result your visitors are more likely to care for what they identify as a precious resource. (as of October 10, 2013, the the Association for Heritage Interpretation listed on its website[6])

Another renowned definition of heritage interpretation is the one given by authors William T. Alderson and Shirley Payne Low in their *Interpretation of Historic Sites* (1985):

> Interpretation is a planned effort to create for the visitor an understanding of the history and significance of events, people, and objects with which the site is associated. (Alderson and Low 1985)

Edward Alexander (2008, 257–260) recognizes five basic elements of 'interpretation' defined as "[...] the multilayered process of museums issuing messages – intended and inadvertent – to the public".

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6   http://www.ahi.org.uk/www/about/what_is_interpretation.

Interpretation (Alexander 2008, 257–260):

1. Has a serious educational purpose;
2. Is based on objects;
3. Is supported by scientific or historical research;
4. Makes use of sensory perception along with the rational avenue to understanding provided by words and verbalization;
5. Is informal education, voluntary and depending only on the interest of the viewer.

According to all these definitions, museum interpretation may provide visitors with the knowledge needed to engage in critical dialogue about the messages the museum presents. As museums promote alternative ways of interpreting their collections, encouraging various interpretations that reflect visitors' perspectives, they confer legitimacy on this not-authorial knowledge by its mere presence in the museum (Roberts 2012, 157–158). In this perspective, museum interpretation becomes an act of empowerment that reflect upon publicity the decisions behind selecting alternative context of meaning. This is particularly true in the digital era in which the potential discursive effects of interactive institutional databases enable users to engage with information in ways previously not possible, hence calling into question the current epistemological foundations of the existing documentary structures. Furthermore, the potential to move from a standardized linear narrative descriptive format and incorporate diverse media, visualizations, and simulations has major implications for the types of interpretive evidence collected, recorded, digitized, and created around museum collections, that might be revisited considering how diverse cultural and theoretical ideas, such as polysemic interpretive models, might be enhanced by the technological potentialities (Cameron 2012, 225–226).

Literature overview has indeed highlight the need to rethink the museum as a "space of inclusion" (Bodo and Mascheroni 2012, 48) based on the model of the "dialogic museum" (Tchen 1992) that foresee the shift from "interpretation to conversation" around heritage (McLean 2011; Proctor 2012; Ross and Speed 2012). Museums that adopt a substantialist vision of the transmission of knowledge are urged to rethink their role (Corsane 2005), moving from the idea of the public as uninformed cultural consumers, to that of cultural producer, participant in the process, decision maker and leader in the creation and dissemination of museum practices (Bodo, Gibbs, and Sani 2009, 4).

In this sense, Hans-Georg Gadamer's hermeneutic theory that conceive meaning not determined by subjective intentions of an author or an historical agent, but rather by the relation between the text and the interpreting subject (Bilen 2000, 45–49), is of particular interest in museums.

To Gadamer the practice of interpretation is dialectical, characterized by active questioning and answering. It is a dialogue that moves in a circular pattern centrifugally toward understanding, in which understanding is linguistically mediated, through conversations with others in which reality is explored and an agreement that represents a new understanding is then reached. In this "hermeneutic circle" the movement starts from our own prejudices, and, in encountering the other in the interpretive process, ideally our own horizon of understanding evolves and may fuse with the horizon of the other who is to be understood (Jahnke 2012, 33).

Considering the museum learning as a social process, expression of the participants' personal and social context, links the process of meaning-making to conversation, in which the interpretation is never definitively closed and the meaning is never static, as what it is said can always be denied and amended because the paths of this conversation are largely determined by what the interpreting subject already know, or from her/his existing knowledge (Hooper-Greenhill 2000a, 24). In this perspective, GLAMs are replacing linear models of communication with "transactional" (Hooper-Greenhill 1995) models in which the information is formulated, communicated and interpreted in a circular process, allowing the public to switch from a passive to an active role.

Author Ann C. Baker, Patricia J. Jensen, and David A. Kolb in their 2002 book *Conversational Learning: An Experiential Approach to Knowledge Creation* make a distinction among the terms 'conversation' and 'dialogue' by describing the different etymology of these words and how they are used in contemporary practice. 'Conversation' has its roots mainly in usages that embrace collaborative and contextual interactions and is used mainly by those focused on human understanding and human experience rather than on abstract knowledge about ideas, whereas the term 'dialogue' etymologically originates from the concept of conflict and opposition in search for truth and is used mainly by those who see social interaction as an intellectual process of refining knowledge.

It is thus a process of reaching interpersonal understanding, where all participants' contributions are equally valued, that can generate new forms of meaning-making within museums, through a "conversational learning approach" (Baker, Jensen, and Kolb 2002, 10–11), in opposition to a rhetorical process of defining one's self through conflict.

4.3.1. CONVERSATION AND SOCIAL ENGAGEMENT

Assigning an active role to visitors through conversational learning approaches questions the traditional model of visitor experience in which visitors are not required to interact socially with each other. In fact other visitors, along with institutional interpretation resources, all interplay in the process of meaning-making. Moreover, under the assumption that

learning is a social activity (Hein 1991), there is the need to ask whether and how – through the design of specific learning programs and the design of exhibition's spaces – the museum can encourage visitors to share socially the experience of visit.

Simon (2010, 25–29) defines a process in five steps, called "me-to-we design" that enables cultural institutions to move from an individual involvement of the visitor to a social experience of visit (Figure 1). In the fifth stage of this process the museum is a social meeting place among different people, and effectively coordinate the actions and interests of individual visitors to create a collective result. These stages are intended as progressive, as it is not possible to consistently design environments for a stage five experience without providing the groundwork of stages one through four.

> Stage one provides visitors with access to the content that they seek. Stage two provides an opportunity for inquiry and for visitors to take action and ask questions. Stage three lets visitors see where their interests and actions fit in the wider community of visitors to the institution. Stage four helps visitors connect with particular people – staff members and other visitors – who share their content and activity interests. Stage five makes the entire institution feel like a social place, full of potentially interesting, challenging, enriching encounters with other people. (Simon 2010, 26–27)

While not all institutional projects should be designed for upper-stage experiences, the inclusion of a greater diversity of social experience should be considered in the development of all cultural projects. As well as the participatory web leverages the profiles of individuals to create opportunities for new connections and social experiences, an effective exhbition design should support social interaction, taking into account that not everyone wants to participate, but providing opportunities for social interaction for those visitors who want to socially share their experience

		WE
STAGE 5	**INDIVIDUALS ENGAGE WITH EACH OTHER SOCIALLY**	
STAGE 4	**INDIVIDUAL INTERACTIONS ARE NETWORKED FOR SOCIAL USE**	
STAGE 3	**INDIVIDUAL INTERACTIONS ARE NETWORKED IN AGGREGATE**	
STAGE 2	**INDIVIDUAL INTERACTS WITH CONTENT**	
STAGE 1	**INDIVIDUAL CONSUMES CONTENT**	**ME**
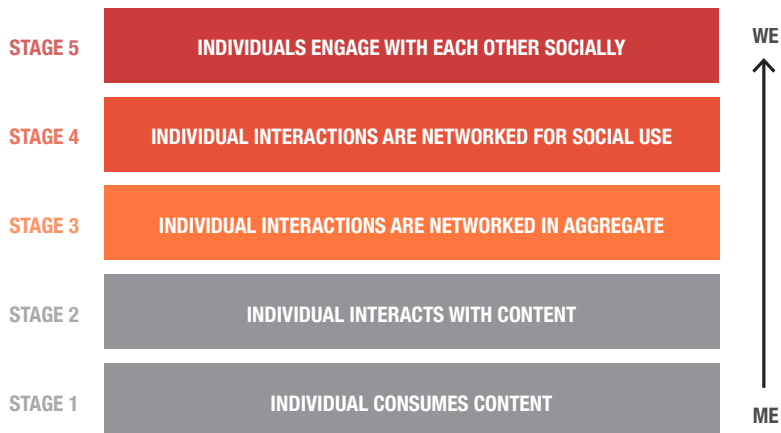
Figure 1. The five stages of "me-to-we" design. Adapted from Simon 2010, 26

of visit. In this perspective, the educational aspect in museums is intended as a collaborative activity that builds the meaning of new concepts by comparing different perspectives (Cataldo 2011, 34), as a result of continuous and sustained interactions (Giaccardi 2012, 21).

4.3.2. A PROCESS-BASED VIEW OF HERITAGE

Within this context, the notion of cultural heritage does not only concern museum's collections, artworks and historic buildings and the ways they are preserved and communicated, but:

> [...] it is about making sense of our memories and developing a sense of identity through shared and repeated interactions with the tangible remains and lived traces of a common past. (Giaccardi 2012, 1–2)

This notion implies a process-based view of heritage without which a participatory approach to heritage would not be feasible. The 1972 UNESCO *Convention concerning the Protection of the World Cultural and Natural Heritage*[7] expressed a traditional and static vision of heritage, conceived as a legacy to preserve and transmit with an emphasis on the "universal value" of the heritage. After thirty years the 2003 UNESCO *Convention for the Safeguarding of intangible Heritage*[8] recognizes that heritage should not only be preserved and transmitted, but must be "constantly recreated by communities and groups in response to their environment." This second definition, as well as introducing "[…] the importance of the intangible cultural heritage as a mainspring of cultural diversity and a guarantee of sustainable development," acknowledge that:

> "[…] communities, in particular indigenous communities, groups and, in some cases, individuals, play an important role in the production, safeguarding, maintenance and re-creation of the intangible cultural heritage, thus helping to enrich cultural diversity and human creativity" (UNESCO 2003).

Accordingly, by its nature heritage cannot be considered only in its formal or functional dimension, as it acquires meaning in the dialogical and social dimension. It is thus needed a shift in perspective from the object to the story around the object and his interpretation, enhanced by the increasing numbers of the actors involved (Morelli, Scarani, and Giardina Papa 2010, 96), including not only the authoritative voice of scholars and curators, but also that of the public. From this viewpoint, the value

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7   Convention concerning the *Protection of the World Cultural and Natural Heritage 1972*, Paris, November 16 1972. Accessible online at: http://whc.unesco.org/en/conventiontext.

8   *Convention for the Safeguarding of the Intangible Cultural Heritage 2003*, Paris, October 17 2003. Accessible online at: http://www.unesco.org/culture/ich/index.php?pg=00006.

attributed to cultural assets does not refer only to their "functional" or "exchange" value, but rather to their "symbolic" value (Baudrillard 2005) as they carry meanings and stories.

In addition to open discussions about the relationship visitors-visitors and visitors-contents, the relational nature of heritage requires to the reconceptualization of the museum-audience relationship (Hooper-Greenhill (2000b, 1), through a continuous re-negotiation of the meaning of the objects displayed, and of the idea of the museum itself as a meeting place (Bodo and Mascheroni 2012, 12).

Parman and Flowers's practical worksheet (2008, 83) about "The Museum's Community Role" outlines nine categories for defining the possible ways in which the community might perceive the museum:

1. "Visitor attraction", in which the program or exhibition gives visitors an overview of what is unique about the territory and its community;

2. "Catalyst for change", in which the program or exhibition delivers a message that will encourage people to think differently about their relationship to others or to the world.

3. "Center of creativity", in which the program or exhibition engages visitors in creative activities, where are visitors, rather than the museum, to determine the outcomes;

4. "Memory bank", in which the program or exhibition displays aspects of the history of a place, person, or cultural tradition;

5. "Storyteller", in which the program or exhibition interprets the history of a place, person, or cultural tradition, in ways that relate the past to the present;

6. "Attic", in which the program or exhibition preserves objects and images that would otherwise have been discarded;

7. "Treasure trove", in which the program or exhibition preserves valuable, meaningful, rare, and unusual objects and images;

8. "Shrine/hall of fame", in which the program or exhibition honors a particular group or individual and assume visitors have a built-in interest in the topic;

9. "Exclusive club", in which the program or exhibition is primarily aimed at people with special interests and knowledge of the topic.

All these categories highlight how the notion of a museum as a contemplative place of learning has changed dramatically, toward the public perception of the museum as "a site for informal learning", and "an instrument for social change" (Weil 2012a, 175).

4.4. Meaning-making and intercultural dialogue

As discusses in chapter three, cultural institutions are increasingly considering visitors as active meaning-makers who make a range of choices based on a variety of reasons and motivations, and constantly reshape their interpretations of the world through social engagement (Silverman 1995).

Shifting the interest from identifying and measuring cognitive and affective outcomes, to evaluating the heritage experience itself is thus the first step towards the transformation of the museum into an inclusive institution. In fact, the exhibition creator's meaning acts as a constraint on the meaning-making of the visitor, but not as an absolute determinant: there is no way to get all visitors to construct the same understanding. The criteria for exhibit success should therefore not be set in terms of reaching common understanding, but rather in terms of visitor engagement with the exhibit. These considerations let to important issues related to museum practices and to visitors and visiting:

> What happens when the museum desire for fixity is disrupted by new sensibilities towards population flows, multiple heritages and the shifting territories of geopolitical places? What are the new dimensions of identity construction and production in museums whose physical place is fixed, but whose audiences, with their changing heritages and cultures, are not? (Whitehead et al. 2013, 11)

Museums seeking to attract and keep a more diverse group of users will need to cautiously consider how their communities are changing, what 'diversity' means for their audiences and what it is likely to mean in the future.

The research project "MeLa-Museums in an Age of Migrations"[9] is currently making a significant contribution on these matters. Adopting the notion of migration as a paradigm of the contemporary global and multicultural world under the impact of the accelerated mobility and nomadism of people, goods, ideas and knowledge (Basso Peressut and Pozzi 2012, 10), the "MeLa" project has the main objective of outlining innovative museum practices that reflect the challenges of the contemporary processes of globalization, mobility and migration. In fact, as people, objects, knowledge and information move at increasingly high rates, a sharper awareness of an inclusive European identity is needed to facilitate mutual understanding and social cohesion. Preliminary results

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9   "MeLa-Museums in an Age of Migrations" (http://www.mela-project.eu) is a four-year interdisciplinary research project funded in 2011 by the European Commission under the Socioeconomic Sciences and Humanities Programme (Seventh Framework Programme).

resulting from an extensive analysis of new exhibition spaces and arrangements in museums of national and local relevance, suggest that the rise and the inclusion of new stances and approaches toward the role of museums are staring to foster a revision of the approaches to curatorial practices of museums. Moreover, consolidated exhibition design practices and museum organization that reflected a premise of objectivity and reality and a traditional conception of identity as unique, homogenous, and geo-politically defined are today brought into question by the shifting nature of contemporary cultural conditions (Basso Peressut, Lanz, and Postiglione 2012, 1:XIV).

The definition of the approaches through which GLAMs can invite audiences to deal with cultural diversity is among the first results of the research carried out by the research group Design for Cultural Heritage (DeCH) of the Department of Design, Politecnico di Milano within the "MeLa" Research Field 05 "Exhibition Design, Technology of Representation and Experimental Actions". "Multicultural storytelling", "intercultural dialogue", and "transcultural practice" are the three possible approaches that have been identified (Lupo et al. 2014, 65-78):

1. "Multicultural storytelling" conceives and represents different cultures alongside one another but separately. It is similar to what Macdonald, in identifying some approaches that museums have adopted to face the multicultural challenge, calls 'multiculturalism' (Macdonald 2007b), an approach that presents groups and communities as discrete cultures and illustrates them mainly through their distinctive material culture;

2. "Intercultural dialogue" identifies and highlights the interconnections between cultures while representing them. It represents dialogue and hybridization between cultures, but the audience is not called to put into play its identity and cultural background. In this respect, the term 'intercultural' is used here differently from how it is used in museum education in an intercultural perspective, where its meaning lie in the development in the audience of those skills and competences more and more needed in contemporary societies (Bodo and Mascheroni 2012);

3. "Transcultural practice" allows and encourages further readings enabled by the 'practice' of cultural diversity. The practice of 'passing through' cultures is stressed: the audience is called to identify with other cultures. While the notion of transculturalism that emerges from the 'transcultural display' described by Macdonald (2007b) puts the emphasis on the identities resulting from passing through fluid cultural boundaries, then the 'transcultural practice' approach focuses rather on the experience of passing through itself.

This focus on personal interpretation opens up issues of identity and culture (Hooper-Greenhill 2000b, 2) especially when special interest group are aroused. Within societies that are increasingly diverse in ethnicity, cultural traditions and historical experience, people within differentiated social and cultural communities respond to museums and their collections according to their own perspective.

Minority ethnic groups or groups who may have traditionally been under represented or misrepresented in museums, increasingly expect to have their culture and identity appropriately represented through exhibitions, collections, events and activities. In particular, when museums have in the past, implicitly or explicitly, denied opportunities for balanced representations, issues about whose culture is being portrayed or transmitted, and who is portraying or transmitting this culture and for whom, are occurring (Ambrose and Paine 2012, 25). A "discursive approach" (Affleck and Kvan 2008, 269) to heritage is a fertile ground for the development of projects aimed at promoting intercultural practices among diverse audiences, in museums that seen themselves as "contact zones" (Clifford 1997). Museums, in fact, as keepers of the collective memory, may indeed play a valuable role in providing an understanding of identity and in fostering a sense of belonging to a community for their users (Ambrose and Paine 2012, 7). The design of the visitor experience should therefore include the creation of situations where visitors can explore contemporary or historical issues of cultural and social relevance in ways that are directly relevant to their prior experience.

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5

DESIGNING PARTICIPATORY EXPERIENCES OF HERITAGE

Chapter five aims at defining the notion of audience participation as intended within this research, starting from a brief excursus on the meaning that the term 'participation' assumes in disciplinary domains other than participatory design and museum studies, such as architecture, urban planning, and in projects of environmental sustainability, discussing some of the participation frameworks proposed by diverse authors. In the first section of the chapter, participation is then addressed considering the social role of the museum and defining participatory cultural institutions as open places for informal learning, conversations and interactions aimed at social inclusion.

The following sections present diverse participatory models proposed by different authors, and the corresponding levels of audience creative control on contents. Differences and possible synergies between the two main design approaches to participation that have been indentified – design *for* participation and participatory design – are then discussed.

The last section finally presents how the evaluation of participatory projects might benefit from incremental and adaptive measurement techniques to help the project stay aligned to its goals while assuring the effectiveness for both participants and non-participants visitors, as well as institutional staff members.

5.1. Defining participation within cultural institutions

As seen in previous chapters, seeking to attract more visitors, museums are increasingly experimenting with novel exhibition models, including interactive and participatory elements, multimedia, and digital technologies. Moreover, an observable trend in museum is a growing attention to sociable, recreational, and participative experience that redirect the traditional and singular focus on collections and exhibits, letting interpenetration of elements of popular/informal and elite/formal culture in a wide-range of cultural experiences (Kotler 2012, 388), including interactive and participatory experiences at many different levels of audience engagement.

Trying to outline a definition of the notion of 'participation' in the domain of museum studies, may be useful to consider that the term is much more common referred to practices of citizens' participation in other disciplinary domains, such as architecture, urban planning, and in projects of environmental sustainability. Sometimes the term is used as a deepening of the concept of responsible and informed citizenship; sometimes it refers to public consultation about decisions that have already been defined or even already taken; and other times, less frequently, participation implies a real involvement of a group of stakeholders in the decision-making process, that are actively enabled to contribute to social life, and produce concrete actions.

The concept of public participation in its meaning of consultation was first contested by Sherry Arnstein in his 1969 much-quoted article "A Ladder of Citizen Participation", that remains a useful analysis of power relations in participation. The bottom rungs of the ladder are (1) "manipulation" and (2) "therapy" corresponding to levels of non-participation because the real objective is not to enable people to participate in planning or conducting programs, but to enable power holders to 'educate' the participants. Rungs (3) "informing" and (4) "consultation" allow citizens to hear and to have a voice, but they still do not have the power to insure that their views will be followed by the powerful. When participation is restricted to these levels, there is no assurance of changing the status quo. Rung (5) "placation" allows citizens to advise, but retain for the power holders the continued right to decide, and rung (6) "partnership" enables citizens to negotiate and engage in trade-offs with traditional power holders. Finally, in rungs (7) "delegated power" and (8) "citizen control", citizens obtain the majority of decision-making seats, or full managerial power (Arnstein 1969).

The LITMUS project (Local Indicators to Monitor Urban Sustainability) in South London, starting from Arnstein's ladder of participation,

identifyied five levels of participations related to the evaluation of community projects (InterAct 2001, 6):

- "Information" in which the public has a passive role as a recipient of information;
- "Consultation" in which the public has a passive role as a provider of opinions and ideas;
- "Participation" in which the public has a more active role as provider of opinions and ideas, but without authority to make decisions;
- "Partnership" in which the public has an active role as provider of ideas and opinions, and has some authority to make decisions;
- And "delegation of authority" in which the public has a majority, or full authority to make decisions.

Similarly, Harder et al. (2013, 45) define a "participation framework" composed of six categories in a scale from non-participation (or "denigration") to full partnership (or "learning as one"), providing for each level the description of the typology of relationships between the diverse of actors in relation to intercultural education.

The diverse level of citizens' participation described above could actually be generalized for multi-disciplinary use, and may constitute a theoretical basis for outlining the approaches of cultural institutions in respect to audience participation.

It is to underline that these scale of public involvement do not imply a continuum among the diverse levels of participation, nor that higher levels are always preferable. The range is rather intended as a neutral benchmark against which any project team can decide its targets, according to specific contexts.

Within museums, the notion of participation is usually related to two main situations:

- In strongly multicultural contexts or in countries with persistent ties with their former colonies, participation often is meant to establish a relationship between the museum and the community from which it originated a collection, adopting an approaches that is close to "consultation" and "acknowledge" or "placation" and "engagement;"
- Especially in Anglo-Saxon contexts, the term refers instead to the social role of the museum, aimed at sustaining community engagement, empowerment and development. In this case the museum adopts an approach to participation that mirrors the last two levels of the ladders of participation (Table 1): "interculturality", "partnership", and "citizen control", or "delegation of authority" and "full partnership".

In the framework of this research, the notion of participation within heritage is intended in a wider meaning that considering the social role of the museum, defines cultural institutions as open places for informal learning, conversations and interactions, aimed at a shared construction of meanings and social inclusion.

Arnstein's level descriptors relating to citizens' participation in public policy and planning	LITMUS's level descriptors relating to the evaluation of community projects	Harder's et al.'s level descriptors relating to participation in intercultural education
Citizen Control: full delegation of all decision-making and action	Delegation of authority: the public has a majority, or full authority to make decisions	Full partnership / Learning as one: dichotomies (expert/community, researcher/respondent, or designer/user) are entirely dissolved, and both partners consciously contribute knowledge and skills toward the achievement of shared common goals
Partnership: people can begin to negotiate with traditional power holders, including agreeing roles, responsibilities and levels of control Delegated power: some power is delegated	Partnership: people can begin to negotiate with traditional power holders, including agreeing roles, responsibilities and levels of control	Interculturality / Learning together: interaction, meaningful exchanges of information, and shared responsibilities for planning and decision-making
Placation: people's views have some influence, but traditional power holders still make the decisions	Participation: the public has a more active role as provider of opinions and ideas, but without authority to make decisions	Engagement / Learning from: active engagement with other stakeholders, whose views significantly influence and inform decision-making, although major decisions are still undertaken without them
Consultation: the public has a passive role as a provider of opinions and ideas		Acknowledgement / Learning about: acknowledgement of other stakeholders who have potentially differing perspectives and are invited to contribute via consultation, study, or listening
Information: one-way flow of information		Neglect: unidirectional flow of information from experts to other stakeholders with no attempt to elicit their views
Therapy: the goal of participation is to enable power holders to 'educate' the participants Manipulation: the goal of participation is to create support for decisions that have already been made, through information which may be partial or constructed	N/A	Denigration: experts dominate and denigration of stakeholders might occur

Adopting Simon's definition (2010, ii), a participatory cultural institution is "a place where visitors can create, share, and connect with each other around content". In detail, according to Simon (2010, ii–iii):

> Create means that visitors contribute their own ideas, objects, and creative expression to the institution and to each other. Share means that people discuss, take home, remix, and redistribute both what they see and what they make during their visit. Connect means that visitors socialize with other people – staff and visitors – who share their particular interests. Around content means that visitors' conversations and creations focus on the evidence, objects, and ideas most important to the institution in question.

The verbs create, share, and connect used in this definition clearly describe the main possible visitors' behaviors enabled by participatory experiences of heritage. In the following section, these behaviors will be considered through the description of diverse models and levels of audience participation, as defined by different authors.

5.2. Models of participation and participants' level of creative control on contents

Considering those cultural institutions that consider themselves as an open place of encounter and dialogue, participatory experiences of heritage can be described using the expression "public curation" (Satwicz and Morrissey 2011) that designates all the diverse modalities by means of which audience is collaboratively involved in shaping museum products, process and experience, in opposition to a traditional way of institutional curatorship.

Public curation includes all the projects that have the goal of being inclusive and participatory without giving up to create a meaningful and engaging experience for visitors, considering both projects in which participation occurs during the experience of heritage and projects based on various methods of participatory design.

Nancy Proctor, in her opening keynote at 2012 MuseumNext in Barcelona, identifies five actions that describe five diverse visitors' approaches for what concern participation within cultural institutions: "watching", "sharing", "commenting", "producing", and "curating" (Figure 1). These activities, recognized through visitors researches conducted at the Smithsonian Institutes may be arranged in a pyramidal order because everyone watch contents, while only few people want to participate in curating contents. This scale broadly corresponds to the 90-9-1 principle affecting participation in Internet communities and reflects Forrester's six "social technographics" groups (Li 2007, 4–6) described in chapter

Table 1 - previous page. Arnstein's ladder of citizen participation compared to LITMUS's ladder, and Harder's et al.'s participation framework. Adapted from Arnstein 1969; InterAct 2001, 6; Harder, Burford, and Hoover, 45

two, by matching user's roles and performed actions: creators/producing, critics/commenting, collectors/curating, joiners/sharing, spectators/watching, and inactives that do not make any action.

The diverse roles participants may assume during the participatory experience of heritage may thus be defined as a subset of Forrester's categorization, in a ladder that includes collectors, critics, and creators.

Dalsgaard, Dindler, and Eriksson (2008) define participation as a mutual relationship in which the visitor encounters within the museum's spaces a specific framing of his/her experience and the interaction takes place through "(co-)exploration, (co-)construction and (co)contribution". Participation may be understood in a very literal sense (e.g. writing a shared review of a book in a library) or it may have to do with enriching the place through engaged interaction (e.g. through participating in an experiment in a science center). In Dalsgaard et al.'s views, the levels and modalities of participation are thus defined on the basis of the activities that visitors perform while visiting.

Another categorization, proposed by Simon, is based instead upon visitors' involvement in the design process. Simon (2010) applies to cultural institutions the models defined by Bonney et al. (2009) in reference to public participation in scientific research, and distinguishes between three different models of public engagement in cultural heritage: contribution, collaboration, and co-creation.

> In contributory projects, visitors are solicited to provide limited and specified objects, actions, or ideas to an institutionally controlled process. Comment boards and story-sharing kiosks are both common platforms for contributory activities. In collaborative projects, visitors are invited to serve as active partners in the creation of institutional projects that are originated and ultimately controlled by the institution. In co-creative projects, community members work together with institutional staff members from the beginning to define the project's goals and to generate the program or exhibit based on community interests. (Simon 2010, 187)

It is to be noted that Simon's contributory projects encompass all actions proposed by Proctor and the categories proposed by Dalsgaard and al. because referred to experiences that ask visitors for limited actions in an

RECEPTIVE   PARTICIPATORY

SPECTATING   INTERACTION   CONTRIBUTORY PROJECTS   COLLABORATIVE PROJECTS   CO-CREATIVE PROJECTS

PARTICIPANT'S LEVEL OF CREATIVE CONTROL

NO CONTROL   CURATORIAL   INTERPRETIVE   INVENTIVE

Figure 2. Levels of audience engagement and correspondent levels of creative control on contents. Adapted from Brown, Novak-Leonard, and Gilbride 2011 and applied to Simon's participatory models

institutionally controlled context where audience-generated contents are displayed. In collaborative and co-creative projects visitors are instead involved in the co-construction and collection of heritage and in the design process: in collaborative projects through the the contribution of cultural assets within the context of a program of interpretation coordinated by the institution, and in co-creative projects through the co-design of the cultural program. Since both in collaborative and co-creative models, participation occurs in the design phase, the adoption of these models produces outcomes – the museum's exhibition or program – that may also be non-participatory.

With reference to public participation in the artistic production, Brown et al. (2011) identify a scale of public involvement that goes from a zero level of participation, to an active involvement in projects of crowdsourced art, to the co-creation of a work of art, until the situation in which the artist and the public work together in all phases of the creative process. These levels of engagement correspond to different levels of audience's creative control on contents, ranging from "curatorial", to "interpretive", to "inventive", that may be transferred and applied to Simon's "contributory", "collaborative", and "co-creative" models of participation (Figure 2).

Simon adds "hosted projects" to the Bonney et al.'s classification, identifying those projects in which "[…] the institution turns over a portion of its facilities and/or resources to present programs developed and implemented by public groups or casual visitors" (Simon 2010, 187). This may happen both in actual and virtual contexts, as institutions may both share physical spaces and digital tools with community groups that may use cultural object registries or scientific data online as the basis for their own research.

5.3. Design *for* participation vs. participatory design

Understanding the types of participatory engagement is the first step in designing participatory projects that will best support institution specific mission-related goals. Participatory outcomes may be external, like increased incidence of conversation among visitors, and internal, such as development of new skills or enhanced relationships.

While design *for* participation means innovating the 'product', through the use of one or more models of participation (contributory, collaborative, co-creative), participatory design means innovating the 'process', without necessarily presupposing a participatory experience of heritage.

Both approaches may be considered exemplifies of participatory museum practices, but it is needed to reflect upon the question if a participatory design approach is needed in order to design participatory experiences of heritage. As Nina Simon asks in a post entry to the *Museum 2.0* blog on April 7, 2009:[1]

> Do true participatory platforms need participatory design processes behind them? Or do designers just need to be transparent about how the platform works and how users' contributions feed into the experience?

In Simon's view a participatory process is not always needed to produce a platform for participation, as there are effective participatory platforms that are designed without user involvement, but issues arises when a participatory platform feels unresponsive because visitors do not feel that their contributions are being respected or valued. Cultural institutions that want to be perceived as actively inviting and incorporating contributions from their audiences need to consider users as design collaborators if they want to keep them as contributors, learning how to negotiate this relationship.

Design has always dealt with user participation as one of the possible ways to reach a design goal. Designers have actively developed ideas about participation for many years, through the separate traditions of participatory design and user-centered design, and more recently through various schools of human-centered design and co-design (Harder, Burford, and Hoover 2013, 41). Significant difficulties in the interdisciplinary study of participation are the diversity of approaches taken, and the lack of a common vocabulary (Harder, Burford, and Hoover 2013, 41). Opinions about who should be involved in these collective acts of creativity, when, and in what role vary widely.

Research projects on user participation in systems development date back to the 1970s, led by Northern Europeans. In Norway, Sweden and

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1   Accessed February 16, 2014. http://museumtwo.blogspot.it/2009/04/participatory-design-vs-design-for.html.

Denmark the Collective Resource Approach was established to increase the value of industrial production by engaging workers in the development of new systems for the workplace. At the same time, the political and civil rights movements in the 1960s and 1970s in western societies demanded for citizens an increased say in the decisions that affected many different aspects of their lives. Participating directly in these activities, some designers started to investigate how they might relate these demands of civil engagement to their own practices.

Participatory methods and techniques are currently employed in a range of projects, spanning from software development to urban planning. Several studies on participatory design research already account for different modes and levels of participation, spanning from the emancipatory, normative direction (i.e., users should be an active part in the design of their workplace), to the production-oriented description (i.e., users have to be integrated into existing design practices by using ethnographic methods), to approaches in which the design process and the user participation precedes the actual use of the product (Hess and Pipek 2012, 64). The term 'participation' in participatory design does not thus reduce to 'involvement,' rather, it means to investigate, reflect upon, understand, establish, develop, and support mutual learning processes during the design process, providing all participants with increased knowledge and understandings: potential users about what is being designed; designers about people and their practices; and all participants about the design process and its outcomes. Understanding the practices and environments where new products and services will be used, people, as active participants in the design project, are more likely to accept and sustain the process and its outcome (Robertson and Simonsen 2012, 5).
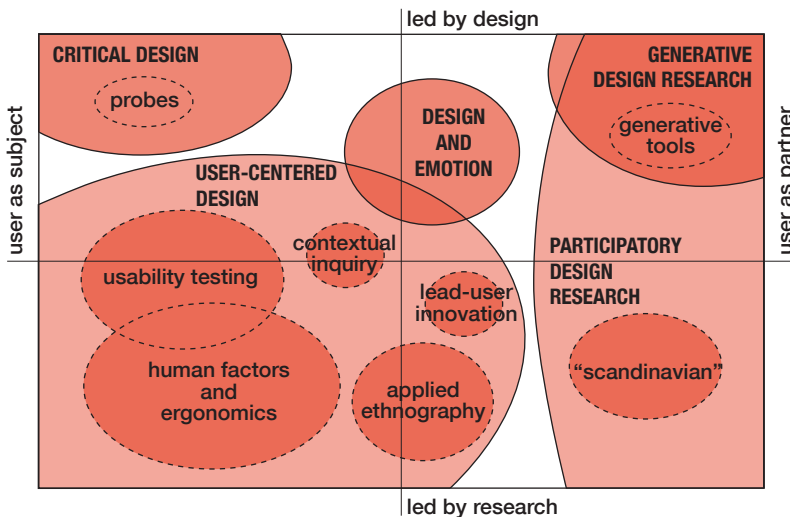
Figure 3. The current landscape of human-centered design research as practiced in the design and development of products and services. Aadapted from from Sanders and Stappers 2008, 6

Table 2. The tools and techniques of participatory design organized by form and by purpose. Adapted from Sanders, Brandt, and Binder 2010

At the core of participatory design is a systematic reflection on how to involve users as full partners in design and how this involvement can unfold throughout the design process, by means of a diverse collection of principles and practices to encourage and support this direct involvement. These design tools and techniques include (Robertson and Simonsen 2012, 3) various kinds of design workshops in which participants collaboratively envision future practices and products; scenarios, personas and related tools that enable people to represent their own activities to others; various forms of mock-ups, prototypes and enactment of current and future activities used to coordinate the design process; and iterative prototyping so that participants can interrogate developing designs and ground their design conversations in the desired outcomes of the design process and the context in which these will be used.

It is important to understand the purpose and context of the tools and techniques for engaging non-designers in specific participatory design activities, to customize them accordingly. Sanders and her co-authors (2010) define a framework (Table 2) for organizing the tools and techniques of participatory design according to their form (i.e., making, telling and enacting) and purpose (i.e., for probing, priming, understanding or generating).

			Purpose			
			Probing	Priming	Understanding	Generating
Form	Making tangible things	2D collages using visual and verbal components on backgrounds (e.g. timelines, circles, etc.)	✓	✓	✓	✓
		2D mappings using visual and verbal components		✓	✓	✓
		3D mock-ups (e.g. foam, clay, Legos, Velcro-modeling)			✓	✓
	Talking Telling Explaining	Daily logs through writing, drawing, blogs, photos, video, etc.	✓	✓	✓	
		Cards to organize, categorize, and prioritize ideas			✓	✓
	Acting Enacting Playing	Game boards and game pieces and rules for playing		✓	✓	✓
		Props and black boxes			✓	✓
		Setting users in future situations				✓
		Improvisation				✓
		Acting out, skits and play acting			✓	✓

Participatory design differs from various user-centered design approaches in that it acknowledges that the beneficiary of the design may not be using the artifact itself, though some design tools and techniques are used in both approaches.

From the point of view of historical development user-centered design is recognized to be the first methodological tool developed with the aim to guide the design process towards the development of cognitive artifacts usable because designed starting from the characteristics and needs of their end users. It is a method originally developed in the field of computer science in the 1970s and 1980s and more applied to industrial design. Since the 1990s have becoming apparent that the user-centered design approach could not address the complexity of the challenges the design discipline was facing. Consequently, novel approaches (e.g. interaction design) for the design of not only usable products, but for the design of the user experience have grown. This has resulted in the need for the design discipline to go beyond the involvement of users in the design process only as information sources, and instead involving them actively and iteratively. In order to study the user experience since late 1990s have been developed diverse methods. The ISO standard *9241-210:2010*[2] provides requirements and recommendations for human-centered design principles and activities, describing six key principles that will ensure a design is user-centered:

1. The design is based upon an explicit understanding of users, tasks and environments;

2. Users are involved throughout design and development;

3. The design is driven and refined by user-centered evaluation;

4. The process is iterative;

5. The design addresses the whole user experience;

6. he design team includes multidisciplinary skills and perspectives.

One of the foundational works about experience design is the model "say-do-make" by Sanders and Dandavate (1999), according to which in order to effectively understand the user experience it is needed to explore simultaneously what people do, what they say, and what they make. Traditional user-centered design research methods were focused primarily on observational research (i.e., looking at what people do); traditional market research methods, on the other hand, have been focused more on what people say and think (through for example focus groups, interviews, and questionnaires). The novel tools proposed by Sanders and Dandavate are focused on what people make (i.e., what they create from the toolkit

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2   Available at the ISO store: http://www.iso.org/iso/home/standards.htm.

the designers provide for them to use in expressing their thoughts, feelings and dreams).

Within this landscape, in the area of participatory approaches to design, the notion of co-design has growing. According to Sanders and her co-authors (Sanders and Stappers 2008) co-design indicates collective creativity as it is applied across the whole span of a design process. It is a specific instance of co-creation and refers to the creativity of designers and people not trained in design working together in the design development process.

Rizzo (2009) considers co-design as the last development of a trend started with user-centered design aimed at involving end users in the design process. It incorporates many principles and tools developed within user-centered design and experience design with the aim to use experimentally the design discipline. Co-design is completely transparent activity in which all participants are acknowledged about the design methodologies and its goals.

Drawing from the ideas of pragmatist philosopher John Dewey in Steen's co-design can be understood as a process of collaborative design thinking that consists of five phases that are intimately related in an iterative process (Steen 2013, 22–24):

- In the first two phases, the problem is explored and a provisional problem definition is formulated. Participants can cooperatively engage with questions such as: "What do I find problematic about this situation?" "What are other people's experiences?" or "In what direction should we look for possible solutions?"

- In the third phase, possible solutions to the problem are conceived. Co-design occurs in the ways in which and in the extent to which participants can use their capacities for perception and conception: for the former they can for example engage with visuals that are related to the problem and empathize with the people involved, and for the latter they can use tools that foster joint creativity and innovation. This combination of perception and conception would enable participants to address questions such as: "How does this problematic situation feel?" "How can we generate solutions for this problem?" or "How is this solution better than the current situation?"

- In the last two phases (four and five), solutions are tried out and evaluated. Different suggestions for solutions are evaluated to assess how different solutions can help to solve the problem. Participants need to conjointly generate solutions that will work practically, negotiating their different roles and interests.

The move from user-centered design and participatory design to

co-design is having an impact on the roles of the players in the design process because in co-designing any stakeholder a priori is more important than any other. In a classical user-centered design process the researcher served as a translator between the users and the designer: the user is a passive object of study, and the researcher brings knowledge from theories and develops more knowledge through observation and interviews. The designer then receives this knowledge in the form of a report and adds an understanding of technology and the creative thinking needed to concepts. In a co-design process, the researcher/designer takes on the role of a facilitator, by providing tools for ideation and expression, leading, guiding, and providing scaffolds to encourage people at all levels of creativity.

Sanders proposes the use of "MakeTools" (Sanders and Dandavate 1999) as a common ground for connecting the thoughts and ideas of people from different disciplines and perspectives. As Liz Sanders listed on the *MakeTools* website:[3]

> MakeTools is a language that can be used by everyone for harnessing and directing collective creativity toward positive change for the future. All people are creative and can participate in co-designing if they are provided with relevant tools and the settings for their use.

Because they are projective, the "MakeTools" are particularly good in the generative phase of the design development process. There are different types of "MakeTools" that facilitate the creation of a wide range of artifacts user-generated. For example with emotional toolkits people make artifacts such as collages or diaries that show or tell stories that express feelings, dreams, fears, and aspirations. With cognitive toolkits people make artifacts such as maps, 3D models of functionality, diagrams of relationships, flowcharts of processes and cognitive models that tell how people understand and misunderstand things, events and places.

In the next paragraphs some tools and techniques for participatory design activities will be described more in detail, distinguishing between their application in the preliminary phase of problem exploration – the user as informant, and in the subsequent phase of concept generations. The tools here described have been selected because of particular relevance for their possible application in participatory museum practices, even if not specifically developed for their use within museum audiences.

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3   Accessed February 16, 2014. http://www.maketools.com/index.html.

5.3.1. THE PARTICIPANT AS INFORMANT

ZUP FORMAT

"ZUP-Zuppa Urban Project" was created in 2010 in Milan by Noemi Satta,[4] and have been realized under the patronage of the Municipality of Milan and funded by some local sponsors. "ZUP" is a project of urban regeneration that aims at connecting people to their local area, stimulating the re-appropriation and the care of the local territory, and the growing of cultural initiatives.

Of interest in the context of the research is the method developed and used by "ZUP" to create opportunities for meeting, in order to generate new ideas about life in the city. "ZUP" uses food, namely a soup,[5] as a tool and a metaphor to narrate the territory, because it is a dish that exists in all cuisines of the world and its apparent simplicity symbolizes the mix and the continuous transformation of the city. The method is based on simple participative process in four steps with the goal of telling the territory by means of soups' recipes:

1. The participant are divided into small groups of 5-10 "urban explorers", composed by one facilitator and people of diverse backgrounds, interests, and culture;

2. Each group explore autonomously the urban area selected for the activity with a map and notebooks on which participants record creatively and freely their past and present personal experiences related to the places they are exploring;

3. At the end of the exploration the groups meet in a designated place and systematize the recorded materials, pointing out the main elements of the visiting experience. These elements (e.g. places,

relationships, public spaces, activities, stories) are the ingredients of the soups;

4. Under the guidance of the moderator, and using two typologies of cards – food ingredients and cooking actions – each participant associates the elements of her/his personal experience to food ingredients and cooking actions. This translation takes place with immediate association and free combinations of ideas and is very personal and may be not shared by other participants;

5. After the associations are done, a meaningful name (e.g. "The gazpacho of the tower") is given to the soup recipe. The soups generated through this process can be prepared and are really edible;

6. A recipe book is edited and distributed to participants and local citizens as a tangible result of the participatory activity. Through recipes that represent participants' experiences of places, it presents alternative, diverse, and often hidden aspects on the local territory.

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4   http://progettozuppa.wordpress.com. Accessed February 16, 2014.

5   In Italian the meaning of the world 'zuppa' is 'soup.'

PROBES

Probes (often also referred as cultural probes or design probes) are design-oriented user research toolkits that are based on self-documentation. Probes are design oriented and are used for exploring new opportunities rather than for solving known problems. They ask users to experiment and to make interpretations and explanations of their experiences, obtaining users' individual points of view as bases for enhancing design (Mattelmäki 2005, 86). Unlike direct observation (e.g. usability testing or participant observation), probes allow users to self-report, avoiding the risk that the observer may influence the ongoing events.

Selected participants are briefed, given a probes kits, which include various probes artifacts and tasks, and briefed about the requirement to record or note specific events, feelings or interactions over a specified period. The contents of the toolkit depend on what type of information the designers/researchers want to collect and on the materials with which participants are familiar. Most kits contain a diary or scrapbook for recording comments or impressions, a camera with printing capability, a voice recorder, pens, post-it notes, staplers, map, and postcards, along with evocative tasks, which are given to participants to allow them to record specific events, feelings or interactions.

Typically, a follow-up interview is conducted to ensure that participants are actively engaged, and are collecting the required information. At the end of the specified period, the materials are collected and a de-briefing session is typically conducted, in order to supplement, validate and explore the information gathered by the participants. Information is then analyzed and documented by the designers/researchers using authentic materials.

From the analysis of the data may emerge novel themes, discussions, and patterns that may be developed in form of story-telling or

Figure 4. A probe kit from the project "Active@work" by Mattelmäki and Lehtonen that examined and developed ways of supporting ageing workers' well being at work and motivation to work longer. Photo retrieved from Mattelmäki 2006, 41

affinity diagramming (Rizzo 2009, 120). The data is likely to be useful in creating personas and provides a good communication medium between the designers and the final users.

Probes may be also for example a generative tool that enables the user's active participation during the experience of visit in a museum while trying new interactive prototypes, apparatuses, or communication devices.

WORLD CAFÈ
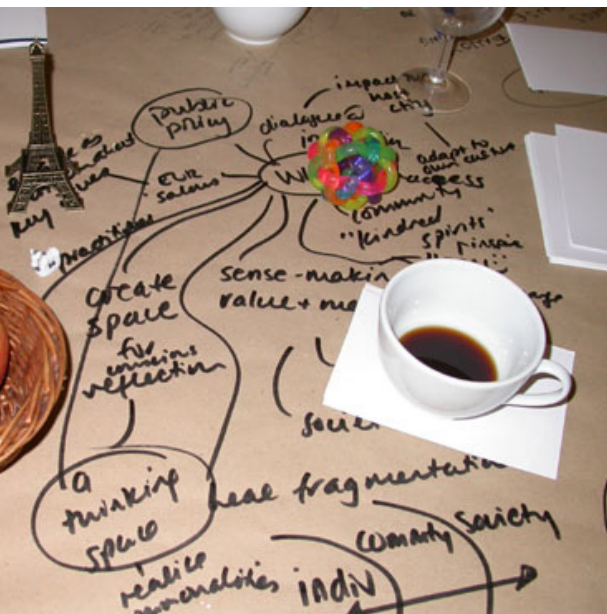
Figure 5. "World café" tablecloth. Photo retrieved from https://www.worldcafe-europe.net.

"World Café" (J. Brown and Community 2002; Slocum 2005) is a simple structured conversational process for facilitating collaborative dialogue and the sharing of knowledge and ideas. Participants discuss a question or issue in groups of four around small round café tables, and at regular intervals the participants switch tables and get introduced to the previous discussion at their new table by a 'table host,' in order to cross-fertilize their discussions with the ideas generated at other tables.

The method is based on seven basic principles:[6]

1. Clarify the purpose of the meeting;

2. Create a hospitable space: a café ambience is created in order to facilitate conversation, and a name, appropriate for the purpose, is given to the meeting (e.g. "Strategy Café", "Discovery Café", etc.);

3. Explore questions that matter and make sure that the question and themes for rounds of conversation are visible to everyone on cards at each table;

4. Encourage everyone's contribution;

5. Connect diverse perspectives: as well as speaking and listening, individuals may be encouraged to write notes on the tablecloth so that when people change to different tables, they can see what previous members have expressed as well as hearing the table host's view of what has been happening;

6. Listen for patterns and insights: at the end of the process the main ideas are summarized in a plenary session and follow-up possibilities are discussed;

7. Share collective discoveries: in some Café events a graphic recorder draws the group's ideas on a wall mural to illustrate the patterns of the whole group conversation. Starting from these records, it may be useful to create a storybook to bring the results of the Café work to larger audiences after the event.

The "World Café" process is particularly useful to engage large groups in an authentic dialogue process when the goal is to generate input and stimulate innovative thinking. The technique, stimulating sociality among participants, may engage in authentic conversation people that are meeting for the first time as well as deepen relationships in an existing group.

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6   http://www.theworldcafe.com. Accessed February 16, 2014.

5.3.2. THE PARTICIPANT AS CO-DESIGNER
NOMINAL GROUP

The "Nominal Group Technique" (NGT) is a group process involving problem identification, solution generation, and decision-making. The technique was first developed by Delbecq and VandeVen in 1971 and has been applied to adult education program planning by Vedros in 1979. The NGT involves five simple stages (Vedros 1979):

1. Introduction: the facilitator explains to participants the purpose of the meeting;

2. Silent generation of ideas: the facilitator provides each participant some cards with the questions to be addressed and ask them to write down a maximum of three ideas (one per each card) that come to mind. During this period, the facilitator asks participants not to consult or discuss their ideas with others. This stage lasts approximately 10 minutes.

3. Sharing ideas: in turn, all participants read their ideas and the facilitator records each idea on a pin board using the words spoken by the participant. There is no debate about items at this stage. This process ensures all participants get an opportunity to make an equal contribution and provides a written record of all ideas generated by the group. This stage may take 15–30 minutes.

4. Group discussion and systematization of ideas: participants are invited to seek further details about any of the ideas that others have produced that may not be clear to them. The facilitator's task is to ensure that each person is allowed to contribute and that the process is as neutral as possible, avoiding judgment and criticism. The group may suggest new items for discussion, but no ideas should be eliminated. If according to the facilitator there are similar ideas, they can be grouped. At the end, to each idea of the resulting list is assigned a letter. This stage lasts 30–45 minutes.

5. Voting and ranking: each participant individually choose from the list the three

Figure 6. "Nominal Group Technique": consolidation and review of ideas with all participants. Photo retrieved from http://www.sswm.info

ideas that are most important to her/him, assigning to them a vote from 1 to 3. The facilitator transcribes every vote alongside the idea pinned on the board. Then, together with the group, the facilitator identifies the ranking of top rated ideas. Following the voting and ranking process, immediate results in response to the question is available to participants so the meeting concludes having reached a specific outcome.

The results of the NGT only represent a starting point in a process of concept generation. The resulting outcomes can be developed and deepened subsequently using other techniques and data. Requiring individuals to write down their ideas silently and independently prior to a group discussion increases the number of solutions generated by groups. The NGT is particularly useful when there is concern about some members not participating (for example because they are concerned about being criticized, or because they do not know each other), when the group does not easily generate quantities of ideas, and when the issue is controversial or there is heated conflict.

INSPIRATION CARD WORKSHOPS

Figure 7. Inspiration Card Workshop for the Mediaspace Project. Photo retrieved from Dalsgaard 2012, 39

The "Inspiration Card Workshop" (Halskov and Dalsgaard 2006)" is a collaborative design event in which professional designers and participants who have knowledge of the design domain combine sources of inspiration from two diverse domains to create design concepts. This design method is primarily used in the early stages of a design process, during which designers and their collaborators narrow down potential future designs.

An "Inspiration Card" is a cardboard card (about 5 by 7,5 cm) on which an image, a title, a description, and a reference are printed. The card also has an empty box for comments. There should be multiple copies of each card, as well as a number of blank cards to be filled out at the discretion of participants. "Inspiration Cards" represent information on the domains for which people design. This information may pertain to situations, people, settings, themes etc. from the domain. The "Domain Cards"

can be created both by designers, usually as a condensation of field studies and research, and by domain experts who participate in the design process. The method has proved most fruitful with 4-6 participants for each group of work; it is loosely structured, informal, and has a simple set of rules and phases:

1. Presentation of "Inspiration Cards": each card is presented with the help of images or video clips, to ensure a shared understanding.

2. Combination and co-creation: participants collaboratively combining the cards on posters, in order to capture design concepts. There are no set rules for turn taking, and cards may be combined in the way the participants deem productive. Any number of cards may be combined to create a design concept. The cards are affixed to poster-sized pieces of cardboard. Participants are encouraged to write descriptions and brief scenarios on the posters.

3. Presentation of posters and design concepts: each group presents its design concepts. The object of this phase is to ensure a common understanding of the concepts, rather than to evaluate them in terms of whether they are appropriate or realistic.

"Domain Cards" are typically only meaningful within the specific project for which they were created, and reuse is limited. The "Inspiration Card" described by Halskov and Dalsgaard only included two categories of cards ("Technology" and "Domain") due to considerations of simplicity, since they represented the two main areas that converged in the design process.[7] Designers seeking to appropriate this method may wish create further categories and subsets, e.g. "People", "Situation" etc.

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7   In their 2006 paper "Inspiration Card Workshops" Halskov and Dalsgaard (2006) report the findings of three projects in which they used the method within the research project "Experience-Oriented Applications of Digital Technology in Knowledge Dissemination and Marketing".

LIVING BLUEPRINT WORKSHOP

The participatory design technique of the "Living Blueprint" was specifically developed by Peter Dalsgaard (2012) and his research group for a series of focused events centered on participatory activities arranged for the "Mediaspace Project", a large-scale project to develop a shared building for the municipal library and Citizens' Service department in Aarhus, Denmark.

The "Living Blueprint" techniques addresses the problems that arise when users and stakeholders have difficulty envisioning what an un-built future building or interior space will be like, and consequently also have difficulty developing concepts for it.

In a "Living Blueprint" workshop, participants take-on the role of a cardboard character and move themselves through the drowing og the future building or interior to bring the future environment alive. The objective of a "Living Blueprint" workshop is of allowing the co-exploration of the un-built space.
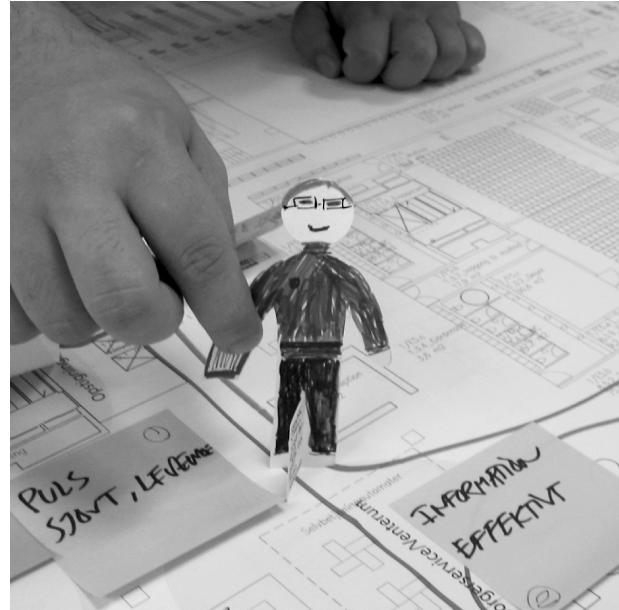

Figure 8. Living Blueprint Workshop for the Mediaspace Project. Photo retrieved from Dalsgaard 2012, 39

5.4. Evaluating participatory projects

Kelly and Sullivan (1996) outline how museum evaluation evolved during the twentieth century. Pre 1920s, the origins of evaluation was heavily influenced by the effort to make museums accessible for the masses rather than for exclusive interest groups, and with the same purpose, observational methods were first used in the 1920s and 1930s to document the educational value of museums. Later, in the 1950s and 1960s, museum evaluation started focusing on visitor surveys even if until the mid 1970s 1980s museum evaluators have been focused almost exclusively on summative evaluation (looking thus at the end product) and on experimental studies of visitor behavior. In the late 1970s and 1980s there was instead an explosion in visitor studies on evaluation research and methods, audience surveys, behavioral studies, and experimental studies, until the 1990s, when the discipline has been strongly influenced by the work of museum evaluators Falk and Dierking.

Participatory projects do not require fundamentally different evaluation techniques from other types of projects, although they introduce a kind of visitors' experiences that cannot be evaluated using traditional museum assessment techniques alone (Simon 2010, 324). For example, outcomes like empowerment and community dialogue do not fit into the traditional assessment tools used by museums and funders, which tend to measure outputs rather than impact. Participatory projects might instead benefit from incremental and adaptive measurement techniques that can help the project stay aligned to its ultimate goals while assuring it work for everyone involved, including participants and non-participants visitors, and institutional staff members.

Lack of good evaluation is probably the greatest contributing factor to slow acceptance and use of participatory projects in the museum field (Simon 2010, 301). Funders and those commissioning participatory projects may benefit from an effective evaluation of participatory working in different ways, including: ensure good use of funds, highlight good practice worth replicating, and identify gaps in provision. For project organizers, an effective evaluation may contribute to setting standards and implementing quality control, develop a shared terminology of success and validate new approaches, analyze strengths and weaknesses which can be used to develop future plans, help to clarify aims and objectives, uncover unexpected consequences, and ensure that resources are used efficiently in future. For participants, an effective evaluation of participatory working can provide information on projects and processes, in addition to provide evidence which can be used to demonstrate and strengthen the representativeness and legitimacy of certain stakeholder groups (InterAct 2001, 3–4).

In fact, as described in previous paragraphs, participatory projects are both process and product based. It means that traditional product-focused and quantitative evaluation methods need to be supplemented by more process-focused and qualitative approaches in the evaluation of participatory projects. A particular emphasis is therefore required on participant behavior and the impact of participatory actions, measuring what participants do and describing what happens as a result of participation. Moreover, the level and the nature of their involvement may be different in different circumstances and different processes are appropriate at different stages. For example, staff members might make traditional internal evaluation and then make it available for public use to enhance transparency, or they might work with participants to develop some questions for evaluation without including them in the entire process (Simon 2010, 319), or again, different stakeholder groups with different interests may need to be involved at different stages.

Choosing the most effective way to engage participants in evaluation depends thus on several factors, including the stage of the project to be evaluated, the type and role of people/groups involved, and the ways in which they have been involved. The LITMUS project identify three basic models of evaluation of community projects, analyzing some of the different roles for stakeholders (InterAct 2001, 9):

- In "top-down" evaluation external evaluators plan and manage evaluation, and stakeholders only provide information;

- In "co-operative" evaluation external evaluators act as facilitators, while working with participants and project staff to develop assessment techniques and collecting and analyzing data. They keep authority over the evaluation process;

- In "bottom-up" models external evaluators still facilitate the evaluation process, but their work is directed by stakeholders to address their interests rather than institutionally driven measures of success.

While participatory evaluation can be also used on projects that have not been participatory (for example engaging stakeholders in the evaluation of a conventional project), the engagement of community members in the evaluation of participatory projects is not always needed. It may be useful to make the evaluative process participatory in itself, involving participants in the development and implementation of project evaluations, when projects are co-designed with community members in which participants have a high level of responsibility.

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> *If you invite people to really participate in the making of a museum, the process must change the museum.*
>
> (Spock 2009, 6)

STUDY OF CASES

6

PRELIMINARY ANALYSIS
OF CASES

Chapter six starts the second part of the thesis that illustrates the analysis, mapping, and discussion of data derived from the study of cases.
In particular this chapter describes the preliminary selection and analysis of projects featuring participatory processes in the collection and/or experience of heritage.
In this phase of the research, selected projects have not been investigated in depth; rather, the study of cases considered in this chapter has been made with the goal of outlining the current tendencies for what concern the main methods and tools that enable audience participation in diverse contexts, in order to isolate the most meaningful cases that are described in detail in chapter eight.

6.1. Objectives and criteria for selection and analysis

During the second year of the research, about ninety participatory projects have been identified and mapped. The main goals of this preliminary mapping of cases are:

- Identifying tools and methods currently employed by diverse kinds of cultural institutions in order to enable participatory experience of heritage;
- Understanding how a participatory approach to heritage may affect the visitor experience in terms of creative controls on contents and social engagement.

The selection of the projects has been conducted through desk research considering a time slot between the beginning of 2000s and today. The preliminary mapping of cases includes those participatory projects in which explicit and original users' contributions are recognizable in the collection and experience of heritage, and in the design of the visitor experience, excluding:

- Projects of collection, representation, and communication of heritage in which user-created contents are not visible and accessible to other visitors, becoming part of the project itself;
- Projects of participatory art, because they represent a distinct phenomenon of artistic co-creation aimed at the production, rather than at the experience of heritage. Those projects in which participants are invited to creatively express themselves in the interpretation of existing cultural assets, in the context of a process institutionally managed and controlled, are instead included;
- Crowdsourced projects aimed at the correction and transcription of information, and contextualization of cultural items (for example by finding and marking the errors in catalogues, transcribing and correcting digitized texts, rating the reliability of information, or describing items that are not accessible because they not catalogued and described yet). The preliminary map of case includes instead those projects in which crowdsourcing is aimed at: the classification of cultural items, by gathering descriptive metadata related to objects in a collection; complementing collections, by adding user-created content to be included in an exhibit or collection; the co-curation of cultural assets, by using the expertise of non-professional curators to advantage the cultural institution; and crowdfunding, by supporting initiatives gathering money or other resources.[1]

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1   For a more detailed description of the diverse typologies and purposes of crowdsourcing projects, see paragraph 2.2 in chapter two.

Two main criteria for selection have been applied in order to restrict the field of investigation:

- Contents must be generally recognized as cultural heritage, both tangible and intangible, physical and digital, according to the definition given by the International Council of Museums (2006) that describe cultural heritage as: "Any thing or concept considered of aesthetic, historical, scientific or spiritual significance";

- The project must be developed or hosted by a cultural organization.

In this phase of the research, additional filters for cases selection were not applied, in order to have an overview as complete as possible of the frame of reference. Keeping a wide framework, also allows having a large collection of cases from which drawing upon methods and models useful to the construction of a design scenario, also deducted from areas and contexts other than those in which the research specifically operates.

The preliminary collection of cases has been analyzed according to eight main criteria that have been identified thanks to the preliminary literature review and verified and discusses through the study of cases:

- Design approaches to participation;

- Participants' roles;

- Participant's levels of social engagement;

- Tools enabling participation;

- Institutional goals;

- Context and area of influence;

- Modalities of curation of user-created contents.

6.1.1. DESIGN APPROACHES TO PARTICIPATION

Projects are first categorized indicating the design approach to participation that, as described in chapter five, may be focused on the product (i.e. the program or exhibition), or on the design process. Design approach to participation that have been considered thus include:

- Design *for* audience participation, in which participants are required to contribute to the interpretation of heritage;

- Participatory design, in which audience participation occurs in the design phase of the heritage experience, and may result in a non-participatory programs or exhibitions.

6.1.2. PARTICIPANTS' ROLES

As seen in chapter five, participants may assume diverse roles in a ladder ranging from collectors, to critics, to creators. The following descriptions of the three roles participants may assume – drawn on Simon's participatory

models (2010) and Forrester's "social technographics" groups (Li 2007, pp.4–6) – have been used in order to map the cases.

- Collectors, who have curatorial control on contents. They typically provide limited and specified contributions to an institutionally controlled process, like for example personal objects for crowdsourced exhibition and collection projects, or they may be involved in the co-construction and collection of heritage thanks to their personal experience;

- Critics, who have interpretive control on contents. They may provide for example feedbacks (verbal and written comments during visits), or actions and ideas on comment boards during visits and in educational program;

- Creators, who have inventive control on contents. They typically serve as active partners in the creation of institutional projects, for example working together with institutional staff members in the co-creation of programs based on community interests through the use of participatory design techniques. They can also be involved in the interpretation of existing cultural assets through personal creative expression.

The levels of creative control on contents are distinct, but not progressive: this means that no one role is better than another, and that makes no sense to set a scale in order to achieve a maximum level of participation. Rather, visitors may play diverse roles in diverse situations according to the context, and reflecting the participation model chosen by the cultural institutions to accomplishing its goals. In many analyzed project it is possible to recognize more than one participatory model; in those case, it has been considered the main role assumed by participants.

6.1.3. PARTICIPANT'S LEVELS OF SOCIAL ENGAGEMENT

The participatory experience of heritage may activate four diverse levels of social engagement among participants, in a scale that have been drawn on Simon's (2010, pp.25–29) "me-to-we design" process in five stages. Only stages three to five have been considered because stage one "individual consumes content" and stage two "individuals interacts with content" entail a non-participatory experience.

Therefore, three possible levels of social engagement are here proposed and used for the mapping of cases:

1. Indirect social engagement, in which individuals engage indirectly with others through contents. It may happen for example when a visitor is able to find online an item she/he is searching thanks to the descriptions given by others. Users can see contributions left by others but they cannot reply;

2. Mediated social engagement, in which individuals engage with each others availing of the mediation of other people (e.g. staff members) or tools designed for the scope (e.g. social media or onsite interactives). Users can see others contributions and add their own;

3. Direct social engagement, in which individuals socialize with known and unknown people, during the experience of visit or within the activities proposed by the cultural institution, which is seen as a place that promote sociality and conversations around heritage. There is a real dialogue among users both online and onsite.

These stages of social engagement are progressive: this means that all projects mapped as upper levels, also imply the adoption of lower levels.

6.1.4. TOOLS ENABLING PARTICIPATION

Participation may be enabled by diverse tools according to the type of environment in which the experience of heritage occurs in the "virtuality continuum" (Milgram & Kishino 1994), distinguishing between actual environment (e.g. GLAMs' physical spaces, urban setting); mixed reality environment (e.g. experiences of heritage through the use of mobile devices); or virtual environment (e.g. online exhibitions, social media platforms).

The notions of mixed reality environment is here used drawing upon the taxonomy proposed by Paul Milgram and Fumio Kishino (1994) that place mixed reality "[…] anywhere between the extrema of the virtuality continuum," which extends from the completely real through to the completely virtual environment with augmented reality and augmented virtuality ranging between. The Milgram and Kishino describe augmented reality as a lightly augmented representation of reality and augmented virtuality as a virtual environment augmented by real objects. Beyond actual and virtual environment, the area of interest within this mapping of participatory projects is in particular augmented reality, referring this term to:

> […] any experience in which reality is lightly augmented with virtual data, be they videos, sounds, texts, images, fictional characters or 3D digital models. (Spallazzo 2012, p.82)

For each project, the main tool enabling participation is indicated. Tools that have been identified include:

-   Social media;
-   Geotagging maps;
-   Mobile applications;
-   Smart objects;
-   Onsite multimedia installations;

- Onsite interactives;
- In person mediators.

6.1.5. INSTITUTIONAL GOAL

Three main institutional goals have been identified in order to highlight the scope of the participatory projects:

- Promote shared learning;
- Promote co-creative work;
- Promote creative expression.

For those projects that present more than one institutional goal, the main outcome for participants has been considered.

6.1.6. CONTEXT AND AREA OF INFLUENCE

Cultural institutions have been classified without following strict criteria (such as types of collections, area and audience they serve, way they exhibit their collections, etc.) because the aim was not to cover the entire spectrum of possible cultural institutions, but rather to give a meaningful sample of their diverse attitudes and approach to public participation. Cases are grouped according to the context and the area they serve.

According to the context, projects can be produced by and/or hosted in:

- Museums;
- Libraries and achieves;
- Informal exhibition space;
- Urban environment.

When inside a museum the typology of the museum is specified, distinguishing between:

- Natural history and anthropology museums;
- Ecomuseums and city museums;
- Science and technology museums and centers;
- Art museums;
- History museums and memorials.

Those virtual spaces (like in the projects **ArtStack, Flickr The Commons**, and **Google Art Projects**) that do not have a formal recognition as cultural institutions, but feature collections of objects from other recognized institutions, have been considered as belonging to the cluster of informal exhibition spaces.

According to their area of influence – that may or may not coincide with the area of influence of the cultural institution that host the project – projects have been classified as local, national, or global.

6.1.7. MODALITIES OF CURATION OF USER-CREATED CONTENTS

This criterion indicates if user-created contents are included the project without any institutional filter, or if there is a process of curation and mediation of user-created contents institutionally controlled.

The next section of the chapter lists the case studies in alphabetical order providing for each project a brief description. It is important to clarify that cases have not been analyzed in depth but classified according the aforementioned criteria, instrumentally used in order to spark the discussion presented in the next chapter.

Appendix A presents an overview table of the analysis of cases according to these criteria.

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Simon, N., 2010. *The participatory museum*, Santa Cruz: Museum 2.0.

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6.2. List of cases

21st Century Abe

2009. Rosenbach Museum & Library, Philadelphia, PA

21st Century Abe is an online exhibition that aims at engaging visitors 18-24 in Lincoln's ideas, inspiring them to contribute to the site's collection submitting YouTube videos, photos and websites; ranking and commenting on contributions; and creating posters and mock news stories for a host of online contests.

References: http://www.21stcenturyabe.org; http://www.whatscookin. com/#C|873|982; Fisher, Matthew, and Bill Adair. 2011. "Online Dialogue and Cultural Practice: A Conversation." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 44–55. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP.45-47.

7 billion Others

2003-ongoing. The GoodPlanet foundation, Paris, and then itinerant

7 billion Other showcases 5,000 interviews filmed in 75 weights of 6 directors who went in search of the "Others." During the exhibition in Paris, the studios were available to visitors so that they could make their own interviews.

References: http://www.7billionothers.org.

9/11 Memorial Museum

2012-ongoing. 9/11 Memorial Museum, New York, NY

The 9/11 Memorial Museum provides visitors with the opportunity to learn about the people who died on September 11, 2001 and February 26, 1993, relying on material contributed by people: photographs, portrait images, objects, and spoken remembrance (through the Museum program partner StoryCorps) of loved ones. Anyone can add her/his story to the website "Make History," a collective telling of 9/11 through the stories of people who experienced it.

References: http://www.911memorial.org; http://makehistory.national911memorial. org.

A Matter of Faith

2006. Stapferhaus Lenzberg

A Matter of Faith uses confrontational profiling asking visitors to enter the exhibition as believers or non-believers and to wear an USB-data stick to show their choice. Throughout the exhibition visitors could add information to the wearable identity piece by responding to a questionnaire, and they are eventually segmented into five profiles based on their relationship to faith. In the final room, they are provided with more information about the profiles.

References: Hachler, Beat. 2008. "Capturing the Present in Exhibition Design." Exhibitionist 27 (2): 45–50. P.52; Simon, Nina. 2010. The Participatory Museum. Santa Cruz: Museum 2.0. PP.52-53.

American Stories

2012-ongoing. Smithsonian's National Museum of American History, Washington DC

American Stories is an ongoing exhibition that examines the manner in which culture, politics, economics, science, technology, have shaped life in the U.S.

over the decades, by telling both well and little-known stories about the American experience. A posting station invites visitors to suggest objects for future collection that would reflect their history and place in America. Using the App associated with the exhibition visitors can describe the object on display, describe their visiting experience, respond to something they have heard left by someone else, and like in the physical posting station–suggesting what else should be included in the exhibition.

References: http://66.147.244.104/~amerifl5/americanstories.

Art of Storytelling
2008-ongoing. Delaware Art Museum, Wilmington, DE

The website entices visitors to participate in the "Art of Storytelling" by listening or reading stories, by writing a story, or by creating a masterpiece in the "Picture A Story" online activity. Developed on a blog platform, the site offers a quick way to view the most recent contributions by genre or collection.

References: http://www.artofstorytelling.org.

Arts Combinatòries
2009-2011. Fundació Antoni Tàpies, Barcelona

Arts Combinatòries (Combined Arts) is a platform for collective work between visitors and researchers of the Fundació Antoni Tàpies. It gives visitors access to the institution's documentation through a physical space in the building and via a platform on the web. It seeks to be a project of reference for the development of digital platforms for access to cultural contents through processes of direct participation by the users.

References: 2012 MuseumNext Presentation by Linda Valdes and Nuria Sole (Fundació Antoni Tàpies); http://www.fundaciotapies-ac.org.

ArtStack
2011-ongoing. ArtStack Limited

ArtStack is a social media platform dedicated to art that allows users to discover art through friends and acquaintances. The website has all the standard things associated with a social network. Users can find a work of art that inspires them, "stack" it to their a feed of collected pieces to create their own personal art profile, and share it with the wider community. They can follow anyone on the platform to see the art they like and discover new pieces through their friends and people they follow.

References: http://theartstack.com.

BibPhone
2006. Aarhus Kommunes Biblioteker, Aarhus

The BibPhone prototype enables children to annotate physical books with digital recordings, by placing the BibPhone over a RFID tag on the book and speaking. By using the prototype as listening device previous recordings are also revealed to the user.

References: Dalsgaard, Peter, Christian Dindler, and Eva Eriksson. 2008. "Designing for Participation in Public Knowledge Institutions." In Proceedings of the 5th Nordic Conference on Human-computer Interaction: Building Bridges, 93–102. New York, NY, USA: ACM; Lykke-Olesen, Andreas, and Jesper Nielsen. 2007. "BibPhone:

Adding Sound to the Children's Library." In *Proceedings of the 6th International Conference on Interaction Design and Children*, 145–148. New York, NY, USA: ACM Press; Mulvad, Jennifer, Knud Schulz, and Lotte Duwe Nielsen. 2007. *Inspiration. Strategies and Prototypes for the Future. Abstract from Children's Interactive Library Project 2004-2006*. Aarhus: The Municipality of Aarhus.

Brangulí was here. What about you?

2011. CCCB, Barcelona

This participatory project between the CCCB and Barcelona Photo Bloggers wants to know how professional and amateur contemporary photographers see at the beginning of twenty-first century the subjects photographed by Brangulí in the city of Barcelona between 1909 and 1945. The CCCB exhibition Barcelona: 2000-2011 presents the ten winning photos voted by online users and a screening of the 324 finalist photos. All the pictures of the project are available online and displayed in two multimedia points at the exhibition.

References: http://www.brangulivaseraqui.com.

Center for Creative Connections (C3)

2004-2008. Dallas Museum of Art, Dallas, TX

C3 is a 12,000-square-foot interactive learning environment at the Dallas Museum of Art, designed to engage visitors with works of art in personally meaningful ways through different learning projects and participatory activities. For example Visitors can create their own work of art inspired by the works on view in C3, participate in hands-on art-making workshops and events, or contribute photographs of the current exhibitions to the C3 Flickr group.

References: http://www.dm-art.org/CenterforCreativeConnections.

Choose the piece

2010. Museo Civico Archeologico Etnologico di Modena, Modena

Choose the Piece is one of thirty pilot projects of the research MAP for ID-Museums as Places for Intercultural Dialogue. It targeted to 60 immigrant students attending Modena's Centre for Adult Education and Training (CTP). Under the guidance of CTP teachers and museum staff, each participant was invited to 'adopt' one of the objects displayed at the Museum, by playing on personal tastes, memories, and specific interests connected with the different countries of origin. Students were asked to write the reasons for their choice along with a short biography, and received a certificate finalizing the symbolic adoption of an object, symbolizing the commitment to preserve it and to spread its knowledge.

References: http://www.agendainterculturale.modena.it/agenda-2010-choose-the-piece/choose-the-piece/choose-the-piece.

City of Memory

2001-ongoing. City Lore, New York, NY

City of Memory is a dynamic map of New York City, which has its origins in the project Memory Maps, a system of enormous borough maps that allowed visitors to share their stories of the city by pinning vellum sheets to specific locations. These written stories were then archived and enhanced with curated stories to create the living archive of personal geographies available at cityofmemory.org.

References: http://www.cityofmemory.org; http://localprojects.net/types/page/10/?type=collaborative-storytelling; MacArthur, Matthew. 2011. "Get Real!

The Role of Objects in the Digital Age." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 56–67. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP.34-43.

Clark Remix uCurate
2012. Sterling and Francine Clark Art Institute, Williamstown, MA

Clark Remix is both a physical and a virtual exhibition featuring paintings, sculptures, and decorative arts objects from the Clark's permanent collection. Visitors can create their own "curatorial remix" online through the site uCurate. It is possible to select a group of objects, design an exhibition, add comments, and eventually share it online.

References: http://remix.apps.clarkart.edu/#uCurate.

Click! A Crowd-Curated Exhibition
2008. Brooklyn Museum, New York, NY

Click! is an exhibition that invited Brooklyn Museum's visitors and the online community to participate both in the artistic production and selection of the work of photography to be displayed. Artists was asked to electronically submit a work of photography that responded to the theme "Changing Faces of Brooklyn," and submissions have been evaluated by online users. In the physical exhibition at the Museum, artworks were installed according to their relative ranking from the juried process.

References: http://www.brooklynmuseum.org/exhibitions/click; Dreher, Dreher. 2009. "The Click Experience-A Participants Point of View." *Exhibitionist* (Fall 2009: Visitor-Generated Content and Design).

Click! Photography changes everything
2007-2010. Smithsonian Photography Initiative, Washington DC

Click! Photography changes everything invited experts from a spectrum of professional domains to survey the ways photography has influenced the history, progress, and practice of each of their fields of interest. Visitors were also encouraged to contribute texts and images in Flickr via an integrated plugin, or directly through the Click! website, and selected visitor contributor content became part of the project's online content.

References: http://www.click.si.edu.

Children Lodz Ghetto. A memorial research project
2006; United States Holocaust Memorial Museum, Washington DC

In 2006 the United States Holocaust Memorial Museum launched a temporary exhibition about children in the Lodz Ghetto inspired by an album of hand-drawn New Year's greetings presented by Ghetto schools to the Jewish Council chairman, and signed by thousands of schoolchildren of the Lodz Ghetto. The memorial research project is a worldwide collaborative volunteer effort to find out what happened to the student signatories in this album. This site provides access to online databases and scanned concentration camp prisoner lists collected from various archives for registered users to find and compile data in order to reconstruct the stories of these children.

References: http://www.ushmm.org/online/lodzchildren; Simon, Nina. 2011. "Participatory Design and the Future of Museum." In *Letting Go? Sharing Historical*

Authority in a User-generated World, by Bill Adair, Benjamin Filene, and Laura Koloski, 18–33. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP.28-30.

Coney Island History
2005. Deno's Wonder Wheel Park, New York, NY

The purposes of Coney Island Voices History Project are to record and preserve memories of Coney Island and to teach young people the techniques of oral history. During the "History Days" people are invited to record their personal memories and share their photographs and other memorabilia. Selected interviews and visual material are accessible in the online archive.

References: http://www.coneyislandhistory.org; Giaccardi, Elisa. 2011. "Things We Value." *Interactions* 18 (January 1). P.19.

Contemporary Issues Forum
2007-2010. National Museum of American Jewish History, Philadelphia, PA

Contemporary Issues Forum invited visitors to participate in real-time discussions about major issues in American and American Jewish life. Four interactive walls presented different questions that visitors answer by sharing their views on Post-it-style notes that are scanned electronically and displayed, allowing the dialogue with others whose opinions they might reinforce or contradict.

References: http://cif.nmajh.org.

Cooking: the Exhibition Chefs
2010. Liberty Science Center, Jersey City, NJ

Cooking The Exhibition Chefs investigates whether a social media website can be a platform to broadly engage the public in the exhibition development process. In particular Ning has being used to bring interested individuals, both general public and organizations, to help develop the Cooking Exhibition, which examined the science and technology that underlies cooking.

References: LaBar, Waine. 2009. "The Public Is a Team Member." *Exhibitionist* (Fall 2009: Visitor-Generated Content and Design); LaBar, Waine. 2010. "Can Social Media Transform the Exhibition Development Process? Cooking: The Exhibition – An Ongoing Case Study." In *Museums and the Web 2010: Proceedings*, edited by Jennifer Trant and David Bearman. Toronto: Archives & Museum Informatics; MacArthur, Matthew. 2011. "Get Real! The Role of Objects in the Digital Age." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 56–67. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P.64.

Cool remixed
2008. Oakland Museum of California, Oakland, CA

Cool Remixed invited local artists and Oakland community organizations to create art and installations for the exhibition aimed at capturing northern California 'cool' via graffiti art, film, fashion, dance, skateboard, and bike culture.

References: http://museumca.org/exhibit/cool-remixed; McLean, Kathleen. 2011. "Whose Questions, Whose Conversation?" In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 70–79. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP. 73-74.

Creative Community Committee (C3)

2012-ongoing. Santa Cruz Museum of Art & History, Santa Cruz, CA

C3 is a large, diverse group that meets bi-monthly or quarterly for a highly specific brainstorming session, inviting people to cross-pollinate and share ideas. Topics range from exhibition development, community needs, outreach programs and family programs.

References: Interview with Nina Simon (Executive director at the Santa Cruz Museum of Art & History); http://museumtwo.blogspot.com/2012/03/community-driven-approach-to-program.html.

Culture Shock!

2005-ongoing. Tyne & Wear Archives & Museums, Newcastle Upon Tyne

Culture Shock! collects digital stories by people of the North East England community inspired by museums and galleries. It is currently one of the largest digital storytelling projects to take place in the world counting over than 550 people that have engaged in digital storytelling workshops to create their own personal digital stories inspired in some way by museums and galleries or by heritage. All the finished stories have been permanently added to museum collections, and broadcasted online and at special events.

References: www.cultureshock.org.uk.

Denver Community Museum

2008-2009. Denver Community Museum, Denver, CO

The Denver Community Museum was a temporary museum that ran less than year in 2008-2009 aimed to challenge the traditional notions of a museum. The contents for each month-long exhibition were entirely community-generated through calls for participation open to all Denver area residents. Every month a new challenge was issued and the previous challenges' results were displayed within the museum.

References: http://www.denvercommunitymuseum.org; http://museumtwo.blogspot.it/2009/12/guest-post-denver-community-museum.html.

Designing democracy

2011-ongoing. Museum of Australian Democracy at Old Parliament House, Canberra

In the permanent exhibition Designing Democracy student teams can undertake custom activities that purposefully engage them with the museum's physical artifacts, images and stories. Participatory activities are facilitated by RFID technology.

References: 2012 MuseumNext presentation by Glenda Smith (Museum of Australian Democracy at Old Parliament House) and Darran Edmundson (EDM Studio); http://moadoph.gov.au/exhibitions/designing-democracy.

DialogTable

2007. University of Michigan Museum of Art, Ann Arbor, MI

DialogTable is an interface where visitors can use hand gestures to discover movies, narratives, and 3D journeys showcasing alternative approaches that pose questions and challenge conventional interpretation to UMMA's collections. The table provides an opportunity for people to discuss with each other their thoughts on what they have seen. Through the companion website, users can tag works of art in the Museum's collection, create their personal collection, and submit ideas for new movies, contributing to a communal dialog.

References: http://www.umma.museum/view/DialogTable; http://kinecity.com/dialogtable.

Digital Natives

2010. Aarhus Center for Contemporary Art, Aarhus

Digital Natives was a research and exhibition experiment exploring the intersections of cultural heritage, participatory design, and new interactive technologies. The project involved creative collaboration between a group of young people, anthropologists, and interaction designers through a period of nine months, with the goal of creating an exhibition that explored the lives and cultures of the digital natives' generation in a specific local setting. The digital natives provided content to the exhibition by sharing their SMS messages, Facebook updates, and photo galleries, and they engaged in the participatory design process of the entire exhibition.

References: Smith, Rachel Charlotte, and Ole Sejer Iversen. 2011. "When the Museum Goes Native." *Interactions* 18 (September 1).

Diritti al cubo

2010. Palazzo Ducale, Genova and Museo Diffuso, Torino

Diritti al cubo is a temporary exhibition that asks the public to participate by giving answers to the questions it asks about the words of democracy. The exhibition aims to make visitors reflect on current problems, uncertainties, and expectations. After expressing their own opinion, visitors can compare their responses with those of others and eventually put themselves in the shoes of the legislator.

References: Interview with Valentina De Marchi (studio Ennezerotre Milano); http://www.museodiffusotorino.it/focus_evento.aspx?id=612.

Doha Memories Prototype

2010. Ceremonial Court, Education City, Doha

Doha Memories is a prototype for a temporary museum of oral memory in Doha. Through personal speakers, visitors can explore the intangible and ephemeral memories recorded by selected participants that have been interwied by local facilitators.

References: Interview with Stefano Mirti (ID Lab); http://www.interactiondesign-lab.com/project.php?progetto_id=126&categoria_id=3.

Dulwich OnView

2007-ongoing. Dulwich Picture Gallery, London

Dulwich OnView is blog-based online magazine that celebrates the people and culture of Dulwich and the surrounding areas of South East London. The Dulwich community associated with the Dulwich Picture Gallery runs it autonomously with the support of the Gallery.

References: 2012 MuseumNext presentation by Shapa Begum and Ingrid Beazley (Dulwich Picture Gallery); http://dulwichonview.org.uk.

Europeana 1914-1918. Your family history of World War One

2011-ongoing; Europeana, European Union

Europeana 1914-1918 is a crowdsourced project aimed to collect memorabilia and stories from the period of the Great War, focusing on European items: letters, postcards, photographs and stories from Germany, Luxembourg, Ireland, Slovenia

and the UK. Contributions can be made via the project's website, by adding a picture of the item or type in the story online; or physically at the "Family History Roadshows," by bringing the items to the event.

References: 2012 MuseumNext presentation "A Story Collection Roadshow" by Anne Marie Van Gerwen (Europeana); http://www.europeana1914-1918.eu.

Flickr Museums
2010. Parsons School of Design, New York, NY

Students of the Parsons School of Design worked in teams to develop fictional museums using Flickr. The aim was to see if it is possible to practice the functions of the museum−collection, conservation, interpretation, education and exhibition−using Flickr's editorial and content management features.

References: http://museumdesignlab.wordpress.com.

Flick The Commons
2008-ongoing. Flickr

The project has the main objectives of increasing access to publicly held photography collections, and providing a way for the general public to contribute information and knowledge. Users are invited to help describe the photographs they discover in The Commons on Flickr, either by adding tags or leaving comments. This information feed back into the catalogues, making them richer and easier to search.

References: http://www.flickr.com/commons.

Forces of Change 1960-1975
2010 and 2013-2016. Oakland Museum of California, Oakland, CA

Forces of Change is an exhibition initially developed in 2010 through a cooperative effort between Museum staff and the African American, Asian Pacific, Latino and Native American Advisory Councils that helped the Museum achieving a result that was representative of the diversity in the state of California during the period in history comprised from 1960 to 1975. People all over the state of California created 24 niches that represented the creator during the 1960s and 1970s. Participants worked with museum staff and teaching artists to curate their own case through the use of both personal objects and pieces from the collection. In 2013 the Museum launched a new edition of Forces of Change.

References: http://museumca.org/forces-of-change; http://www.nytimes.com/2010/05/16/arts/design/16oakland.html?pagewanted=all; McLean, Kathleen, and Adam Nilsen. 2009. "Forces of Change: The Peoples Exhibit." *Exhibitionist* (Fall 2009: Visitor-Generated Content and Design); Valdez, Cynthia G. 2011. "Empowering Voices: Community Advisory Councils at the Oakland Museum of California"; McLean, Kathleen. 2011. "Whose Questions, Whose Conversation?" In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 70–79. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP.75-76.

Foresta nascosta
2009-2011. Municipality of San Giuliano Milanese (MI)

The project involves five areas of Milan, selected as a symbol of a decade of urban and social history since the postwar period. A group of young volunteers from San Giuliano Milanese gathered personal stories and family photographs of the

inhabitants of the five selected areas that have been displayed in the Temporary Museum District. Backstage materials the complete archive of collected stories and images are available on the project website.

References: http://www.forestanascosta.net.

Franklin Remix
2010. Rosenbach Museum & Library, Philadelphia, PA

Franklin Remix was an online exhibit, developed for middle school students by middle school students. It allowed visitors to view a rich-media slideshow narrated by the students themselves and explore artifacts and related stories. "Student pages" featured students' individual reflections on the exhibit through texts, images and voices.

References: Fisher, Matthew, and Bill Adair. 2011. "Online Dialogue and Cultural Practice: A Conversation." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 44–55. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P.48.

Free2Choose
2010-ongoing. Anne Frank House, Amsterdam

Free2choose is a simple interactive show in which visitors vote on their stances on issues related to freedom. Short films show up-to-date examples from around the world of how human rights can come into conflict with each other or with the democratic rule of law. At the end of each film a question is asked that the museum visitors can vote on. The visitors then see the results of the votes: first the collective opinion of the people present in the room, then the cumulative opinion of all the visitors who have answered this question at Free2choose.

References: http://www.annefrank.org/en/Museum/Exhibitions/Free2choose; Simon, Nina. 2010. *The Participatory Museum*. Santa Cruz: Museum 2.0. PP.92-95.

From Memory to Action
2009-ongoing; United States Holocaust Memorial Museum, Washington DC

Located in the Museum's Wexner Center, the interactive installation From Memory To Action: Meeting The Challenge of Genocide introduces visitors to the concept and law of genocide, through three contemporary cases of genocide (Rwanda, Srebrenica in Bosnia-Herzegovina, and Darfur region of Sudan) and through eyewitness testimonies from activists, survivors, rescuers, journalists, and humanitarian aid workers. An interactive surface projects the visitors' written pledges as they write them and adds them to a growing physical repository. Also website users can post their pledges to take action against genocide on the Museum's Pledge Wall.

References: http://www.ushmm.org/confront-genocide/take-action-against-genocide; Simon, Nina. 2010. *The Participatory Museum*. Santa Cruz: Museum 2.0. P.70.

Glasgow Open Museum
1990-ongoing. Glasgow Open Museum, Glasgow

Open Museum is a project aimed to take museum collections to those communities that the museum service had failed to reach. Starting as a pilot project in 1990, the Open Museum worked with some of the most excluded groups and communities in Glasgow to create exhibitions which toured community venues.

References: http://www2.le.ac.uk/departments/museumstudies/rcmg/projects/a-catalyst-for-change-1/Catalyst%20for%20change.pdf; Simon, Nina. 2011. "Participatory Design and the Future of Museum." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 18–33. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P. 32.

Google Art Project

2011-ongoing. Google

Google Art Project is part of the Google Cultural Institute, collaboration between Google and hundreds of museums, cultural institutions and archives around the world with the goal of making available and accessible online important historical, cultural, and environmental assets. Users can log in with their Google Account to create their own collection, compiling any number of images from any of the partner museums and save specific views of artworks to create a personalized virtual exhibition. They can also share their artwork collection with others through social media and email.

References: http://www.googleartproject.com; https://sites.google.com/a/pressatgoogle.com/art-project/press-release; Proctor, Nancy. 2011. "The Google Art Project: a New Generation of Museums on the Web?" *Curator. The Museum Journal*.

Haarlem Oost library

2006-2009. Haarlem Oost library, Haarlem Oost

Haarlem Oost is a branch library in the Netherlands that wanted to encourage visitors to share reviews about the books they read, by providing a system of physical tagging of books embedded into the normal use of the library. When returning a book, patrons just had to drop it in the book bin labeled with the tag most suitable for the returned book. In this way users did not have to add anything to their standard library routine while providing different types of access to materials. Since 2009 the Library does not use the tagging system anymore.

References: http://www.hanratharchitect.nl/projecten/haarlem-oost; http://museumtwo.blogspot.it/2008/09/how-to-design-from-virtual-metaphor-to.html.

Hack the Museum Camp

2013. Santa Cruz Museum of Art & History, CA

Hack the Museum Camp was a two and half days event at which participants worked to create interpretative experiments around pre-selected permanent collection objects to create an exhibition that challenged museum conventions and traditional exhibit design practice. The goal was to invite unusual collaborations, give people a space to test out their expectations, and encourage experimental thinking and prototyping. Eighty creative people with skills relevant to exhibit making were divided in teams to design and create their interpretative experiments. The event ended with a public Pecha Kucha on experimentation.

References: http://www.santacruzmah.org/museumcamp2013; http://museumtwo.blogspot.it/2013/07/hack-museum-camp-making-space-for.html; http://museumtwo.blogspot.it/2013/07/hack-museum-camp-part-2-making-magic.html.

Historypin

2011-ongoing. We Are What We Do in partnership with Google, Online platform

Historypin is an online global archive where millions of people can explore and create communal archives browsing contents on a map, or navigating featured contents in "Channels," "Projects," "Collections," and "Tour" sections. Individuals can add photos, videos, audio files, stories and recollections, pinning them to a particular point in place and time. Contributions can be submitted through the Historypin website, iPhone and Android apps and via community projects all over the world.

References: http://www.historypin.com; http://wearewhatwedo.org/portfolio/historypin

Human library
2000-ongoing. The Human Library Organization Copenhagen, Worldwide

The Human Library is a mobile library set up as a space for dialogue and interaction: visitors are given the opportunity to speak informally with "people on loan" that are extremely varied in age, sex and cultural background. The Human Library enables groups to break stereotypes by challenging the most common prejudices.

References: http://humanlibrary.org; Simon, Nina. 2011. "Participatory Design and the Future of Museum." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 18–33. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP. 27-28.

Hydroscope
2008. Kattegat Marine Centre, Kattegat

The Hydroscope is a prototype installation designed for the Kattegat Marine Centre that invites visitors to construct fish for a virtual ocean. Visitors can assemble their own imaginary fish that combined the particular qualities of existing species, using a physical construction kit with embedded RFID tag that give each peace a unique identity. Depending on the characteristics of the fish, it will inhabit specific places in the digital ocean inhabited also by the fish that previous visitors have created and mapped onto the physical floor surface of the exhibition space. Visitors can explore it by pushing the Hydroscopes along the floor surface.

References: Iversen, Ole Sejer, and Christian Dindler. 2008. "Pursuing Aesthetic Inquiry in Participatory Design." In *Proceedings of the Tenth Anniversary Conference on Participatory Design 2008*, 138–145. PDC '08. Indianapolis, IN, USA: Indiana University; Dalsgaard, Peter, Christian Dindler, and Eva Eriksson. 2008. "Designing for Participation in Public Knowledge Institutions." In *Proceedings of the 5th Nordic Conference on Human-computer Interaction: Building Bridges*, 93–102. New York, NY, USA: ACM Press.

Hyphenated-Origins: Going Beyond the Labels
2006-2008. Newton History Museum, Newton, MA

The exhibition curators were the exhibition's subjects themselves: seven students from Newton's high schools, whose families have immigrated to the United States. The students planned, designed, and created a full-scale exhibit that focused on their life experiences. The participants worked with exhibition designer Douglas Simpson and photographer Peter Vanderwarker to tell their stories. Each story was represented in the Museum gallery with a life-size cutout portrait and a display case that held photographs and objects of special significance to the student and his or her story.

References: Simpson, Douglas. 2009. "Immigrant Teens Tell Their Story."
Exhibitionist (Fall 2009: Visitor-Generated Content and Design).

In the Long Run: Thirty years of the Great North Run

2010. Great North Museum, Newcastle Upon Tyne

The participatory installation is part of the temporary exhibition In the Long Run:
Thirty years of the Great North Run. It consisted of thirteen single touch-screens
with associated digital pens and pads placed along the length of a long table.
The screens displayed stories and photographs from runners and visitors plus
an invitation for people to write or draw on the pads. On returning the pen to a
docking station the contributions were uploaded onto the associated screen and to
a live server and connected website. Visitors could also view and submit their own
contribution the website.

References: Bartindale, Tom, Rachel Clarke, John Shearer, Madeline Balaam, Peter
Wright, and Patrick Olivier. 2011. "Bridging the Gap: Implementing Interaction
through Multi-user Design." In *CHI '11 Extended Abstracts on Human Factors in
Computing Systems*, 2071–2076. CHI EA '11. New York, NY, USA: ACM.

In your face

2007. Art Gallery of Ontario, Toronto, Ontario

In Your Face was an exhibition made entirely by public consisting of portraits
collected from the general public to celebrate the individuality and diversity of
Canada. A range of people from professional artist, to amateur, to people who
had never made art before, and children submitted portraits that were displayed
anonymously without labels.

References: http://www.ago.net/in-your-face; McIntyre, Gillian. 2009. "In Your Face:
The Peoples Portrait Project." *Exhibitionist*.

Inventory of Intangible Cultural Heritage

2008. Institute for Museums and Conservation, Lisbon

Online platform based on Wiki infrastructure to collaboratively create the Intangible
Cultural Heritage Inventory for the production of inlaid ceramics in Nisa, a small
Portuguese village in North Alentejo.

References: ASPACI. 2011. "Identificazione partecipativa del patrimonio immateriale".
Milano: ASPACI. PP.91-101; Cabral, Clara Bertrand. 2011. "Collaborative Internet-
mediated ICH Inventories." *International Journal of Intangible Heritage* 6: 35–43.

MappaMi

2007-ongoing. EUMM-Ecomuseo Urbano Metropolitano Milano Nord, Milan

MappaMi is an interactive web platform that allows citizens to represent a trace of
their passage and presence in the places of their memory, with the goal to promote
the active and participated protection of the local heritage. Users can mark on
a map specific areas of interest related to memories, witnesses, commentaries
on news, or ideas for the future that they can write in the format of a blog post,
including photos, external documents and videos. They can also add comments to
other visitors' posts.

References: Interview with Alessandra Micoli (EUMM); http://mappa-mi.eumm-nord.it

Mapping Main Street

Ongoing. Maker's Quest 2.0, Online Platform

Mapping Main Street is a collaborative documentary media project that has the goal to document all of the more than 10,000 streets named Main in the United States. People can contribute to this re-mapping of the United States submitting, via Flickr and Vimeo, photos, audios, and videos recorded on actual Main Streets.

References: http://www.mappingmainstreet.org; Shapins, Jesse. 2011. "Mapping the Urban Database Documentary." In *Urban Geographers: Independent Filmmakers and the City*, edited by Mark Street. Berghahn Books.

Mare Memoria Viva
Ongoing. CLAC-Centro Laboratorio Arti Contemporanee and Fondazione con il Sud, Palermo, Sicily

The main goal of the project is the creation of a diffused urban ecomuseum aimed to reconstruct, through stories, memories and the active participation of the inhabitants, the link between the city of Palermo and the sea. Stories, photos, videos, and objects of affection have been collected to create a geotagged community map that connect local heritage to the sea. Citizens are directly involved in the management of the Museum serving as guides both physically and through audio guides.

References: http://www.progettomemoriaviva.net.

MN150
2007-ongoing. Minnesota History Center, St. Paul, MN

MN150 is a permanent exhibition at the Minnesota History Center that displays 150 of people, places, and things that shape the state's history. All 150 topics covered were visitor-nominated, and the resulting exhibition features their stories alongside representative artifacts and additional content. Via the MN150 Wiki, visitors can view the winning nominations and additional historical content provided by the museum.

References: http://www.mnhs.org/exhibits/mn150; http://museumtwo.blogspot.it/2008/07/state-fairs-and-visitor-co-creation.html; Barret, Roger, Liza Pryor, and Jeanne W. Vergeront. 2009. "Exhibition Critiques: MN150." *Exhibitionist* (Fall 2009: Visitor-Generated Content and Design).

Museomix
2011-ongoing. Museomix. Itinerant

Museomix is a series of events hosted in several cultural venues worldwide, in which over three consecutive days, participants create and test new ways to mediate exhibitions. Designers, creators, makers, hackers, and museum professionals are invited to mix and develop ideas in pursuit of a new model for experiencing the museum with real visitors testing them right away.

References: 2012 MuseunNext presentation by Samuel Bausson (Museomix); http://www.museomix.org.

Nationale Automatiek
2010-ongoing. Amsterdam Historical Museum, Amsterdam

The National Vending Machine (in Dutch *Nationale Automatiek*) is place where Museum's visitors can buy both historical and everyday objects (like a light bulb or tulips). Each object tells a story about Dutch history, which visitors can read on an attached label, see as a video or discover on the project's website. Visitors can contribute to the collection by telling their story about the object they bought or by suggesting new objects.

References: http://themuseumofthefuture.com/2010/05/27/the-national-vending-machine-building-a-community-of-objects; http://www.any.nu/498/en/zuiderzee-vending-machine; Visser, Jasper, and Dennis Tap. 2011. "The Community as the Centrepiece of a Collection: Building a Community of Objects with the National Vending Machine." In *Museums and the Web 2011: Proceedings*, edited by Jennifer Trant and David Bearman. Toronto: Archives & Museum Informatics.

NaturePlus

2009-ongoing. The Natural History Museum, London

NaturePlus is a personalized visitor experience that spans both the Darwin Centre and the Museum's website. Within the Darwin Centre, visitors can bookmark and collect information from eight interactive exhibits using a card with a unique barcode and ID number. On-line visitors register their unique IDs to access a personalized website where the information they have bookmarked is saved. The personalized area also features additional information like articles, videos, forums and events from both the Museum and external providers. Visitors can actively take part in discussions with Museum scientists and other visitors to the site through the NaturePlus forum.

References: http://www.nhm.ac.uk/natureplus; Barry, Ailsa. 2010. "NaturePlus. Developing a Personalised Visitor Experience Across the Museum's Virtual and Physical Environments." In *Museums and the Web 2010: Proceedings*, edited by Jennifer Trant and David Bearman. Toronto: Archives & Museum Informatics.

New Dialogue Initiative

Ongoing. Wing Luke Museum of the Asian Pacific American Experience, Seattle, WA

New Dialogue Initiative is a multi-strategy program that address community concerns and urgent needs about contemporary social issues and current news events, giving voice to underrepresented ideas and opinions from the Asian Pacific American community. The goal is to bring together community members, artists, and other professionals to jointly shape and implement the programs.

References: http://wingluke.org/dialogue.htm; Simon, Nina. 2011. "Participatory Design and the Future of Museum." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 18–33. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P.32.

New York Divided

2006-2007. New York Historical Society, New York, NY

This temporary exhibition used artifacts, documents, and media pieces to trace the role of the slave trade in New York City's history and New Yorkers' responses to the Civil War. At the end of exhibition, visitors could record video responses to four questions related to the exhibition that were posted on YouTube and integrated into the introductory videos that framed the exhibition.

References: http://www.nydivided.org/AboutExhibit; Simon, Nina. 2010. *The Participatory Museum*. Santa Cruz: Museum 2.0. PP-144-146.

Nubes

2011. ENS d'Architecture de Marseille, Marseille

Nubes is an integrated platform for collaboratively describing, analyzing, documenting and sharing digital representations of heritage buildings. It aims to

exploit the relations between the 3D representation of buildings and technical, documentary, historical information, organizing multiple representations (and associated information) around a model of semantic description.

References: http://www.map.archi.fr/nubes/NUBES_Information_System_at_ Architectural_Scale/Home.html.

Object Stories
2009-2011. Portland Art Museum, Portland, OR

Object Stories invited people to tell stories about things that matter to them. Objects and stories have been captured through a recording booth that asked participants for audio stories plus photos of themselves with their objects. Stories and objects have then been published to an onsite and online digital archive where they were presented along with more curated personal stories about Museum's objects.

References: http://objectstories.org; http://museumtwo.blogspot.it/2011/05/how-do-you-capture-compelling-visitor.html.

Oggetti Obsoleti del Contemporaneo
2008-ongoing. Istituto Musei Comunali di Santarcangelo

The project is virtual museum of contemporary obsolete objects (like for example floppy disk, typewriter, compact cassette, etc.). Users can suggest an object to be included in the repository uploading for each object a photo, a description, and tags. They can also add comments to the other objects of the repository.

References: http://www.oggettiobsoleti.com

Open house: If These Walls Could Talk
2006-ongoing. Minnesota Historical Society, St. Paul, MN

Personal stories of families contributed by people of the local community are told through rooms representing different eras of the house. The goal of this community-based project was to built connections between the Minnesota Historical Society and the neighborhood.

References: http://www.mnhs.org/exhibits/openhouse/exhibit.htm; Filene, Benjamin. 2011. "Listening Intently: Can StoryCorps Teach Museums How to Win the Hearts of New Audience?" In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 174–193. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press.

Parlamentarium
2011-ongoing. Parlamentarium-European Parliament's Visitors' Centre, Brussels

Interactive multimedia displays guide visitors through the storytelling of European integration. In particular the "Role Play Game," addressed to secondary school groups, let the participants to step into the shoes of a Member of the European Parliament and to take a fast-track course on how Europe's democratically elected body works. Students need to negotiate with fellow scholars to build the future they want for Europe as in imaginary political groups.

References: http://www.europarl.europa.eu/visiting/en/visits/parlamentarium.html.

Passerby Museum
2002-2009. Itinerant (Madrid, Spain; Puebla, México; Kitchener, Canada; New York, NY; México City, Mexico; Havana, Cuba; Claremont, CA)

The Passerby Museum is an itinerant institution dedicated to presenting temporary

exhibitions in different cities. At each location, visitors were asked to donate any random object from their life to the Passerby Museum's "collection." The installations include each of the approximately 3,000 items collected at all of the locations.

References: http://www.cafka.org/cafka07/nicholas-dumit-estevez-maria-alos-passerby-museum; http://claremontmuseum.org/passerby-museum-exhibition.

PhilaPlace

2009-ongoing. Historical Society of Pennsylvania, Philadelphia, PA

Two open source products–Google Maps and CollectiveAccess collections management system–are integrated in this project to create a model for place-based storytelling. The platform encourages visitors to share their stories, create tours, and access the Historical Society of Pennsylvania's database of curatorial content associated with the different locations.

References: http://www.philaplace.org; Giaccardi, Elisa. 2011. "Things We Value." *Interactions* 18 (January 1). P.19; Fisher, Matthew, and Bill Adair. 2011. "Online Dialogue and Cultural Practice: A Conversation." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 44–55. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. p.45.

Pop-Up Museum

2011-ongoing. Seattle Public Library, WS; Australian Museum, Sydney; Destination Archaeology Resource Center, Pensacola, FL; Center for Experiential Learning and Diversity, Washington DC; YMCA's Cascade People's Center, Seattle, WS; Multnomah County Library, Portland, OR; Santa Cruz Museum of Art & History, CA.

Pop-Up Museum is a temporary exhibition where people share stories with others, and learn something about someone else through conversations. Participants are invited to share their own object, based on a theme, for which they write their own label. The museum is based solely on the content provided by the people who show up to participate.

References: Interview with Nora Grant (Community Programs Coordinator at the Santa Cruz Museum of Art & History); http://popupmuseum.org; DelCarlo, Michelle. 2012. "Conversation and Community: An Exploratory Study of The Pop-Up Museum Concept". Master of Arts degree in Museology, Washington DC: University of Washington.

Public Perspective Exhibition Series

2006-ongoing. Brooklyn Historical Society, New York, NY

Public Perspectives Exhibition Series provides a creative forum for individuals, school and community groups, and non-profit organizations to have an active voice at the Brooklyn Historical Society by presenting community-curated exhibits that are selected by a panel of cultural and community representatives.

References: http://brooklynhistory.org/sitearchive/exhibitions/perspective_series. html; Schwartz, Deborah, and Bill Adair. 2011. "Community as Curator: A Case Study at the Brooklyn Historical Society." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 112–123. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press.

Publicview
2010-ongoing. Sunderland City Council, Sunderland

Sunderland local people can upload to the project website their opinions of pieces of public art, using audio, video or text. These contributions are connected to a map that profiles each of the art pieces in Sunderland. Visitors can use the map to make tours of the city.

References: http://www.publicview.org.uk.

QRpedia
2011-ongoing. Wikimedia UK

QRpedia is a mobile Web based system that uses QR codes to deliver Wikipedia articles related to museums' artifacts, detecting visitors' preferred languages. As it is based on Wikipedia, anyone can add or modify contents.

References: 2012 MuseumNext presentation by Alex Hinojo (#glamwiki partnership ambassador); http://en.wikipedia.org/wiki/QRpedia.

Queensland stories
Ongoing. State Library of Queensland, Brisbane

State Library of Queensland uses digital storytelling to capture a diverse range of stories submitted by Queensland organizations or individuals. Digital stories are short videos that use images, sound, narration, video and music to tell a person's unique story. State Library maintains a Mobile Multimedia Lab that contains all the necessary equipment to conduct a digital storytelling.

References: http://www.slq.qld.gov.au/resources/queensland-stories; Kutay, Cat, and Peter Ho. 2010. "Story Telling for Cultural Knowledge Sharing." In *Proceedings of the 2010 International Conference on New Horizons in Web-based Learning (ICWL'10)*, edited by Xiangfeng Luo, Yiwei Cao, Bo Yang, Jianxun Liu, and Feiyue Ye, 28–34. Berlin, Heidelberg: Springer-Verlag.

Re-Tracing the Past
2003. Hunt Museum, Limerick

In the temporary exhibition Re-Tracing the Past: Exploring Stories, Objects, Mysteries two room-sized spaces contained interactive installations that enabled visitors to explore various details of mysterious objects of unknown or uncertain provenance and purpose. Object cards endowed with RFID technology were also used as the keys that visitors used to explore the installations and trigger the provision of information.

References: Fraser, Mike, John Bowers, Pat Brundell, Claire OMalley, Stuart Reeves, Steve Benford, Luigina Ciolfi, et al. 2004. "Re-tracing the Past: Mixing Realities in Museum Settings." In *First ACM Conference on Advances in Computer Entertainment (ACE 2004)*. ACM Press; McCarthy, John, and Luigina Ciolfi. 2008. "Place as Dialogue: Understanding and Supporting the Museum Experience." *International Journal of Heritage Studies* 14 (May): 247–267.

Red Bull Street Art View
2011-ongoing. Red Bull, online platform

The site dedicated to street art is the sum of the contributions made by users around the world and viewed through Google Street View. The web interface allows visitors to interact with the context in which art is inserted and with the surrounding urban landscape.

References: http://www.streetartview.com.

San Francisco Mobile Museum
2009-ongoing. San Francisco Mobile Museum, San Francisco, CA

San Francisco Mobile Museum runs short exhibits that appear in storefronts, parks and social spaces of the city featuring locally grown creations.

References: http://www.sfmobilemuseum.org; http://sfmobilemuseum.blogspot. it; Mortati, Maria. 2012. "Large Lessons from a Small Project: The San Francisco Mobile Museum." *Exhibitionist* (Spring 2012: Traveling Exhibitions: Where Are They Going?).

Santa Cruz Collect
2012. Santa Cruz Museum of Art & History, Santa Cruz, CA

The temporary exhibition Santa Cruz Collect presents collections from Santa Cruz County residents and institutions, exploring the practice of collecting, both on an individual and institutional level. The Museum's staff collaborated with community members to source content and develop the exhibit. Moreover, all interactive and participatory visitor experiences were prototyped with visitors at Museum's events in the months leading up to the opening.

References: Partaking in the design of exhibition's interactives and design of exhibition's labels; http://www.santacruzmah.org/2012/santa-cruz-collects-july-21-nov-11-2012; http://museumtwo.blogspot.it/2012/09/12-ways-we-made-our-santa-cruz-collect.html.

Scapes
2010. deCordova Sculpture Park and Museum, Lincoln, MA

Scapes is a participatory sound installation that creates a two-way audio experience for visitors influenced by their physical location on DeCordova grounds. It invites the visitors to both listen and participate in the creation of their own recordings, which are immediately incorporated into the sound-piece for everyone to hear.

References: 2012 MusemNext presentation by Nancy Proctor (Smithsonian Institution); http://www.decordova.org/sites/default/files/Final%20PLATFORM%20 3%20brochure.pdf; https://vimeo.com/15058020; http://wiki.museummobile.info/archives/16082.

Science Museum Object Wiki
2008; Science Museum, London (UK)

The project's website is a Wiki produced by the London Science Museum as a trial that contains information about objects held in the Museum's public collections. According to the Wiki model, anyone can contribute by adding information or memories of the objects.

References: http://objectwiki.sciencemuseum.org.uk/wiki; Looseley, Rhiannon, and Stacey Roberto. 2009. "Museums & Wikis: Two Case Studies." In *Museums and the Web 2009: Proceedings*, edited by Jennifer Trant and David Bearman. Toronto: Archives & Museum Informatics.

Shapeshifting
2012. The Peabody Essex Museum, Salem, MA

The temporary exhibition Shapeshifting celebrated Native American ideas that have crossed time and space to be continuously refreshed with new concepts and

expressions. The online interactive invited users to join the conversation about the exhibition: after watching short videos which explore four key works, visitors can share their thoughts with others who have experienced these works in the PEM galleries and online, and explore others' viewpoints.

References: http://www.pem.org/sites/shapeshifting.

Shh! It's a Secret!
2010. Wallace Collection, London

For one year a group of twelve schoolchildren worked with Museum's staff to develop a family-focused exhibition to unravel the secrets behind the artifacts in the Museum collection. Children co-developed the exhibition theme, selected the objects, designed the space, developed interpretative materials, managed the budget, raised sponsorship, created press and marketing materials, and led interpretative tours.

References: http://www.wallacecollection.org/collections/exhibition/82.

Silence of the Lands
2007. University of Colorado, Boulder, CO

Silence of the Lands is a cross-media infrastructure based on multiple and ubiquitous computing that enables the capture and sharing of sonic experiences of the natural heritage to encourage an engaged and collective form of social production of the natural heritage that fosters environmental awareness. The infrastructure promotes the connection between a local community and its land by capturing sounds from the natural environment, mapping the soundscape on the Web, and creating an ideal soundscape in the public space.

References: Giaccardi, Elisa. 2008. "Cross-media Interaction for the Virtual Museum. Reconnecting to Natural Heritage in Boulder, Colorado." In *New Heritage: New Media and Cultural Heritage*, by Yehuda E. Kalay. Taylor & Francis; Giaccardi, Elisa, and Leysia Palen. 2008. "The Social Production of Heritage through Cross-media Interaction: Making Place for Place-making." *International Journal of Heritage Studies* 14 (May): 281–297; Giaccardi, Elisa. 2011. "On Pause and Duration, or: The Design of Heritage Experience." Newcastle, UK.

Storie Plurali
2009. Museo Guatelli, Ozzano sul Taro di Collecchio

Storie Plurali (Plural Stories) aimed to collect stories and experiences of participants (ten women) connected with the Museum's collections, and develop them through the language of theatre. Participants worked together for five months in order to identify personal interpretations of Museum's objects connected with their respective contexts of origin. These interpretations would then be at the heart of the final theatre performance.

References: Bodo, Simona, Kirsten Gibbs, and Margherita Sani. 2009. *Museums as Places for Intercultural Dialogue: Selected Practices from Europe*. MAP for ID Group; Bodo, Simona, and Silvia Mascheroni. 2012. "Educare Al Patrimonio in Chiave Interculturale. Guida Per Educatori e Mediatori Museali." *Strumenti. Settore Educazione*. MIlano: Fondazione Ismu.

StoryCorps
2003-ongoing. StoryCorps, USA-itinerant.

StoryCorps mission is to provide Americans of all backgrounds and beliefs with the

opportunity to record, share, and preserve the stories of their lives. Participants, usually in pair, make an appointment to have a conversation in a soundproof recording booth with a trained facilitator that presents with potential questions, and ask which participant will act as interviewer and which as interviewee. Each conversation is recorded on CD, and preserved at the American Folklife Center at the Library of Congress. Selected stories can be listened at NPR's Morning Edition and on the project's website.

References: http://storycorps.org; Frisch, Michael. 2011. "From a Shared Authority to the Digital Kitchen and Back." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 126–137. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. PP.134-136; Schwartz, Deborah, and Bill Adair. 2011. "Community as Curator: A Case Study at the Brooklyn Historical Society." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 112–123. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P.90.

Sweet & Sour
2011-2013. Smithsonian's National Museum of American History, Washington DC

Sweet & Sour was part of the special showcases within the Museum's Artifact Walls. It called for collecting a variety of Chinese restaurant-related objects ranging from menus to restaurant signs to cooking implements, which would provide a glimpse into the long history of Chinese immigration, exclusion, exoticism and perseverance.

References: http://americanhistory.si.edu/exhibitions/artifact-walls-sweet-sour; http://blog.americanhistory.si.edu/osaycanyousee/sweet-sour; MacArthur, Matthew. 2011. "Get Real! The Role of Objects in the Digital Age." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 56–67. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press. P.64.

Tales of Thing
2009-ongoing. University of Salford; University College London; Brunel University; University of Dundee; Edinburgh College of Art.

Tales of Things is part of the research project TOTeM, Tales Of Things and Electronic Memory that explores social memory in the emerging culture of the Internet of Things. The system allows individuals to attach social data to objects through a website that generates a unique QR code or RFID tag so that others who come across the object can retrieve that data. Contents depend on real people's stories, which can be geo-located through an on-line map of the world where participants can track their object even if they have passed it on.

References: http://talesofthings.com; Speed, Chris. 2011. "An Internet of Things That Do Not Exist." *Interactions* 18 (May 1): 18–21.

TAM TAM – Tutti al Museo
2010-2012. Museo Popoli e Culture del Pime, Milan

TAM TAM – Tutti al Museo offers a progressive approach to the Museum's collections, creating a wealth of stories shared by individuals with different cultural backgrounds. It is structured in a series of successive meetings, which require the continued involvement of the same small group of people. The mediators first lead the participants on a guided tour articulated by comparing Museum's objects and

personal objects of affection, then the participants bring to the museum their own object of affection and collectively discuss it, and finally participants repeat their experience with other visitors becoming themselves mediators.

References: Interview with Silvia Mascheroni (Patrimonio e Intercultura); http://www.pimemilano.com/index.php?l=it&idn=6&idnews=1394&onlpg=5.

The great fat debate
2008-2010. Science Museum, London

The great fat debate is an interactive multimedia exhibition developed to enable visitors to find out about different views of the potential advantages and disadvantages of Olestra (a fat substitute). Visitors were able to record their own views on paper; some of these comments were selected by the exhibition team and added to a growing ring-bind of visitors' comments that could be read by all subsequent visitors.

References: http://www.chemforlife.org/virtual_gallery/fat_debate/default.htm; Gammon, Ben, and Xerxes Mazda. 2009. "The Power of the Pencil. Renegotiating the Museum Visitor Relationship through Discussion Exhibits at the Science Museum, London." *Exhibitionist* (Fall 2009: Visitor-Generated Content and Design).

The Secret Life of Objects
2008. Design Museum, Helsinki and University of Art and Design Helsinki

The Secret Life of Objects, an Interactive Map of Finnish Design was a temporary exhibition based on a selection of objects from the collections dating from 1874 to 2008 on show in the Design Museum. Through the interactive map visitors could give their comments about the objects and enjoy comments that were left by other visitors at a stand in the exhibition. The material collected during these initial experiments served as the basis for engaging the Museum's staff. Text comments left through the stand were printed and placed near the design objects.

References: http://thesecretlifeofobjects.blogspot.it; Salgado, Mariana, Joanna Saad-Sulonen, and Lily Díaz. 2009. "Using On-line Maps for Community-Generated Content in Museums." In *Museums and the Web 2009: Proceedings*, edited by Jennifer Trant and David Bearman. Toronto: Archives & Museum Informatics.

The Shannon Portal
2007. Interaction Design Centre, University of Limerik

The goal of this installation at the Shannon International Airport, County Clare, was to extend the airport's role as a connection hub, allowing users to create content that would document their travels and experiences in the West of Ireland. Participants could create e-cards of their own *photographs* of locations and monuments in the area, annotate them with a personal hand-written message and email them for free. They could also add their annotated photos to a public image gallery that was displayed in the airport's transit lounge, which constituted a visual record of their journeys and of the heritage sites they had visited.

References: Ciolfi, Luigina, Mikael Fernstrom, Liam J. Bannon, Parag Deshpande, Paul Gallagher, Colm McGettrick, Nicola Quinn, and Stephen Shirley. 2007. "The Shannon Portal Installation: Interaction Design for Public Places." *Computer* 40 (July): 64–71; Ciolfi, Luigina, Liam J. Bannon, and Mikael Fernström. 2008. "Visitors' Contributions as Cultural Heritage: Designing for Participation." *Tafter Journal* 2 (47).

Top 40

2009. City Art Gallery and Museum, Worcester

The temporary exhibition Top 40 featured forty paintings from the City Art Gallery and Museum's permanent collection, each of which was labeled with a large number indicating its place in the Top 40 ranking decided by visitors by paper ballot. The labels were changed weekly to reflect the count from visitors' ballots.

References: http://www.worcestercitymuseums.org.uk/mag/magpex/top40/top40. htm; Simon, Nina. 2011. "Participatory Design and the Future of Museum." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 18–33. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press.

Turbingeneration

2009-2013. Tate Modern, London

Turbinegeneration is a project aimed to international collaboration and exchange, by linking schools, galleries, artists and cultural institutions worldwide through contemporary art and ideas. Schools and colleges can register to collaborate with an international partner to exchange their artwork online. The activities are supported by a free downloadable project pack informed by research with teachers and developed by practicing artists and Tate Learning, with a range of starting points to initiate an ongoing dialogue among schools. Through the dedicated blog site, school can share, compare and develop artwork together, uploading photographs, video, audio and text.

References: http://www.tate.org.uk/about/projects/unilever-series-turbinegeneration.

Yellow Arrow

2004-ongoing. Counts Media, Inc.

Yellow Arrow is a global public art project aimed to transform the urban landscape into a map that expresses the personal stories and secrets associated within everyday spaces. Participants place uniquely coded "Yellow Arrow" stickers to draw attention to different locations and objects. By sending a text to the Yellow Arrow number beginning with the arrow's unique code, participants connect a story to the location where they place their sticker. When other persons encounter the sticker they send its code to the number and receives the message on their mobile phone.

References: http://yellowarrow.net; http://www.flickr.com/photos/yellowarrow; Shapins, Jesse. 2011. "Mapping the Urban Database Documentary." In Urban Geographers: Independent Filmmakers and the City, edited by Mark Street. Berghahn Books

Yorkshire's Favourite Paintings

2011-ongoing. Museums Sheffield

Yorkshire's Favourite Paintings is a project put together by diverse museums and galleries in Yorkshire to celebrate the quality and variety of paintings in their collections. Participants are asked to create a shortlist of their favorite paintings in Yorkshire through the project website. They have a chance to win a printed copy of people's favorite painting by telling why they like it and where they'd like to hang it.

References: http://www.yorkshiresfavourites.org.

7

MAPPING OF CASES AND DISCUSSION OF DATA

Chapter seven systematizes and discusses the data collected through the study of cases described in the previous chapter.

In particular, the first section describes the tools that have been identified as potential enablers of participatory activities and highlights the relations between tools, participants' roles, and levels of social engagement with the objective of gaining insights about which tool may work best in order to achieve specific institutional goals. This discussion is supported by graphic representations to facilitate an integrated analysis of data.

The second section then proposes a visual map of the collected cases and discusses the modes of participation that have been identified. The main goal is to highlight the level of social engagement that particular modes of participation may promote, in relation to the roles that participants assume during the experience of heritage.

7.1. Enabling participation

This paragraph describes the tools that have been identified as potential enablers of participatory activities that could effectively support the achieving specific institutional goals. Moreover, the relations between tools, participants' roles, and levels of social engagement, which have been identified through the preliminary analysis of cases, are here highlighted and discussed. Appendix A presents an overview table of the analysis of cases according to these criteria.

In order to facilitate an integrated analysis of data, this discussion is supported by graphic representations that have been made using the application "Raw" developed by the DensityDesign Research Lab, Politecnico di Milano.[1]

7.1.1.PARTICIPATION AND SOCIAL MEDIA

In recent years cultural institutions have increasingly shifted the focus from the use of hard interactive technologies for audience engagement (e.g. 3D interactive virtual models, immersive environments), to the participatory opportunities offered by social media platforms, responding to audience's expectations to create, care for, and co-produce different types of content and experiences.
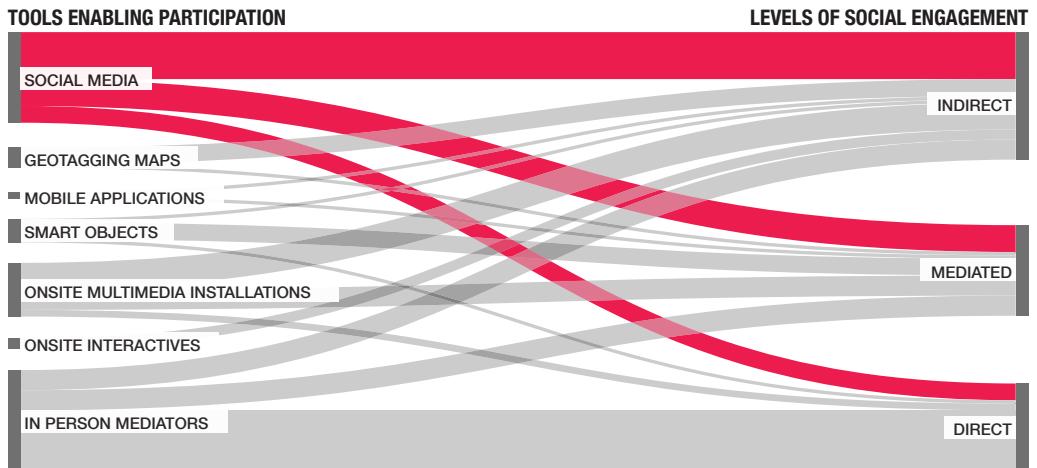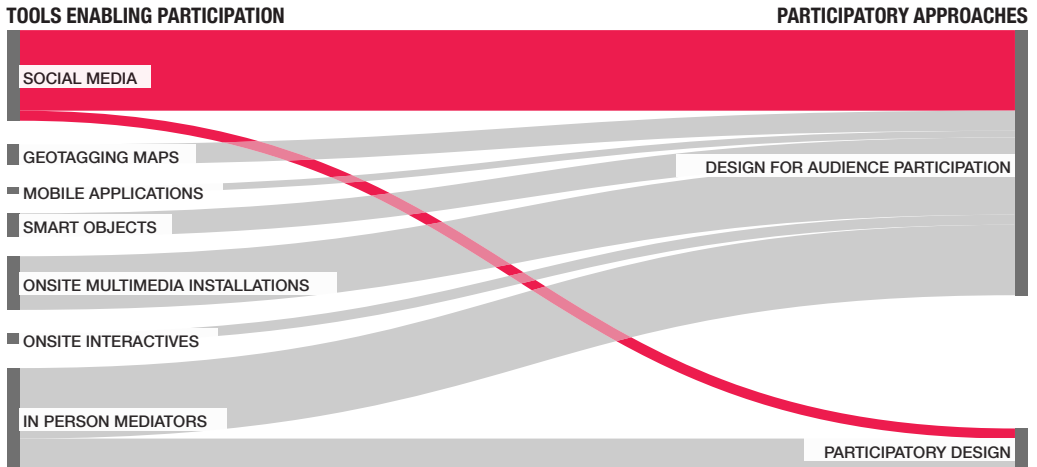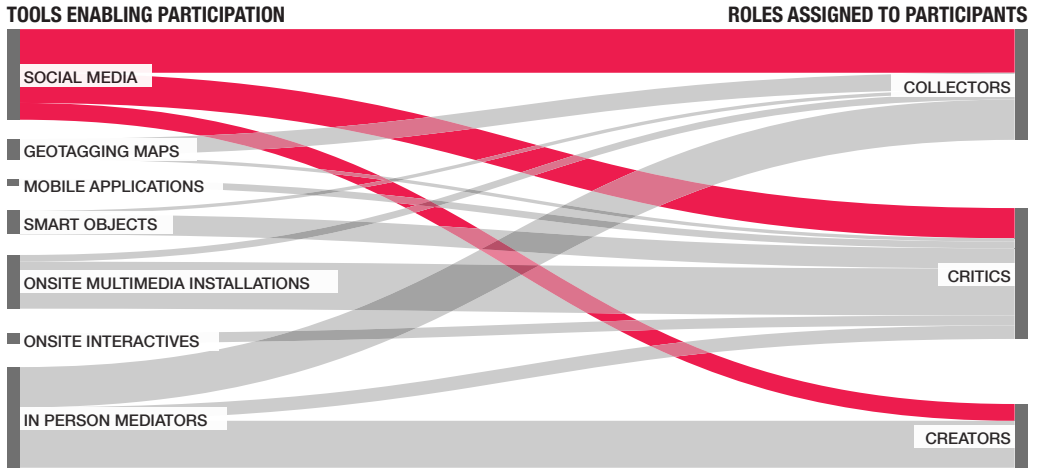
Analyzing the applications of social media within cultural institutions three main frames are recognizable:

1. The use of social media in a marketing frame with the aim to promote the museum and engage the audience;

2. The use of social media for building and sustaining a community of interest around the institution;

3. The use of social media for encouraging the public to co–create museum narratives.

Social media as a means to build communities of fans and reaching a wider audience is a social marketing strategy widely used by most cultural institutions. Social media, often linked to museums websites are having a major impact on the ways in which museums are perceived, pushing institutions toward being more responsive to the public (Ambrose & Paine 2012, p.104).

While museums initially used social media only to advertise events and exhibits, the tools of social networking are now also used for interactive education, including collaborative and participatory modes of interaction, user generated tags and comments. However, as stated by Scott
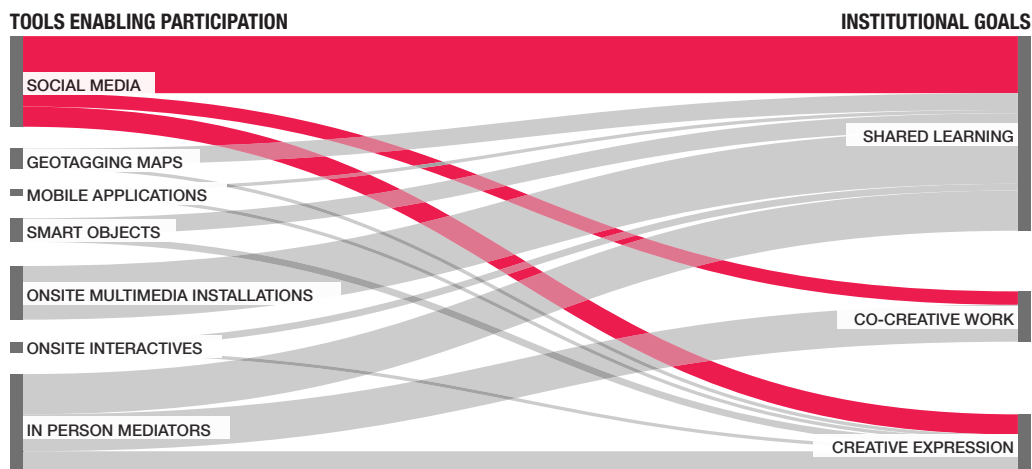
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1   http://www.densitydesign.org.

TOOLS ENABLING PARTICIPATION   **ROLES ASSIGNED TO PARTICIPANTS**

SOCIAL MEDIA

COLLECTORS

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

CRITICS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

CREATORS

TOOLS ENABLING PARTICIPATION   **PARTICIPATORY APPROACHES**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

DESIGN FOR AUDIENCE PARTICIPATION

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

PARTICIPATORY DESIGN

TOOLS ENABLING PARTICIPATION   **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

INDIRECT

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

MEDIATED

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

DIRECT

TOOLS ENABLING PARTICIPATION   INSTITUTIONAL GOALS

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

SHARED LEARNING

CO-CREATIVE WORK

CREATIVE EXPRESSION

Figure 4. Relations between the the use of social media and the desired institutional goals

Billings in his blog post "Social Media Dialogue",[2] in many cases they have proved to be insufficient to trigger a real involvement, beyond superficial and fragmented conversations. Social media turns out instead to be effective tools when they are used to enable a sustained and constructive dialogue with the public, providing users with different levels of creative control over contents (Figure 1) adopting, in the majority of cases, an approach of design *for* participation rather then using methods of participatory design (Figure 2).

Users can share their opinions about an exhibition or a collection, like in the projects **Flickr the Commons**, **Shapeshifting**, **Yorkshire Favourite Paintings,** or create online personal collections, such as for example in the social media platforms **Art Stack,** which may even become the basis for projects of distance education like in the projects **Google Art** and **Turbinegeneration**.

Moreover, users can also create and co-curate original cultural contents, like in the community of the online magazine **Dulwich on View,** and even co-designing the experience of heritage, like in the projects **Franklin Remix**, and **Cooking: The Exhibition Chefs**.

Data drawn from the study of cases also reveals that in most cases online projects do not enable a high level of social engagement (Figure 3), as the majority of projects based on personal mediation instead do.

The use of social media and other tools for online collaboration seem thus to work best in those cases in which the main institutional goal concern visitors' engagement in activities of shared learning (Figure 4) for which a direct social engagement among participants may be promoted, but is not an essential requisite for the success of the project.
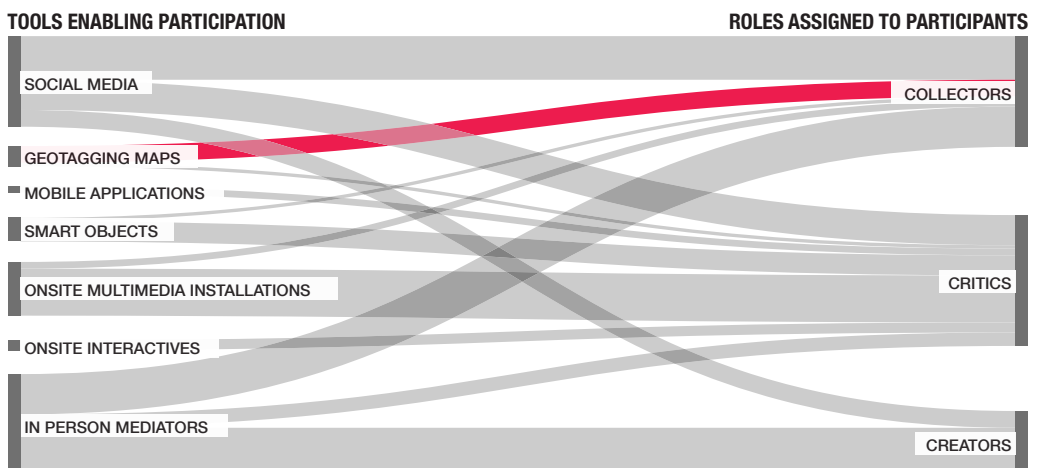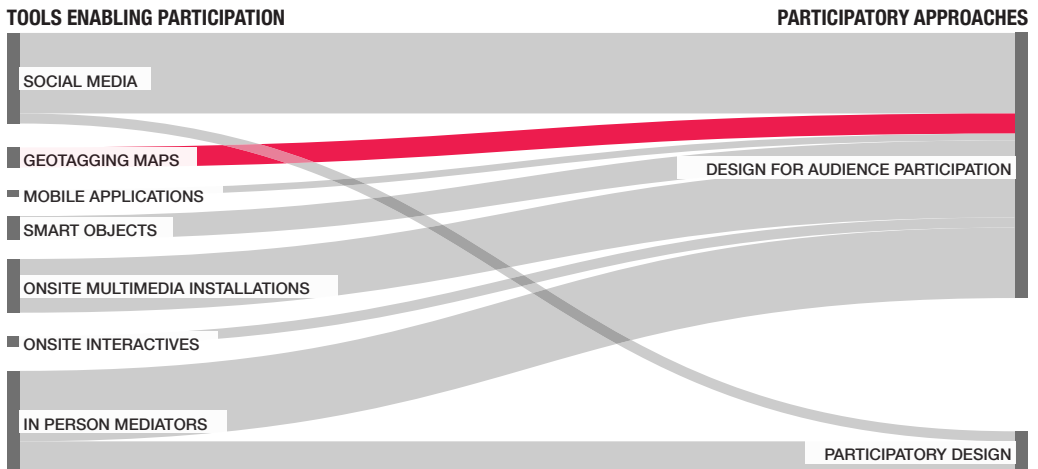
2   http://www.museumnext.org/2010/blog/social-media-dialogue.

7.1.2. PARTICIPATION AND STORYTELLING THROUGH GEOTAGGING MAPS

Geotagging maps and geo-blogs, like for example **Mapping Main Street**, and **MappaMI** to cite some of the mapped projects, are other tools that may enhance the experience of heritage enabling practices of participatory urban storytelling. Participatory mapping techniques allow the neighborhood of the city to collect, document and preserve local memories related to their intangible cultural heritages. Geo-blogs use the Internet as a tool to incrementally continue gathering information on a local map that can be constantly enriched with content generated by citizens. The way geo-tagged stories can be accessed enables visitors to rediscover the local intangible cultural heritage through the memories and personal background of other individuals who come in contact with it.

Figure 5. Relations between the use of geotagging maps and adopted participatory approach

Figure 6. Relations between the use of geotagging maps and participants' roles during the experience of heritage

TOOLS ENABLING PARTICIPATION — PARTICIPATORY APPROACHES

SOCIAL MEDIA
GEOTAGGING MAPS
MOBILE APPLICATIONS
SMART OBJECTS
ONSITE MULTIMEDIA INSTALLATIONS
ONSITE INTERACTIVES
IN PERSON MEDIATORS

DESIGN FOR AUDIENCE PARTICIPATION
PARTICIPATORY DESIGN

TOOLS ENABLING PARTICIPATION — ROLES ASSIGNED TO PARTICIPANTS

SOCIAL MEDIA
GEOTAGGING MAPS
MOBILE APPLICATIONS
SMART OBJECTS
ONSITE MULTIMEDIA INSTALLATIONS
ONSITE INTERACTIVES
IN PERSON MEDIATORS

COLLECTORS
CRITICS
CREATORS

TOOLS ENABLING PARTICIPATION **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

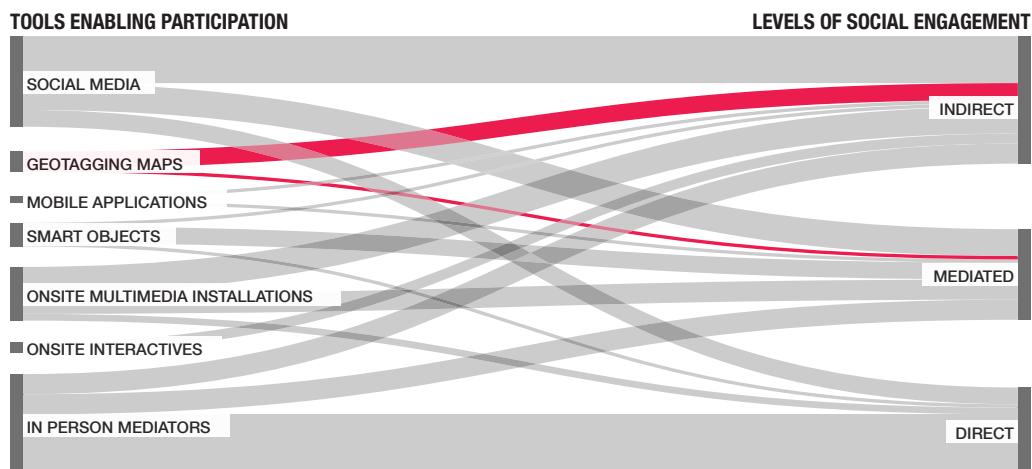IN PERSON MEDIATORS

INDIRECT

MEDIATED

DIRECT

Figure 7. Relations between the use of geotagging maps and the levels of social engagement among participants

Within the list of selected projects, the narrative approach of locative storytelling through geo-tagging maps have been observed as mainly used for a wide exploration of cities history and culture represented by individual memories. It may indeed constitute a fertile ground in re-imagining museums relationship with their visitors also in non-urban contexts, as for example the projects **Silence of the Lands** does in relation to natural heritage, and the projects **PhilaPlace** and **Historypin** do for what concern historical heritage.

Regardless of the contexts, locative storytelling is always based on an approach of design *for* participation (Figure 5) aimed at achieving shared learning among participants that mainly act as collectors (Figure 6) by telling their personal stories for the co-construction of a shared heritage, or, to a lesser extent, as critics of an existing heritage like in the project **Publicview**.

The level of social engagement enabled by geotagging systems is almost always indirect (Figure 7) because participants do not engage in conversations with each other but only see others' personal stories.

7.1.3. PARTICIPATION AND MOBILE APPLICATIONS

Allowing the public to share and create cultural contents through the Internet is however only one of the possibilities that digital technologies may offer to cultural institutions to engage with their audiences. Johnson, Adams, and Witchey (2011) identify six areas – mobile applications, tablets, augmented reality, electronic publishing, digital preservation, and smart objects – as emerging digital technologies with a great potential for educational and interpretive programs within museums. By the 2015, the 80% of Internet access will be through a mobile device (Ericsson 2011)

TOOLS ENABLING PARTICIPATION　　　　　　　　　　　　　　**INSTITUTIONAL GOALS**
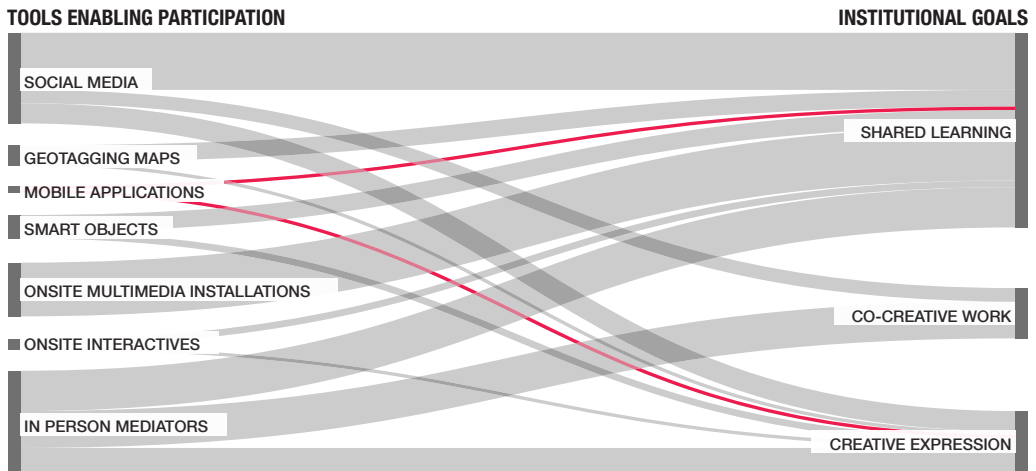
and it is therefore essential to consider the mobile technology as a major means by which more and more visitors will expect to access museums' resources and receive services.

The preliminary analysis of the cases reveals that most museums' mobile applications serve as a guide through the galleries and are used for providing users with additional information about the collections. Allowing visitors to customize the contents before, during, and after the visit, mobile technologies enable the extension in space and time of the heritage experience.

Mobile technology has also been largely employed in recent years for enabling gaming experiences aimed at promoting cultural learning. As explored by Davide Spallazzo (2012) in his Ph.D. dissertation *Sociality and Meaning Making in Cultural Heritage Field. Designing the Mobile Experience*, gamification is a favorable field for the design of interactives experiences of heritage, but this particular area of application of mobile technologies has not been included in the selection of cases because mainly aimed at promoting interaction rather than participation as intended within this research.

Mobile technology often also enables the development of projects that use augmented reality to enhance the visitor experience, but, although providing a high level involvement, in most cases this type of experience does not allow participatory approaches. In fact, visitors can see the virtual contents over-layered to the real environment, but rarely can add their personal layer of information. Moreover, the use of augmented reality within museums does not stimulate sociality, as contents are enjoyed individually through a personal device that, acting as a filter, does not allow users to assign meaning to contents in context in a way not so much

Figure 8. Relations between the use of mobile applications and the desired institutional goals

dependent on a physical device. The large number of projects in which mobile applications do not allow the possibility for users to add original contents has not been included in the preliminary selection of cases.

The project **American Stories** that promotes a mediated level of social interaction through objects, and the project **Scapes** that reshapes the idea itself of the audio guided experience by encouraging visitors to verbally describe the objects they encounter during the guided tour, are among the few cases in which mobile applications enable instead a participatory experience of heritage.

Best practices confirm that mobile applications may constitute a favorable area to further explore for the enabling and supporting participatory projects aimed at promoting shared learning or creative expression (Figure 8), although they are currently not largely employed in this sense.
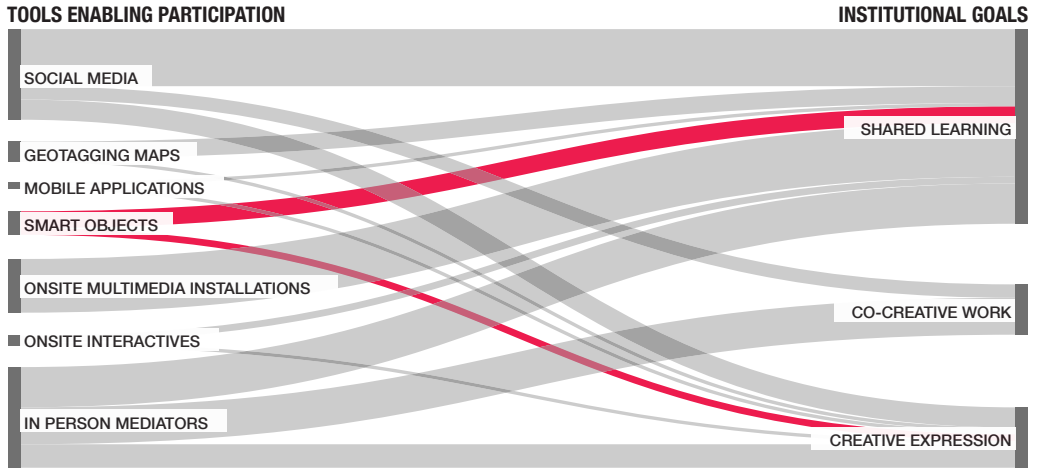
7.1.4. PARTICIPATION AND SMART OBJECTS

Mobile technology is instead more widely used for enabling participatory experiences of heritage by using the Internet of Things in a mixed reality environment.

Smart objects, or spimes, are able to communicate information about themselves and access information aggregated by users, by acquiring an electronic identity in the physical environment (Leder et al. 2010; Speed 2011, p.18). They can be considered more digital than actual objects because their "[…] informational support is so overwhelmingly extensive and rich that they are regarded as material instantiations of an immaterial system." (Sterling 2005, p.11).

The use of this technology by cultural institutions is a favorable field for the development of participatory projects in which objects and places bearing RFID labels or QR codes, invite visitors to share their personal interpretation that is then incorporated into the electronic identity of the object for others to see and respond to. However, among the difficulties in the use of smart objects in museums are the provision of free public Wi-Fi throughout the museum spaces, and problems arising from phone cameras and reader softwares when, for example, there are shadows, reflections, or poor light on the codes.

The study of cases reveals that smart objects within museums are mainly used for promoting shared learning, like for example in the cases **Re-Tracing the Past, NaturePlus**, **Yellow Arrow**, **QRpedia**, and **Tales of Things**, but may also used for encouraging creative expression, such as in the project **BibPhone** (Figure 9). Within an approach of design *for* participation (Figure 10), participants act as critics of an existing heritage (Figure 11), by adding their personal interpretation that becomes imbedded in the electronic identity of the object. In the majority of cases
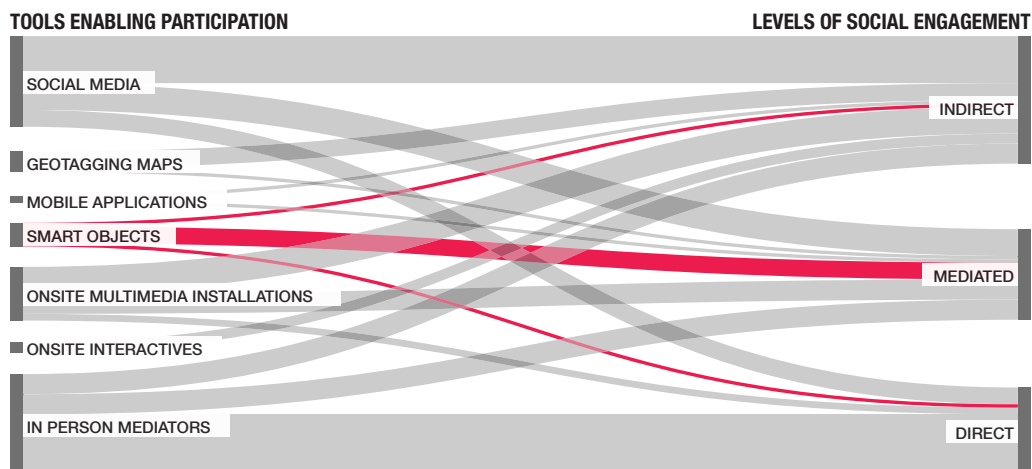
TOOLS ENABLING PARTICIPATION   **INSTITUTIONAL GOALS**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

SHARED LEARNING

CO-CREATIVE WORK

CREATIVE EXPRESSION

TOOLS ENABLING PARTICIPATION   **PARTICIPATORY APPROACHES**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

DESIGN FOR AUDIENCE PARTICIPATION

PARTICIPATORY DESIGN

TOOLS ENABLING PARTICIPATION   **ROLES ASSIGNED TO PARTICIPANTS**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

COLLECTORS

CRITICS

CREATORS

TOOLS ENABLING PARTICIPATION **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

INDIRECT

MEDIATED

DIRECT

Figure 12. Relations between the use of smart objects and the levels of social engagement among participants

Figure 13 - following page. Relations between the use of onsite multimedia installations and the desired institutional goals

Figure 14 - following page. Relations between the use of onsite multimedia installations and participants' roles during the experience

Figure 15 - following page. Relations between the use of onsite multimedia installations and the levels of social engagement among participants

the level of social engagement is mediated, with the exception of some projects, like for example the **Hydroscope** prototype that enable a direct social interaction among participants (Figure 12).

7.1.5. PARTICIPATION AND ONSITE MULTIMEDIA INSTALLATIONS

Because engaging in a very direct and physical way with the viewer, multimedia installations in museums' exhibitions tend to activate an emotional response, and enable the creation of a physical, mental, and emotional space, which prepares the audience for a sensitive re-reading of the objects that are on display. Witcomb (2007, 36–37) suggests that multimedia installations may enhance the "'affective' possibilities of objects" because they have the ability to "[…] privilege the role of interpretation" and to "[…] act as releaser of memory in much the same way as objects can make unconscious memories conscious".

In this sense, onsite multimedia installations seem to be a fertile ground for the development of participatory projects aimed at promoting shared learning (Figure 13), although many multimedia installations still operate with traditional didactic frameworks, mainly because they are "[…] understood as a tool for interpretation and rarely as a material expression in its own right" (Witcomb 2007, p.36).

In the great majority of the considered projects in which multimedia installation are used to enable participation, participants act as critics (Figure 14), while their level of social engagement may vary (Figure 15). In those projects in which the participatory activity promotes indirect social engagement, users' interaction with multimedia installations usually occurs in two steps. Some basic concepts are first introduced by means of diverse media like video, audio, interactive media pieces, etc., as in the projects **A Matter of Faith**, **From Memory to Action**, and **Free to Choose**,
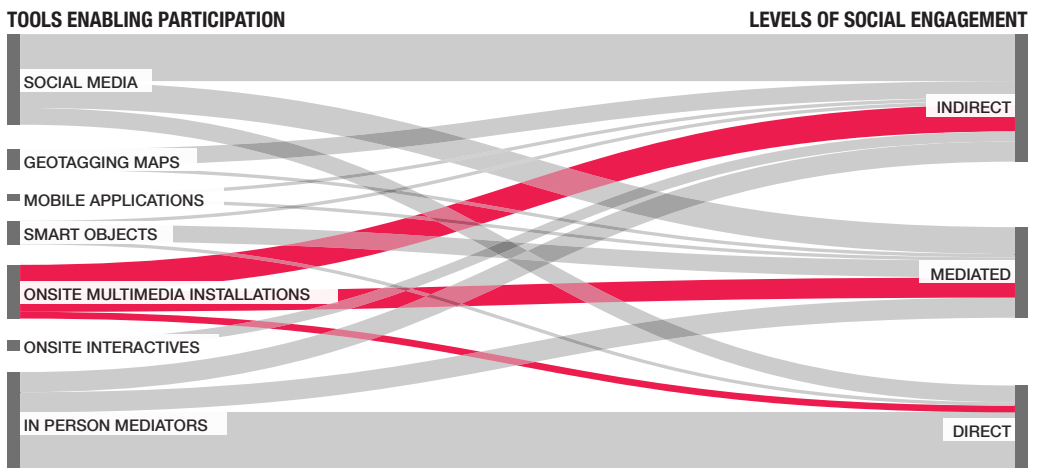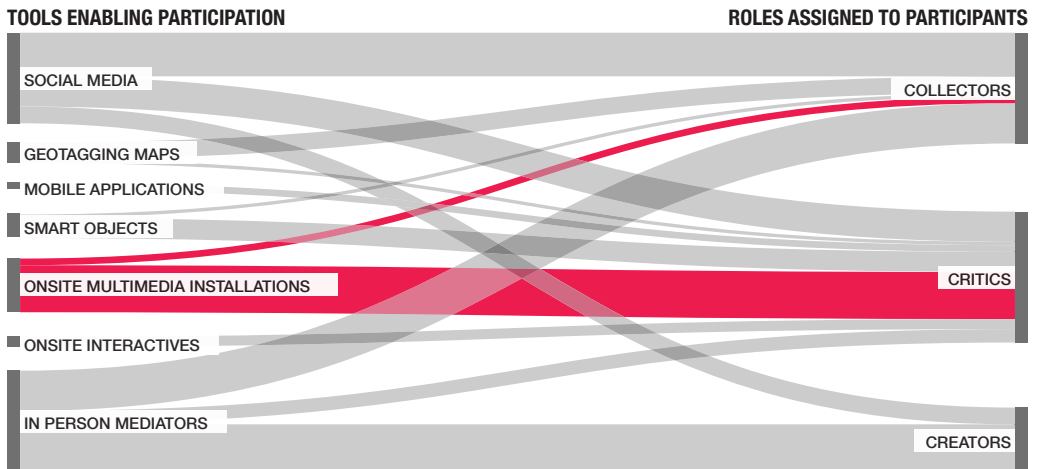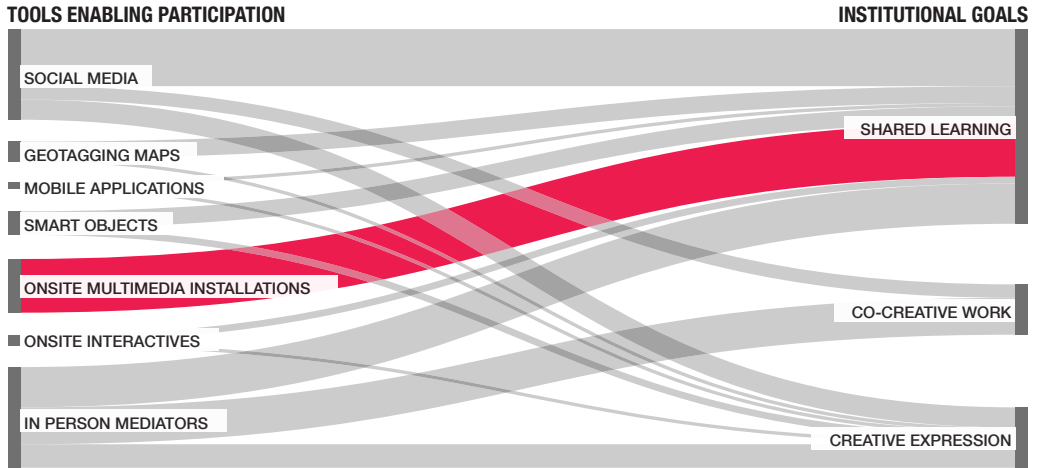
TOOLS ENABLING PARTICIPATION **INSTITUTIONAL GOALS**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

SHARED LEARNING

CO-CREATIVE WORK

CREATIVE EXPRESSION

TOOLS ENABLING PARTICIPATION **ROLES ASSIGNED TO PARTICIPANTS**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

COLLECTORS

CRITICS

CREATORS

TOOLS ENABLING PARTICIPATION **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

INDIRECT

MEDIATED

DIRECT

in order to spark the conversation and build a common ground among participants. The topic of discussion may also be the subject of the entire exhibition like in the project **New York Divided**. Then, other devices, like interactive surfaces, touch screens, projectors, etc., allow visitors to express their personal opinion that is added to a growing repository where it is possible to see and compare other visitors' contributions, but it is not possible to reply to others' views.

Those projects in which the participatory activity promotes mediated social engagement, like **Dialog Table**, **Diritti al cubo**, and **Contemporary Issue Forum**, are similar in their dynamic of interactions to the previous group, but individuals can engage in a conversation with each other because are allowed to reply to the comments they see. These conversations among visitors may be mediated by onsite multimedia installations or by social media. Although individuals really interact with each other, their social engagement cannot be considered direct because they are separate in space, and question and answers are delayed in time.

In those projects in which the participatory activity promotes instead direct social engagement, users are required to interact with multimedia installations while engaging with other individuals, by performing specific actions and collaboratively answering to some questions, like in the project **Designing democracy**, or by negotiating decisions, like in the project **Parlamentarium**.

7.1.6. PARTICIPATION AND ONSITE INTERACTIVES

As well as multimedia installations, onsite interactives are used in participatory projects in which participants act as critics (Figure 16) by ranging, voting, selecting, and commenting cultural contents, but in all these cases the level of social engagement is always indirect (Figure 17).

This mainly depends on the physical nature of the interactive apparatuses like comment boards, pinboards, ballot systems, etc., that do not enable either a mediated or direct conversation among participants, which only can see and compare the contributions left by others, without seeing other's replies to their own contribution. It is in fact unlikely that a visitor returns visiting the same exhibit just to see if someone else has left new comments. Nevertheless, onsite interactives may enable meaningful participatory experiences of shared learning (Figure 18) by promoting multiple interpretations of heritage.

Moreover, showing several personal points of view, onsite interactives may constitute an easy and often cheap way for making visitors feeling that their opinion is respected, valued and taken into account, like the projects **Top40**, **MN150**, and the experimentation at the **Haarlem Oost Library** demonstrate.
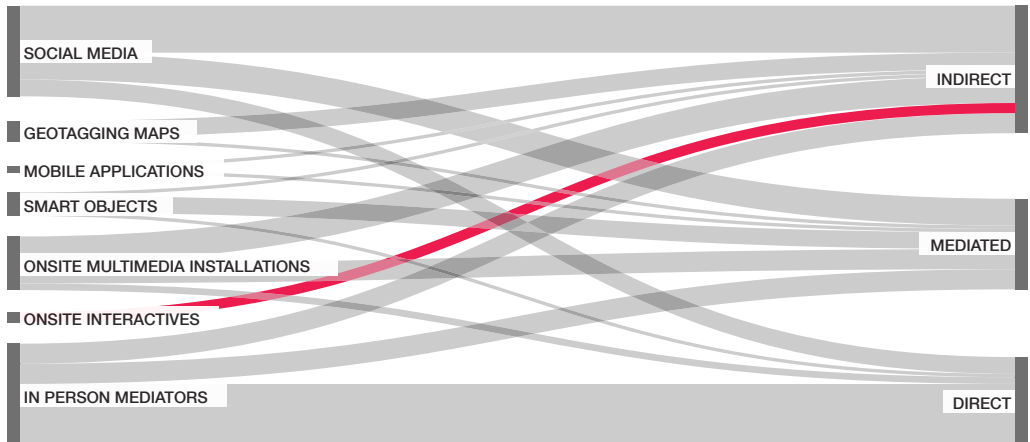
TOOLS ENABLING PARTICIPATION   **ROLES ASSIGNED TO PARTICIPANTS**
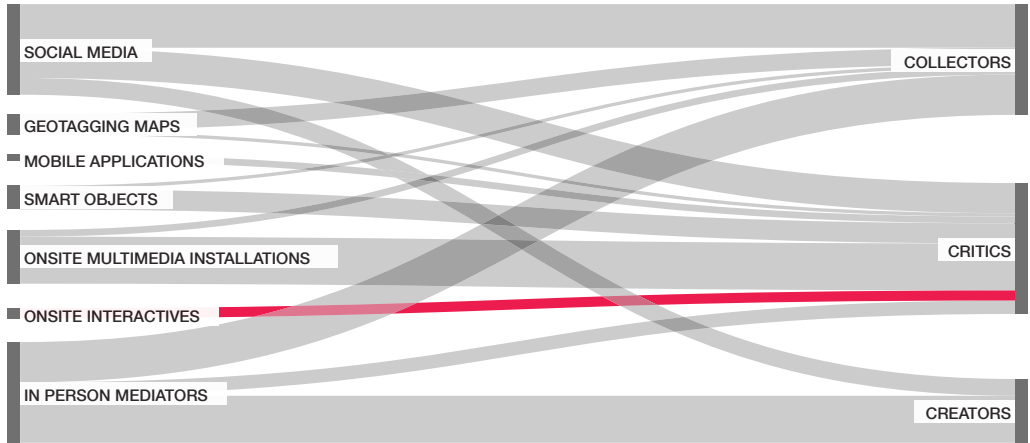
SOCIAL MEDIA

COLLECTORS

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

CRITICS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

CREATORS

TOOLS ENABLING PARTICIPATION   **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

INDIRECT

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

MEDIATED

ONSITE INTERACTIVES

IN PERSON MEDIATORS

DIRECT

TOOLS ENABLING PARTICIPATION   **INSTITUTIONAL GOALS**

SOCIAL MEDIA

SHARED LEARNING

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

CO-CREATIVE WORK

ONSITE INTERACTIVES

IN PERSON MEDIATORS

CREATIVE EXPRESSION

7.1.7. PARTICIPATION AND IN PERSON MEDIATION

The analysis of cases reveals that in person mediators may enable audience participation in projects based both on an approach of design *for* participation, than on participatory design methods (Figure 19).
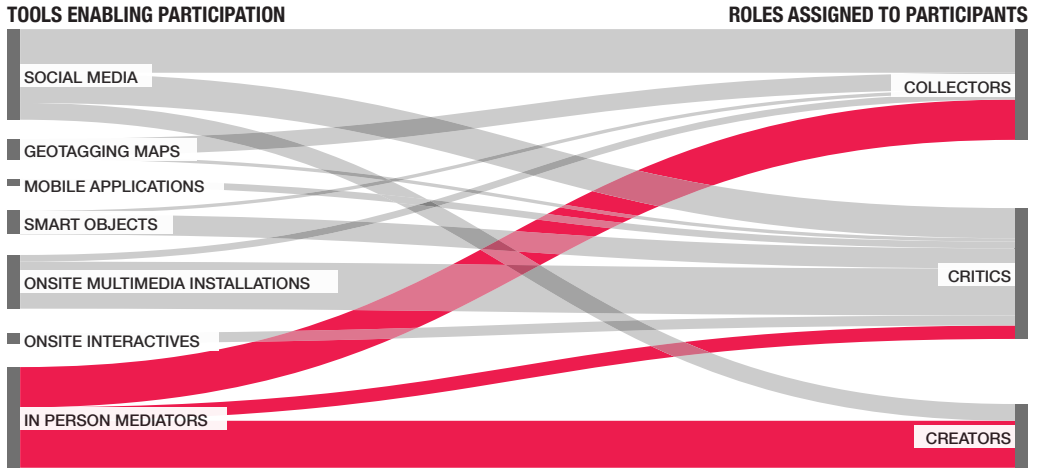
This means that, according to the desired institutional goals to be achieved, in person mediators may facilitate diverse range of participatory activities, in which visitors may act as: collectors, like in the projects **Mare Memoria Viva**, and **Santa Cruz Collect**; critics, like in the projects **TAM TAM**, and **Choose the piece**; or creators, like in the projects **Museomix, Creative Community Committee, Hack the Museum Camp, New Dialogue Initiative, Digital Natives, Hyphenated-Origins, Shh! It's a Sectet!, Glasgow Open Museum, Denver Community Museum, and Public Perspective Exhibition Series** (Figure 20).

In particular, it is to note that there is an area of density of cases that use in person mediators to enable visitors' participation in co-creative projects (Figure 21) with the goals of promoting co-creative work among participants (e.g. all the projects list above), or promoting creative expression, like in the projects **Center for Creative Connection** and **Forces of Change 1960-1975**.

The level of social engagement may vary, but in most cases is direct (Figure 22). In fact, those projects aimed at promoting co-creative work through the co-design of programs and exhibitions need the direct social engagement of participants at diverse stages of design process as an essential prerequisite.

The involvement of participants in the design process seems to be effectively achieved only by means of continued and sustained in person social interactions between participants and institutional staff, who may serve

TOOLS ENABLING PARTICIPATION   **PARTICIPATORY APPROACHES**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

DESIGN FOR AUDIENCE PARTICIPATION

PARTICIPATORY DESIGN

TOOLS ENABLING PARTICIPATION   **ROLES ASSIGNED TO PARTICIPANTS**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

COLLECTORS

CRITICS

CREATORS

TOOLS ENABLING PARTICIPATION   **INSTITUTIONAL GOALS**

SOCIAL MEDIA

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ONSITE INTERACTIVES

IN PERSON MEDIATORS

SHARED LEARNING

CO-CREATIVE WORK

CREATIVE EXPRESSION

TOOLS ENABLING PARTICIPATION   **LEVELS OF SOCIAL ENGAGEMENT**

SOCIAL MEDIA

GEOTAGGING MAPS

MOBILE APPLICATIONS

SMART OBJECTS

ONSITE MULTIMEDIA INSTALLATIONS

ONSITE INTERACTIVES

IN PERSON MEDIATORS

INDIRECT

MEDIATED

DIRECT

either as mediator of the participatory experience and active participants sharing the same level of creative control on contents and decisional power then visitors.

7.2. Modes of participation

This chapter section aims at describing the main modes of participation that have been identified through the preliminary analysis of cases.

A visual map (Figure 23) has been employed in order to systematize the collected cases along two conceptual axes with the goals of highlighting the levels of social engagement that particular modes of participation may promote, in relation to the roles that participants assume during the experience of heritage. The horizontal axis represents participant' roles in a ladder ranging from collectors, to critics, to creators, while the vertical axis represents the three levels of social engagement – indirect, mediated, or direct – that may be pursued and activated by a participatory experience of heritage. Cases are visually identified in the map by seven diverse icons representing the tool used to enable participation in each case. It is possible to observe that the nine map's quadrants – defined by the intersections of participants' roles and levels of social engagement – presents five areas of density, each one corresponding to a specific mode of participation, that reflects the main action required to visitors in order to participate.

This pattern suggest that certain modes, supported by specific tools, demand participants to act according to a specific role, and are more suitable than other in order to promote the desired level of social engagement.

Those cases that presented more than one modes of participation have been categorized considering the predominant action required to visitors, i.e. the participants' action without which participation cannot occur. Five main actions that have been identified are:

- Contributing objects and stories;
- Commenting;
- Voting;
- Creatively expressing themselves;
- Co-designing.

It is to clarify that the map is not intended as a quantitative research tool. Rather, it has been used as an instrument useful to identify how the visitors' experience, in terms of roles and social engagement, may be influenced by the use of different modes of participation in actual, mixed reality, and virtual environments. Another purpose of this analysis is trying to understand which modes of participation are best suited in order to achieve particular institutional goals.

7.2.1. CONTRIBUTION OF OBJECTS AND STORIES

In those projects in which participants act as collectors because involved in the collection and co-construction of specific cultural assets, they have a "curatorial" (Brown et al. 2011) level of creative control on contents as they are asked to contribute objects and/or personal stories and experiences to a growing collection that may be both physical and virtual and include both tangible and intangible contents.

- The majority of cases refer to the collection of physical objects that carry specific meanings and personal interpretation narrated in first person by participants, like for example the projects **Europeana 1914-1918**, **9/11 Memorial Museum**, **Pop-Up Museum**, and **Object Stories**;

- Other cases refer to the collection of intangible cultural heritage in the form of formal contribution to growing repository, such as in the projects **Inventory of Intangible Cultural Heritage** and **Science Museum Object Wiki**, or in the form of personal storytelling, such as in the projects **Queensland stories**, **7 Billion Others**, and **StoryCorps**. Also belong to this cluster all projects of urban storytelling, like **Mapping Main Street**, **City of Memory**, or **MappaMI**;

- In few cases, like in the projects **San Francisco Mobile Museum** and **Passerby Museum**, participants collect instead physical objects that are displayed in informal exhibition spaces for temporary exhibitions.

For the first two groups of cases, beyond serving the institution in the co-construction of heritage, participants are involved in a process of shared learning through their multiple and personal interpretations, which unfold thanks to the co-collected heritage itself. For the last group of cases, instead, the main institutional goal, rather than supporting shared learning, is stimulating creative expression through the choice of the object to be included in the collection.

The map's analysis also reveals that, in the majority of cases, when participation is pursued by the contribution of objects and stories, the participants' level of social engagement is indirect or mediated.

7.2.2. PERSONAL INTERPRETATION OF EXISTING HERITAGE

The second mode of participation that have been identified concerns those projects in which participants act as critics in the interpretation of existing heritage.

According to this mode, participants have "interpretive" (Brown et al. 2011) level of creative control on contents, as they are typically asked to express their personal view on a particular object or collection that is then displayed along the institutional interpretive apparatuses.
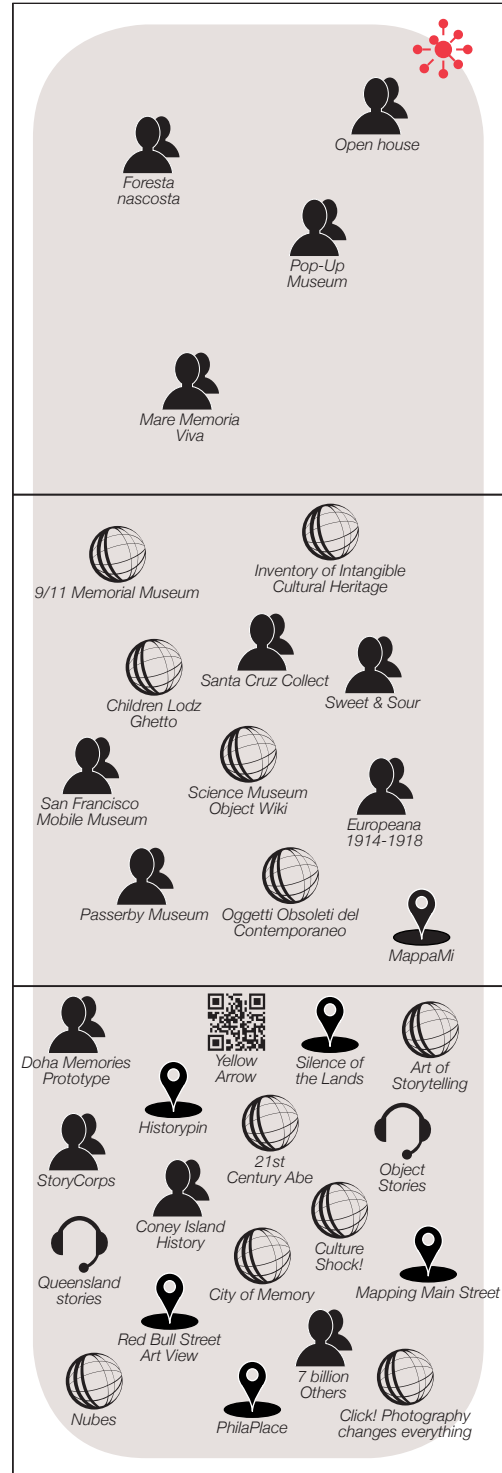
Figure 23. Map of cases highlighting tools enabling participation and participatory actions required to participants in respect to their roles and social engagement
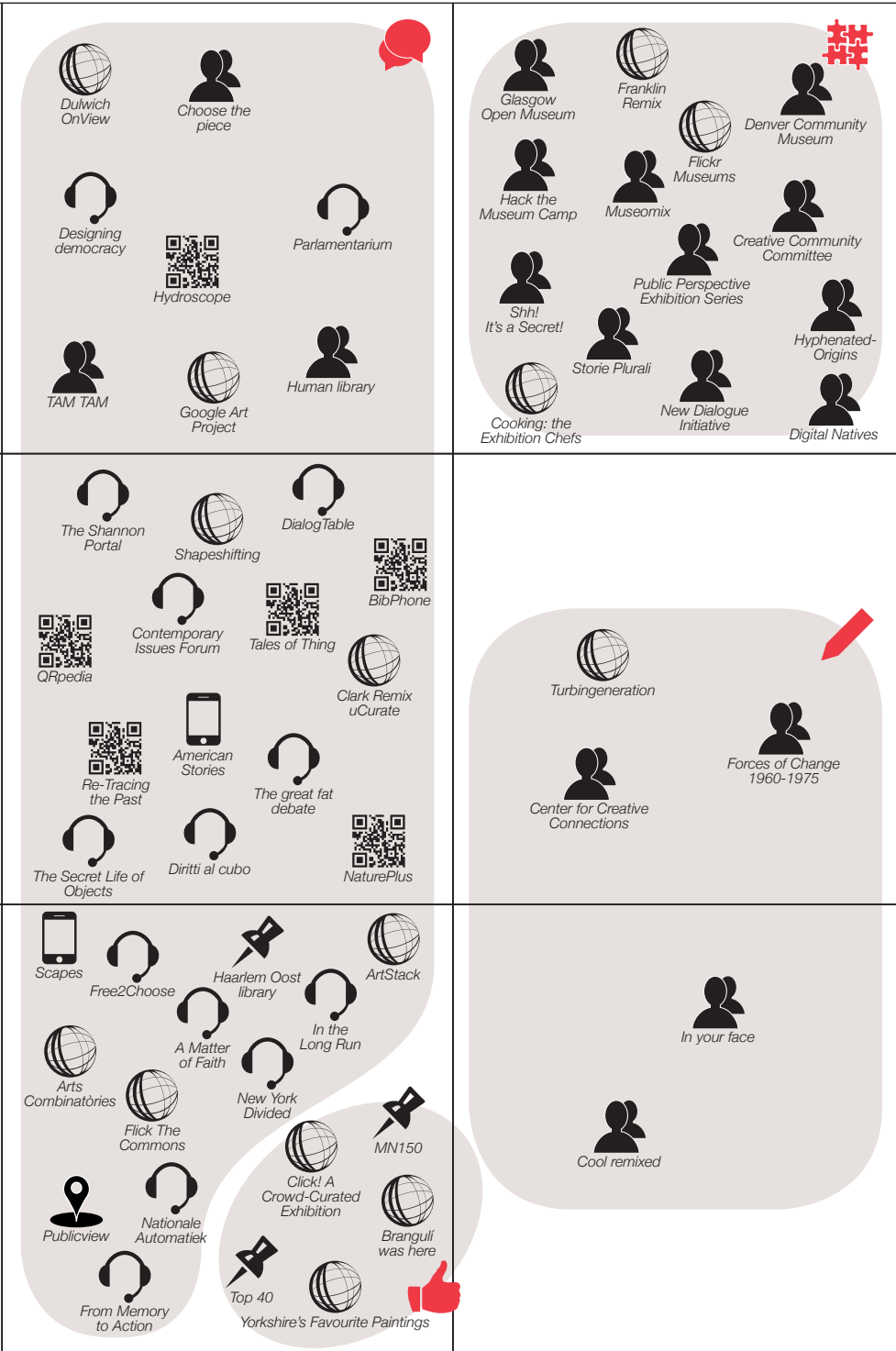
TOOLS ENABLING PARTICIPATION

Virtual Continuum

social media

geotagging

mobile applications

smart objects

onsite multimedia installation

onsite interactives

in person mediators

ACTIONS REQUIRED TO PARTICIPANTS

contributing objects and stories

commenting

voting

creatively express themselves

co-designing

Open house

Foresta nascosta

Pop-Up Museum

Mare Memoria Viva

9/11 Memorial Museum

Inventory of Intangible Cultural Heritage

Santa Cruz Collect

Children Lodz Ghetto

Sweet & Sour

San Francisco Mobile Museum

Science Museum Object Wiki

Europeana 1914-1918

Passerby Museum

Oggetti Obsoleti del Contemporaneo

MappaMi

Doha Memories Prototype

Yellow Arrow

Silence of the Lands

Art of Storytelling

Historypin

StoryCorps

21st Century Abe

Object Stories

Coney Island History

Queensland stories

Culture Shock!

City of Memory

Mapping Main Street

Red Bull Street Art View

7 billion Others

Nubes

PhilaPlace

Click! Photography changes everything

COLLECTORS

DIRECT

CRITICS (Direct)

Dulwich OnView

Choose the piece

Designing democracy

Parlamentarium

Hydroscope

TAM TAM

Google Art Project

Human library

CREATORS (Direct)

Glasgow Open Museum

Franklin Remix

Denver Community Museum

Hack the Museum Camp

Museomix

Flickr Museums

Creative Community Committee

Shh! It's a Secret!

Public Perspective Exhibition Series

Storie Plurali

Hyphenated-Origins

Cooking: the Exhibition Chefs

New Dialogue Initiative

Digital Natives

MEDIATED

CRITICS (Mediated)

The Shannon Portal

Shapeshifting

DialogTable

BibPhone

QRpedia

Contemporary Issues Forum

Tales of Thing

Clark Remix uCurate

Re-Tracing the Past

American Stories

The great fat debate

The Secret Life of Objects

Diritti al cubo

NaturePlus

CREATORS (Mediated)

Turbingeneration

Center for Creative Connections

Forces of Change 1960-1975

INDIRECT

CRITICS (Indirect)

Scapes

Free2Choose

Haarlem Oost library

ArtStack

A Matter of Faith

In the Long Run

Arts Combinatòries

New York Divided

Flick The Commons

MN150

Click! A Crowd-Curated Exhibition

Publicview

Nationale Automatiek

Brangulí was here

From Memory to Action

Top 40

Yorkshire's Favourite Paintings

CREATORS (Indirect)

In your face

Cool remixed

CRITICS   **CREATORS**

Engaging visitors in a participatory process of interpretation is a strategy especially employed when the institutional goals to be achieved concern shared learning, because allows the simultaneous presence of multiple views of the same cultural assets.

For this reason, among the mapped cases that present this mode of participation, a relative large number of projects are related to the interpretation of difficult heritage or to the discussion of current political, cultural, ethical, and religious major issues, as in the cases **Parlamentarium, Designing democracy**, **Contemporary Issues Forum**, **Diritti al cubo**, **A Matter of Faith**, and **The great fat debate**.

However, with the exception of those projects that have the main purpose of sparking a discussion about controversial themes, the map's analysis shows that direct social interaction is seldom archived by means of this mode of participation, while in the majority of cases the level of social engagement varies from indirect to mediated because participants typically do not socialize with each other, but socially engage availing of the mediation of mobile application (e.g. **American Stories**), smart objects (e.g. **Tales of Things**), and multimedia installations (e.g. **Dialog Table**) designed for the scope.

7.2.3. VOTING SYSTEMS

The visual map of cases highlights another small group of projects in which participants have "interpretive" (Brown et al. 2011) level of creative control on contents because required to express their view by some kind of voting system. This mode of participation is similar to the previous one for what concern the participants' role that in both cases is of critics. However, the action of voting implies a much more simply interaction with contents than commenting does. In fact, in order to personally interpret a cultural asset, visitors need to deeply engage with it, and spend a relative big amount of time in understanding and comparing other visitors' interpretation, before adding their own view. By means of voting systems instead, visitors may engage with the objects to be ranked or selected in a more superficial way, because no motivation for their choices is required.

However, this simple mechanic of interaction does not preclude the achieving of meaningful experience of heritage for participants. For example in the project **Top 40**, thanks to a simple ballot box and voting sheets that encouraged visitors to vote for their favorite picture, spontaneous discussions broke out in the gallery on the relative merits of different pictures, and visitors of all ages came back each week to see where their favorite was in the chart and to cast another vote.

Although spontaneous social interactions among participants may occur, more generally it can be said that the voting mode of participation

promotes an indirect level of social engagement, either if the vote is enabled by onsite interactives apparatuses like in the project **MN150,** or by online social media like in the projects **Yorkshire Favourite Paintings** and **Click a Crowd-Curated Exhibition.**

7.2.4. CREATIVE EXPRESSION

In those projects in which participants have "inventive" (Brown et al. 2011) level of creative control on contents, they may act as creators because invited to creatively express themselves in the interpretation of an existing heritage, which may also not being of an artistic kind.

The map of cases presents a small group of cases in this cluster because, as stated in chapter six, one of the criteria for the selection of cases excluded those participatory projects in which participants act as co-artists in the creative processes that is not specifically related to the valorization or interpretation of an existing heritage. Artistic participatory practices have not been considered within this research because they represent a distinct participatory phenomenon aimed at the co-production, rather than at the experience of heritage.

The projects in which, instead, the artistic creative expression of participants is intended as a means for adding further interpretive keys to an institutional heritage, have been considered and included in the map, with the awareness that they only constitute a small portion of the entire realm of artistic projects bases on co-creative practices.

Letting participants creatively express themselves is a mode of participation that works best when the main institutional goal is promoting personal creativity in relation to a specific theme or topic within a process that is institutionally managed and controlled.

The map's analysis reveals that this mode of participation in most cases need the in-person mediation of institutional staff or artists who work specifically in the realm of active social participation to be enabled (e.g. **In your face** and **Cool remixed,** and **Forces of Change 1960-1975**), even if , more rarely, it could also been supported by social media tools (e.g. **Turbingeneration**). In both cases, personal creative expression only tends to promote indirect or mediated levels of social engagement because the artistic creation is intended as the result of personal expression and consequently individuals do not need to be involved in conversation with each other.

7.2.5. CO-DESIGNING

The top-right quadrant of the map (Figure 23) shows an area of density of cases characterized by high level of social engagement and by the presence of co-creative model of participation. In the projects belonging to this area, participants have "inventive" (Brown et al. 2011) level

of creative control on contents and act as creators according to a co-designing modes of participation. In fact, they are asked to take part in the process of design of the heritage experience with the institutional goal of engaging communities in all the phases of development of programs and exhibitions.

Participatory design methods and techniques[3] are used to engage participants, in most cases enabled by in person mediators, like for example in the projects **Museomix, Hack the Museum Camp,** and **Storie Plurali,** or in few cases enabled by social media, like in the projects **Franklin Remix** and **Cooking: The Exhibition Chefs**. As shown in the map, the level of social engagement among participants is always direct in order to sustain the participatory activities of co-design.

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3   See chapter five for the description of some methods of participatory design that may be used within cultural institutions.

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8

SELECTED PROJECTS

Chapter eight presents the further analysis conducted on fifteen cases in order to gain operative insights into the modalities by which the design discipline may contribute to the plan and implementation of participatory experience of heritage within cultural institutions.

Selected cases have been identified as of particular interest for the development of a general framework that support the design of participatory experiences of heritage, and are grouped along the chapter reflecting three of the main participatory modalities described in the previous chapter:
- Personal interpretation of existing heritage;
- Contribution of objects and stories;
- Co-designing.

Every case study description is based on the following schema:
- Basic project's information, including time, institutions that host or promote the project, developers, and references;
- Project's description;
- Main outcomes for participants;
- Operative insights useful for the development of a design framework.

8.1.
Personal interpretation of existing heritage

American Stories

April 2012 – Ongoing
Smithsonian National Museum of American History, Kenneth E. Behring Center, Washington D.C.

Developers

The Smithsonian National Museum of American History (Project director Bill Yeingst, exhibition curator Bonnie Campbell Lilienfeld)

References

National Museum of American History. 2012. "'American Stories' Exhibition Opens at National Museum of American History." Accessed April 16 2013. http://americanhistory.si.edu.

Description

American Stories is an ongoing exhibition at the Smithsonian's National Museum of American History presenting a chronology of American history that spans the Pilgrims' 1620 arrival in Plymouth through the 2008 Presidential election. In 5,300 square feet, American Stories is organized by chronological eras and is designed to serve as an introductory experience to American history and as a dedicated space in the Museum to feature new acquisitions. The goal is to give a more inclusive representation of the experiences of all Americans. Using both well-known and everyday objects to describe the American history, American Stories highlights the ways in which objects and stories can reinforce and challenge visitors' understanding of history and help define their personal and national identities in a country influenced by diverse cultural communities.

Onsite exhibition

The exhibition is divided in five main sections modeled on the historical eras defined in the National Standards for History. "Forming a New Nation" focuses on the period from 1776 to 1801; "Expansion and Reform" convey stories about the War of 1812, the growth of the nation, and the Civil War; "Industrial Development"

highlights the period following the Civil War; "Emergence of Modern America" illustrates world war, innovation, financial instability and the emergence of modern popular culture; and "Postwar and Contemporary America" spans from 1945 to the present exploring scientific, medical, and technological innovation, political and social change, and popular culture.

A posting station invites visitors to suggest objects for future collection that would reflect their history and place in America. In the center of the exhibition gallery there is an interactive table that allow visitors to explore the contents on display in a chronological way and to relate them to the main cultural and political events of the American history.

This is the first general subject exhibition for which the Museum has translated all the labels into Spanish. The Spanish guide is available by request at the museum information desks, accessible via smart phone through a QR code at the exhibition entrance, and online at http://amhistory.si.edu/docs/AmericanStories_spanish.pdf.

Online exhibition

American Stories is also a bilingual online exhibition featuring the same objects and stories of the actual exhibition that can be browsed randomly or by selecting one of the five main sections.

The App Access American Stories

In conjunction with the exhibition, the Smithsonian released for the first time an app to make the exhibit experience more accessible to visitors with low vision that can discover the displayed objects through the eyes of both visitors and museum staff. Visitors can participate by describing one of the objects on display; describing their experience of the exhibition; responding to something they have heard left by someone else; or—like in the physical "posting" station—suggesting what else should be included in the exhibition. Visitors can also simply listen to the audio

recorded by other people—choosing between other visitors or museum staff voices—and vote their favorites that will get priority in the play list for other listeners. The App Access American Stories is available in English and Spanish for Android and iPhone and can be downloaded for free at http://www.si.edu/Accessibility/AAS.

Outcomes for participants

Visitors are actively engaged in the process of interpretation of contents, by suggesting objects to be included in the exhibition and by sharing (recording through the App) stories related to the displayed objects.

Operative insights

Even if it is designed to increase accessibility for visitors with disabilities, the App Access American Stories is an audio experience that offers everyone (not only disabled people) new ways of interpreting and understanding the evocative historical objects on display. Thanks to the App, but also through the communication apparatuses that shape the onsite exhibition, in American Stories objects acquire meaning in their dialogical and social dimension. In fact the focal point of the exhibition is not build around the objects in their functional dimension, but around the stories they evoke, their symbolic value and interpretation, that are enhanced by the increasing numbers of actors involved (not only the authoritative voice of scholars and curators, but also the public).

ArtStack

2011 – Ongoing
ArtStack Limited

Developers

Ezra Konvitz, James Lindon, and Alex Gezelius

References

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Description

ArtStack is a social media platform dedicated to art that allows its users to discover art through friends and acquaintances. The website has all the standard things associated with a social network: users can find a work of art that inspires them, "stack" it to their personal art stack (which is a feed page of their collected pieces) to create their own personal art profile, and share it with the wider community. Combining functionalities found on Pinterest, Twitter, and Facebook, ArtStack allows members not only to publicize their art tastes, but also to find out what their peers find worthy of attention.

ArtStack is currently accessible only by invitation: users need to receive an invitation to join from a friend, or request one on the ArtStack homepage. After the invitation, users can sign up also using their Facebook account.
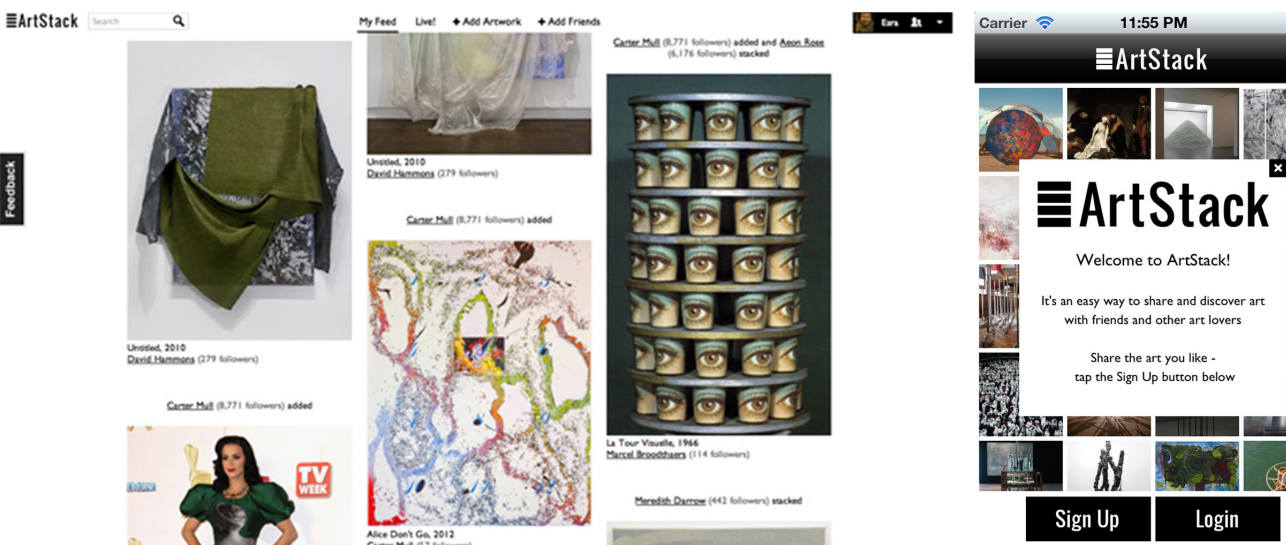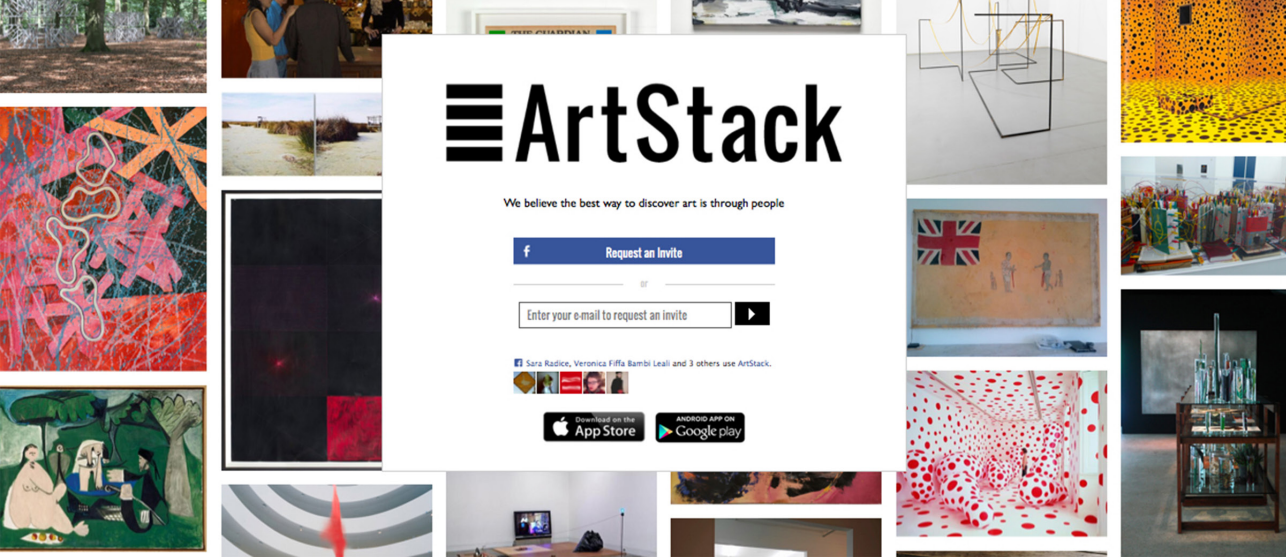
Main features of the social media platform include:

- Adding artworks: users can select a file from their computer, or enter the link to a file on the web. Pieces are automatically tagged with name and creator, and users can add year, exhibition, medium, dimension, and almost any custom tag to make the piece searchable inside the site. Moreover they can flag any copyright issues;

- Adding friends: users can send an invite either by email, Gmail, Twitter, or Facebook;

- Discover: users can discover art by clicking "Live" to see the most recently added artworks to the ArtStack art community, or "Trending" to see the most stacked artworks, most followed artists, and popular galleries, exhibitions and museums.

- Stacking: when the cursor is hovered over a particular artwork, users can do several actions: add it to their own stack of artworks; leave a comment; ask a question; displays the Art stack member who posted the artwork; see the first people who added the artwork to their own stacks (this provides an extra initiative for others to stack early); and displays the

total number of stacks where the artwork appears;

- Collecting: users can include artworks to their pre-set collections, or create a new one. Using the feature that allows users to group their works into different themes, professional gallerists and curators may also use the platform to showcase their past, current, and upcoming collections to attract a wider audience.

The ArtStack community has added artworks to the platform by more than 30000 artists, which includes without any differentiation both internationally recognized artists, curators, writers, creative thinkers, and art enthusiasts from across 185 countries, enabling the circulation of information that, until recently, was reserved to an elite.

Ezra Konvitz, co-founder of ArtStack, in an interview for *The Guardian* (2012), explains that an aspect that differentiates ArtStack from Pinterest or other social networks is the typology of contents and the appearance of the layout. They are designed for a specific target audience interested in art: the layout has a very clean design with large images and published contents are just artworks. Moreover, contrary to Pinterest, all the art in ArtStack is organized and classified into categories, so users can see all the work of an artist, a gallery or a library, regardless of who adds it, and find new works of an artist when they are added.

The free ArtStack iPhone App enables users to photograph and "stack" art they see wherever they are.

Outcomes for participants

ArtStack's website is organized as an archive that facilitate the access to arts both for users who specifically seek it, and for users who are looking for something they still don't know through serendipitous discovery, in the same way they discover new music by checking out what their Facebook friends are listening to on Spotify.

There is the potential for galleries to create virtual versions of their collections, and for artist to exhibit their paintings and portfolios.

Operative insights

On the contrary of the majority of other social websites, ArtStack is a close community as it is not possible to Google search any ArtStack users or artists, (which instead is possible for example with any Pinterest profile). On the one hand a close community may enrich the experience giving it exclusivity and ensuring the pieces are kept shared among users that are really interested in the topic, while on the other hand, opening it up could make the discovery element more powerful, also for those people who have never set foot in a gallery (Caines 2012).

BibPhone

2003 – 2006
Silkeborg Public Library and Aarhus Kommunes Biblioteker, Denmark

Developers

The Alexandra Institute in collaboration with Arkitektskolen Aarhus, Claus Bjarrum Arkitekter, Dantek, BCI, Tihii Media, Aarhus Universitet, and Datalogi-Datalogisk Institut

References

Dalsgaard, Peter, Christian Dindler, and Eva Eriksson. 2008. "Designing for Participation in Public Knowledge Institutions." In *Proceedings of the 5th Nordic Conference on Human-computer Interaction: Building Bridges*, 93–102. New York, NY, USA: ACM Press. doi:10.1145/1463160.1463171. Lykke-Olesen, Andreas, and Jesper Nielsen. 2007. "BibPhone: Adding Sound to the Children's Library." In *Proceedings of the 6th International Conference on Interaction Design and Children,* 145–148. New York, NY, USA: ACM Press. doi:10.1145/1297277.1297307. Mulvad, Jennifer, Knud Schulz, and Lotte Duwe Nielsen. 2007. *Inspiration. Strategies and Prototypes for the Future Abstract from Children's Interactive Library Project 2004-2006*. Aarhus: The Municipality of Aarhus. The Alexandra Institute. 2006. "Children's Interactive Library." Alexandra Instituttet. Accessed April 16 2013. http://www. alexandra.dk/uk/projects/pages/childrens-interactive-library.aspx.

Description

The bibPhone was developed within the research "Children's Interactive Library" that was "focused on children's use of the library and how their experiences and development could be supported and challenged through augmented reality. The aim of the project was to bridge the gap between existing activities in interactive buildings and physical spaces at schools and libraries" (The Alexandra Institute 2006).

The target groups are children from 6 years of age. The concept originated from children's reluctance of performing written reviews and enables children to annotate physical material with digital recordings. The bibPhone concept is based on the use of RFID tags in library books, combining a wireless mini-computer with an RFID reader, microphone and speaker. Children can speak into the books by placing the bibPhone over a RFID tag on the book. By using the bibPhone as listening device, they can also listen to previous recordings made by other users. Moreover, through the bibPhone, librarians can store their review of a book for children to hear (Dalsgaard, Dindler, and Eriksson 2008, 99).

The concept of the bibPhone can be realized technically in a number of different ways, and two different prototypes were first developed: the *vase prototype* that has a low volume sound and is mostly intended for a single user, and the *oil can prototype* that has higher sound volume and enables sociality during the investigation of books (Lykke-Olesen and Nielsen 2007).

The project combines the physical and the digital, making the physical space and artifacts in the library the interface for digital material. The concept is not restrained to information materials but could also be used in relation with RFID tags added to specific elements in the physical environment, enabling new forms of play and exchange of information. A secret layer of information for children attached to selected books is also an imaginable scenario (Mulvad, Schulz, and Duwe Nielsen 2007, 9).

Outcomes for participants

The bibPhone was tested for a short period of time and it is hard to say whether it would really become a parallel practice for investigating books along with regular browsing. While most children found it fun to use the bibPhone to listen to what others had recorded on the books, making own recordings seemed to be embarrassing, probably due to the awkward situation of talking to a book or the difference in privacy between writing a review and speaking it out loud. During the prototype evaluation it was observed that instead of selecting or rejecting books by looking at the cover image, the children go more systematically through the bookshelves with the bibPhone (Dalsgaard, Dindler, and Eriksson 2008, 99).

Operative insights

The book (or any other object), thanks to the use of RFID tags, may become a physical link to real-time data, linking its contents to related external data.

An important issue that arises from this project is if and how filtering the thousands of sounds that will accumulate in the books, in order to maintain the system in the long run. An argument in favor of a mediation process is to remove broken and bad recordings, while an argument for not filtering is keeping the mystery of the invisible landscape of sound in which for example two friends can have a book that no one else knows about where they exchange secrets and stories (Lykke-Olesen and Nielsen 2007).

Dulwich OnView

2007 – Ongoing
The Friends of the Dulwich Picture Gallery with the official recognition of the Dulwich Picture Gallery, Dulwich

Developers

The Friends of the Dulwich Picture Gallery

References

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Description

Dulwich OnView is a museum blog run by volunteers from the local community, with posts about the Dulwich Picture Gallery in southeast London and its community. It is unique and different from a regular museum blog because it is independent from the Gallery, and run by the community for the community, while benefiting from formal recognition and support from the Gallery, even if it uses no Museum's resources. The Gallery's official recognition makes the contents created by independent volunteers more believable and able to get further involvement from the local community. As the Dulwich Picture Gallery is perceived as traditional and conservative, Dulwich OnView has helped to counteract this image and set the Gallery in the context of a local community that supports it (Liu et al. 2010). The fact that

it is often regarded as the "unofficial" Museum website (Beazley 2009) has in fact allowed the site to be a facility for the local community in Dulwich maintaining a strong connection with the Dulwich Picture Gallery.

Although the Gallery is supportive of Dulwich OnView, the relationship between the two entities is relatively loose to allow flexibility on both sides. For example, the Gallery can use the Dulwich OnView blog for promoting upcoming exhibitions by providing informal insights related to particular aspects for which the main Dulwich Picture Gallery website would not be appropriate, and The Friends of the Dulwich Picture Gallery can include in the blog many articles that are not directly related to the Dulwich Picture Gallery, but more generally to the local community.

After every article there are comment boxes that encourage the readers to give opinions, ideas, and feedback, and to contribute sharing experiences. Comments are moderated and responded to within hours. Although a limited number of contributors have editorial access, hundreds have written, photographed, or made films for this hybrid museum blog, and people can be put in touch with each other.

Contributors come from a far wider demographic than the visitors to Dulwich Picture Gallery. The analysis of search terms and Web traffic reveal that the blog is discovered by people not looking for—and perhaps not knowing about—Dulwich Picture Gallery, who are then introduced to the Gallery through the associated articles and numerous links. The age of visitors ranges from teenagers, posting comments on articles, to older people accessing photographs and posting memories. Local people go to the site for looking for a good read with a local

connection, information on local events, or information about ticket sales for the Dulwich Picture Gallery events, while there is also a significant number of international users that request information about the Dulwich Picture Gallery or try making contact with experts (Liu et al. 2010).

### Outcomes for participants

A pool of diverse writers represent different voices and will connect the Dulwich Picture Gallery with different audiences. The variety of topics helps to involve new readers, as the writers typically pass on articles to their networks. As a result of this good community spirit, also off-line friendships are formed directly as a result of online involvement (Liu et al. 2010).

Operative insights

The modalities of management observable in the project developed by The Friends of the Dulwich Picture Gallery may be regarded as a successful best practice for the development of museum-based virtual communities in the context of existing communities of practice.

The project demonstrates how community activities may use the strength of individual relationships to enrich events and events to strengthen individual relationships. In fact, when the individual relationships among community members are strong because participants know each other well, the events are much richer also for non-members participants.

Flickr The Commons
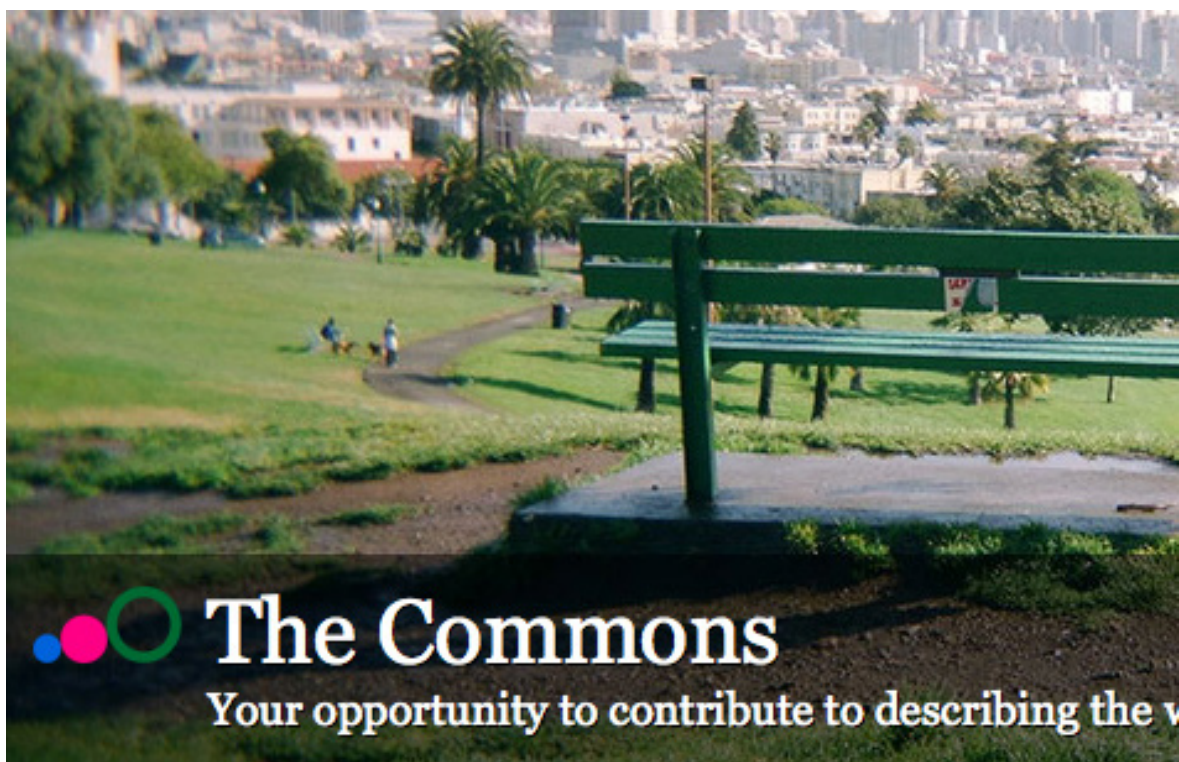
.○ **The Commons**
Your opportunity to contribute to describing the w

2008 – Ongoing
Flickr

Developers

Flickr

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———. 2013b. "About the Rights Statement." *Flickr*. Accessed April 16 2013. http://www.flickr.com/commons/usage.
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Oates, George. 2008. "Many Hands Make Light Work." *Flickr Blog*. Accessed April 16 2013. http://blog.flickr.net/en/2008/01/16/many-hands-make-light-work.

Description

The project has the main goals of increasing access to publicly held photography collections, and providing a way for the general public to contribute information and knowledge (Flickr 2013a).

Users are invited to help describing the photographs they discover in Flickr The Commons either by adding tags or leaving comments. This information feeds back into the catalogues, making them richer and easier to search. In fact, photographs from different collections can be linked together and newly indexed by the public, thanks to Flickr's folksonomic tagging that provide valuable metadata and increase the utility of search results (Indicommons 2013).

Flickr The Commons was launched on January 16 2008, when Flickr released a pilot project in partnership with The Library of Congress. The Library has an enormous photo catalogue, containing over a million photos, from which the Library team has chosen about 1500 photos from each of the two more popular collections to show on Flickr (Oates 2008).

Today, with several more partner institutions on-board, the collection of public domain photographs comprises more than 250 000 images, that have generated more than 2 million tags and over 650 000 comments.

Main features includes:

- The "Groups" function, that enables users to assemble, classify, and curate photographs according to specific themes and interests. This type of classification differs greatly to the standardized procedures practiced by

cultural institutions and acts as a means of connecting like-minded individuals (Colquhoun 2013);

- "Favorites" allows users to build their own collections of photographs from those available across Flickr.
- "Tags" provide institutions with an insight into the terminology used by their audience to classify and locate images. The tagging system is a means of understanding how individuals interpret and understand photographs in different ways (Colquhoun 2013).
- "Comments" and "Notes" generate dialogue between institutions and Flickr users, offering multiple levels of interpretation that have the potential to develop new contexts and narratives for photographs.

Photographs can be shared on a variety of different social media including Facebook, Twitter, Pinterest, and Tumblr. Sharing tools also enable users to embed images within different online platforms, contributing to the varied ways in which photographs are recontextualize within the online environment.

The website represents a small proportion of the photographic collections held by some of participating institutions, which in many cases present users with a broad overview of the diversity and scope of their collections at large that benefit from greater exposure through Flickr's large user base.

Users do not play a direct role within the process of content selection that is performed by the participating institutions. Several museums and archives post photographs, which are released with a "no known copyright restrictions" determined by various reasons such as the expiration of the copyright, the failure to adhere to required formalities or conditions, sufficient legal rights to authorize others to use the work without restrictions, or the ownership of the copyright without the interest in exercising control.

Outcomes for participants

Beyond being an alternative Web platform for the public to view photographic collections, as other social networking sites, Flickr The Commons support communication and knowledge sharing, offering users the opportunity to express their interests while engaging with collections.

The project may also provide educators and their students an abundance of historical imagery and information from around the world with which they can engage.

Operative insights

Flickr The Commons highlights how letting users to participate in online collections, for example through folksonomic tagging, may reveal the significance of particular objects and artifacts according to public opinions. This approach may also challenge the traditional way in which online collection are conceived that do not include the voice of the public in the selection and categorization of items.

Google Art Project

2011 – Ongoing

The original seventeen partner museums at the time of Google launch the Art Project's were:
Alte Nationalgalerie, Berlin
Freer Gallery of Art, Smithsonian, Washington D.C.
Frick Collection, New York, NY
Gemäldegalerie, Berlin; Museum Kampa, Prague
Metropolitan Museum of Art, New York, NY
Museum of Modern Art, New York, NY
Museo Reina Sofia, Madrid
Thyssen-Bornemisza Museum, Madrid
National Gallery, London
Palace of Versailles, Versailles
Rijksmuseum Amsterdam, Amsterdam
State Hermitage Museum, St. Petersburg
State Tretyakov Gallery, Moscow
Tate Britain, London
Uffizi, Florence
Van Gogh Museum, Amsterdam

Developers

Google

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Gordon, Leslie A. 2013. "It's Google, but Is It Art? Museums Wonder Whether They Should Open Their Galleries to Digitizing - ABA Journal." *ABA Journal*. Accessed April 16 2013. http://www.abajournal.com/magazine/article/its_google_but_is_it_art.
Proctor, Nancy. 2011. "The Google Art Project: a New Generation of Museums on the Web?" *Curator. The Museum Journal*. Accessed April 16 2013. http://www.curatorjournal.org/archives/635.
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Valvo, Michael. 2012. "Press Release." *Art Project Powered by Google*. Accessed

April 16 2013. https://sites.google.com/a/pressatgoogle.com/art-project/press-release.

Description

Google Art Project is part of the Google Cultural Institute, collaboration between Google and hundreds of museums, cultural institutions and archives around the world with the goal of making available and accessible online important historical, cultural, and environmental assets.

The Google Cultural Institute includes three different projects (as of April 2013):

- Art Project, through which the public can access high-resolution images of artworks housed in several international museums;

- World Wonders Project that, through a partnership with UNESCO, makes possible a virtual visit to modern and ancient UNESCO world heritage sites using Street View and the 3D modeling;

- And Archive exhibitions, which presents virtual exhibitions designed by the cultural institutions partners of Google, with the objective to make available online some of archival materials that cannot be shown to the public in their actual spaces.

The Art Project was launched in 2011 in cooperation with seventeen partner museums. In 2012, Google signed partnership agreements with other 151 museums from 40 countries and the platform now (as of April 2013) features more than 30,000 objects available to view in high resolution (Valvo 2012).

The Art Project aims at giving more people access to art by removing barriers like cost and location. It provides people the opportunity to experience art both individually and socially, enabling multidisciplinary and multi-institutional learning.

Users can virtually walk through 46 museums covered by Street View and zoom-in on some artworks. A dedicated page for each selected artwork provides users a dynamic high-resolution image of the artwork, and contextual information to enhance their understanding of the work. Users can access information detailing physical characteristics of the image, medium, provenance, viewing notes, history of the artwork, and artist information. The level of information varies by museum and by artwork as each museum was allowed to include as much material as they wanted to contribute.

The platform includes educational tools and resources for teachers and students. Using services like Google Scholar, Google Docs and YouTube, the Art Project includes external links for users to explore additional information about an artwork or a gallery.

The pages "Look Like an Expert," "DIY," and "What's Next" provide activities for site users similar to those often found in art galleries (such as a quiz that asks site visitors to match a painting to a particular style) and links to various art history timelines, art toolkits, and comparative teaching resources.

Users can log in with their Google Account to create their personal collection. They can compile any number of images from any of the partner museums and save specific views of artworks to create a personalized virtual exhibition. Personal collections can be shared with others through social media (Google+, Facebook, Twitter) and email.

Additionally, the second, improved version of the website integrates Google+ video hangouts, allowing viewers to create more engaging personal galleries. This feature may also become the base for distance education program, engaging users in shared-screen discussions, such as in the case of an expert leading a virtual tour of a distant museum to remote attendees.

Users can search across numerous collections to find artworks that fit their parameters of interest by filtering their search with several categories, including artist, museum, type of work, date, and country. The search results
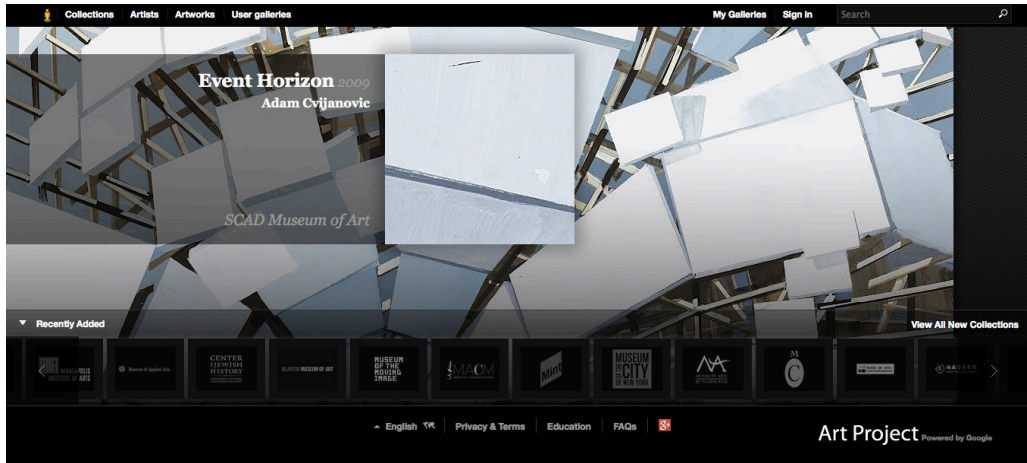
are displayed in a slideshow format. Future improvements include upgrading panorama cameras, more detailed web metrics, and improved searchability through metatagging and user-created metatagging (Proctor 2011).

Outcomes for participants

User can interact with artworks by creating their own collection.
This functionality is almost the only entirely legal and simple way to create and manage a personal selection of artworks from several online museums collections for educational purposes that could also be shared and that allows direct social engagement among involved users.

Operative insights

High-resolution images are an example of how the digital heritage can be used to complement, rather than imitate, the encounter with the artwork in the actual gallery.
Julian Raby, director of the Smithsonian's Freer and Sackler Galleries, points out how, thanks to the gigapixel scans, the ability to engage with artworks in intimate close-ups at a computer screen is transforming online art viewing from informational to emotive

(Proctor 2011). Moreover, it is worth to notice the shift from "content" to "context" in museum's approaches when displaying digitized collections (Proctor 2011). While the first generation of museums on the Web was concerned with the quantity of information, getting online as many objects as possible, now the focus is on the quality of content and its interpretation.

Hydroscope

2008
The Kattegat Marine Centre Grenå

Developers

The Hydroscope prototype was developed as part of the "Interactive Experience Environments" project and funded by the Center for Interactive Spaces, Aarhus University, Department of Computer Science, and Aarhus School of Architecture.

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Description

The Kattegat Marine Centre displays marine life from all over the world thanks to large aquaria supplemented by boards those provide visitors with information about the origins and characteristics of the different species.

The Hydroscope is a prototype installation designed for the center that invites visitors to construct fish for a virtual ocean. The rationale for the design of the Hydroscope prototype was to explore a different range of means by which visitors could relate to fish and marine life, creating an addition to the exhibition that would be playful and engage visitors to actively explore and experiment with the fish and their qualities. Rather than explicitly communicate information about marine life the objective was to create a space where visitors could imagine how marine life could be like (Dindler et al. 2007).

Visitors can assemble their own fish using a physical construction kit with embedded RFID tag that give each peace a unique identity. The construction kit contains the heads, bodies, fins and tails of a variety of existing species of fish, and, starting from these pieces, visitors can create their imaginary fish that combines the particular qualities of existing species. As the imaginary fish is created, a digital screen shows a representation of the fish and provides simple information about the specific parts being used and the overall characteristics of the emerging fish.

Visitors are invited to release it into a virtual ocean that is inhabited by the fish that previous visitors have created. Depending on the characteristics of the fish, it will inhabit specific places in the sea (shallow water, deep water, etc.). The digital ocean is mapped onto the physical floor surface of the exhibition space, and visitors can explore it by pushing the Hydroscopes along the floor surface; as the hydroscopes are moved around the floor, the scenery in the hydroscopes change, building a metaphor of an ocean beneath the floor surface (Dalsgaard, Dindler, and Eriksson 2008, 97; Dalsgaard 2010, 4).

Outcomes for participants

The Hydroscope challenged the idea of a marine center like a place where visitors observe fish and read about their characteristics, without being actively involved. Thanks to the Hydroscope they could interact with contents while engaging socially with other visitors.

In fact visitors were invited to be part of the meaning-making process in a very literal sense as they were free to experiment with the characteristics of fish. The prototypes did not provide any correct answer, as there was no correct fish to be assembled. However, the prototypes framed the knowledge because the assembly table did provide feedback relating to the properties of the various fish parts and their combination.

The in-situ observations over two periods of four days revealed that visitors' engagement with the installation goes through a transformation from being individual to being social (Dalsgaard, Dindler, and Halskov 2011).

Operative insights

Participants' contributions are not in the form of formal knowledge but of the ideas and imagination embedded in the objects. In fact, when other visitors find a fish made by others, it does not fully reveal its individual parts. Rather, visitors have to re-create the fish to discover it and thus, in some sense, reproduce the ideas imbedded in the original.

Scapes

2010
The DeCordova Sculpture Park and Museum, Lincoln, MA, PLATFORM series.[7]

Developers

Halsey Burgund;
The former DeCordova Koch Curatorial Fellow Nina Gara Bozicnik;
Koch Curatorial Fellow Lexi Lee.

References

Burgund, Halsey. 2010. *Scapes Intro*. Accessed April 16 2013. https://vimeo.com/15058020.

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[7]   PLATFORM is a series of solo exhibitions by early and mid-career artists from both the New England and American arts communities. These shows focus on work that engages with deCordova's unique architectural spaces and social, geographical, and physical location. The PLATFORM series is intended to support creativity and the expression of new ideas, and is a catalyst for dialogue about contemporary art (DeCordova Sculpture Park and Museum 2010).

DeCordova Sculpture Park and Museum. 2010. "PLATFORM 3". *DeCordova Sculpture Park and Museum*. Accessed April 16 2013. http://www.decordova.org/sites/default/files/Final%20PLATFORM%203%20brochure.pdf.
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Proctor, Nancy. 2010. "Mobile Social Media: Halsey Burgund's 'Scapes'." *MuseumMobile Wiki*. Accessed April 16 2013. http://wiki.museummobile.info/archives/16082.

Description

Scapes is a participatory sound installation that, unlike traditional one-way communication systems like audio tours or text panels in museums, creates a two-way audio experience for visitors. The experience is significantly influenced by visitors' physical

location on DeCordova grounds, inviting them to both listen and participate in the creation of the work. The installation was design by the musician and sound artist Halsey Burgund that in this project explores his interest in the landscape's relationship to sound, history, and social experience through interactive technology.

Participants use handheld wireless devices and headphones to listen to audio and make their own recordings, which are immediately incorporated into the sound-piece for everyone to hear. An iPhone application, available for free on Apple's App Store and preloaded onto Museum's iPhones for museum visitors to borrow, enables visitors to record their thoughts and responses to the landscape. While navigating the Park whit their phones, visitors hear location-specific voices, music, and sounds that change as they move through the Park, allowing them to tap into an otherwise invisible landscape of sound. The application is designed to work fully only while at the museum, so using the App while anywhere else will result in an incomplete experience.

Burgund's program codes the visitors' responses and in real-time folds them into a database containing a collection of past and current voice recordings. Visitors listen to a continuously evolving score of responses, and, as new responses are constantly are incorporated into the composition, the audio is never the same. Snippets of spoken word layered with music that Burgund composed specifically for the DeCordova project, are streamed through the phones. The score is time and location-based because the application uses GPS and open-source technology to create dynamic musical scores from participants' spoken words that continuously evolve in real-time. Layers of voices collected over the course of the project create an oral history recording people's interactions with the land (DeCordova Sculpture Park and Museum 2010). The iPhone application has a simple interface: when the App is launched, it locates visitors and offers two choices: "Listen" or "Speak". Picking "Listen," visitors listen to the location-sensitive layer of audio composed by Burgund and mixed by the computer. Users also have two filtering options: tapping "Who", visitors uncheck voices they do not want to hear; and tapping "What" they uncheck the questions they don't want to hear answers from (Outhier 2010). Picking "Speak," visitors are invited to reply in 45 seconds or less to one of five questions: "Scapes is an excuse to talk to yourself about anything at all. Go for it"; "Ask a question of those who come after you"; "Tell a story inspired by something you see or feel here"; "Look straight up and describe what you see"; and "Tell us about someone you wish was here with you right now. Talk to him/her" (Outhier 2010). Comments are not edited nor censored, but incorporated into the piece in real-time, and it is made evident by the fact that visitors can hear their own-recorded voices while having the tour. Although the DeCordova Sculpture and Park Museum took the risk of letting visitors express themselves freely, the overall quality of the comments was really high and didn't include offensive language in over 4 months of operation (Rodley 2010; Proctor 2010).

Outcomes for participants

Thanks to Scapes, visitors spend more time looking at the sculptures than they typically would, and even if they don't learn anything more about the pieces themselves from the comments, they make a much stronger connection to them, looking for things that other visitors noticed.

Scapes does not patronize visitors with didactic content or educational exercises. Rather, it allows visitors to participate in building the visitor experience at the sculpture park, while hearing the results in real time. In this way will have a real impact on others'

connections to the art during their single transitory visit (Proctor 2010).

Operative insights

In this project mobile technology is used as a social media platform that creates conversations that go beyond the broadcast mode of traditional audio tours. One of the reasons that contribute to the success of the installation is that the project is an artwork. It was not designed like a traditional museum's App based on content strategy and educational goals. Rather, the primarily aesthetic artist's definition of success influenced visitors' engagement within the installation.

Adopting this model could means that instead of focusing primarily on interpretation and education, museum could develop programs, exhibitions, or mobile experiences also conveying audiences' voices in helping the museum becoming more relevant to other visitors.
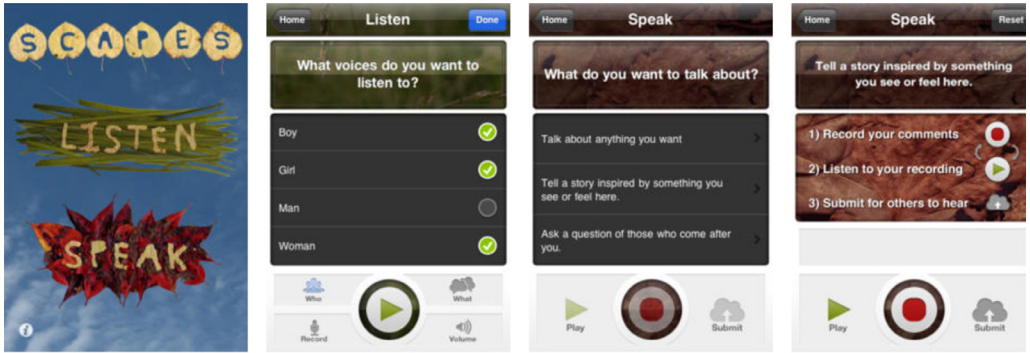
StoryCorps

2003 – Ongoing
StoryCorps, in partner with NPR - National Public Radio; The American Folklife Center at the Library of Congress; The National September 11 Memorial & Museum; The Smithsonian National Museum of African American History and Culture.

Developers

David Isay, radio documentary producer;
Local Projects (original interview concept, motion graphics loop running on the exterior of the first booth at Grand Central Terminal, and Listening Stations design);
MESH Architectures and MASdesign (StoryBooths design);
Designlounge (StoryBooth graphics for Foley Square, New York, Milwaukee and Nashville).

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Tchen, John Kuo Wei, and Liz Sevcenko. 2011. "The 'Dialogic Museum' Revisited: A Collaborative Reflection." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 80–97. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press.

Description

> "StoryCorps is an independent nonprofit whose mission is to provide Americans of all backgrounds and beliefs with the opportunity to record, share, and preserve the stories of our lives. Since 2003, StoryCorps has collected and archived more than 40,000 interviews from more than 60,000 participants. StoryCorps is one of the largest oral history projects of its kind, and millions listen to our weekly broadcasts on NPR's Morning Edition and on our Listen pages"[8]

The aim of the project is to create a bottom-up history of America thought the voices of everyday Americans, demonstrating that ordinary people shape history, under the assumption that "The lives of everyday people are as interesting and important as the lives of the rich and famous" (Filene 2011, 176).

StoryCorps created an interviewing process that is person-to-person, providing a facilitator for the interaction and a venue for people to interview one another. This is the main difference between this and other projects aimed at collecting oral stories, that often instead just asked people to talk directly into a camera in a booth, whit the result of never quite succeed. Participants, usually in pair, make an appointment to have a conversation in a soundproof recording StoryBooth with a trained facilitator that presents with potential questions and ask which participant will act as interviewer and which as interviewee. The participants then sit across from each other at

a table with a desk lamp and two microphones and talk. The facilitator runs the recording equipment, and, sometimes, inserts a question into the conversation. The session lasts about forty minutes, after which the facilitator takes a photo of the participants and hands a CD copy of the interview. A second copy is sent to Washington D.C. to be archived at American Folklife Center at the Library of Congress (Filene 2011, 175–176).

Some selected stories are curated and can be listened at NPR's Morning Edition and at StoryCorps website "Listen pages." Furthermore each StoryBooth has a number of "Listening Stations" that encourage people to put their ears against the booths for sample stories. In all this cases the experience of fruition of contents is essentially a solo experience that does not promote any social engage with other people, nor physically and virtually.

- StoryCorps began with a **StoryBooth in Grand Central Terminal in New York**, which opened 2003, recording more than 5,000 stories from both New Yorkers and visitors from across the country.

- In 2004 StoryCorps launches its two **MobileBooths**, that are traveling recording studios housed in airstream trailers that have recorded stories in 48 states in US.

- Since July 2005, StoryCorps and the **National September 11 Memorial & Museum** have worked to record at least one story to honor each life lost in the attacks on September 11, 2001 and February 26, 1993.

- Since 2006, StoryCorps' **Memory Loss Initiative** has supported and encouraged people with various forms of memory loss to share their stories with loved ones and future generations. The toolkit "Commemorate" was designed to help organizations record, share, and preserve the stories of clients living with memory

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8   http://storycorps.org/about.

loss, enhancing bonds between clients, caregivers, and staff and reducing common feelings of isolation and low self-esteem.

- In 2007 StoryBooths was opened in **Milwaukee in Nashville**.

- In 2007 the StoryCorps **Griot Initiative** was launched to ensure that the voices, experiences, and life stories of African Americans would be preserved and presented with dignity, becoming the largest collection of African American stories in history.

- In April 2008 the flagship StoryBooth in Grand Central Terminal closes, and the new flagship **StoryBooth** opens in **Lower Manhattan's Foley Square**.

- In 2008 a StoryBooth opened in **San Francisco**, in partnership with the **Contemporary Jewish Museum**.

- In 2008-2009, the special initiative **StoryCorps Alaska** traveled to local communities to record and preserve the diverse stories of Alaskans.

- In 2008 StoryCorps launches the first annual **National Day of Listening**, inspiring tens of thousands of Americans to record and preserve conversations with loved ones during the holidays.

- In 2009 a StoryBooth opened in Atlanta, in partnership with **WABE, Atlanta's NPR Station**, and **StoryCorps Historias** was launches as initiative to honor and celebrate Latino stories.

Outcomes for participants

The case has the overall aim to collect (through the interview process), share (through the selected and curated stories broadcasted on radio), and preserve (at the Library of the Congress's American Folklife Center) people's stories, giving ordinary people the opportunity to become part of a permanent record of the big and small events of American history of their times.

Operative insights

This case opens to a reflection about different approaches in curating contents contributed by the public. Raw interviews are archived at the American Folklife Center at the Library of Congress without any curatorial intervention. This row contents are not accessible or usable by the public in any way. The institutionally curated material is used instead for the NPR's *Morning Edition*, which every Friday presents a highly refined extract of a story.

A space for people to share their stories has great potential in supporting intercultural dialogue, but in this case, the curatorial approach lacks of an interpretive filter that promotes conversations around the contents. People can listen to the best and curated stories at the radio, but they cannot decide which are the stories that worth to be broadcasted, or the selection criteria, and any critical interpretation is absent.

StoryCorps opens important issues about the relationship between museums and visitors when authority is shared with public voices. Liz Sevcenko referring to the *StoryCorps* project, questions about the role that museum should have in promoting a deeper dialogue among diverse people: "I think museums do have the potential to do more than just validate everyone and everything and instead to tease out some of the power dimension or the political questions that people's stories raise" (Tchen and Sevcenko 2011, 90).

Tales of Thing

2009 – 2013
Research project "TOTeM - Tales Of Things and Electronic Memory", EPSRC Research Councils UK's Digital Economy Programme

Developers

Maria Burke, University of Salford; Andrew Hudson-Smith, University College London; Angelina Karpovich, Brunel University; Simone O'Callaghan and Jon Rogers, University of Dundee; Chris Speed, Edinburgh College of Art.

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Description

Tales of Things is part of the research project "TOTeM" that explores social memory in the emerging culture of the Internet of Things. The
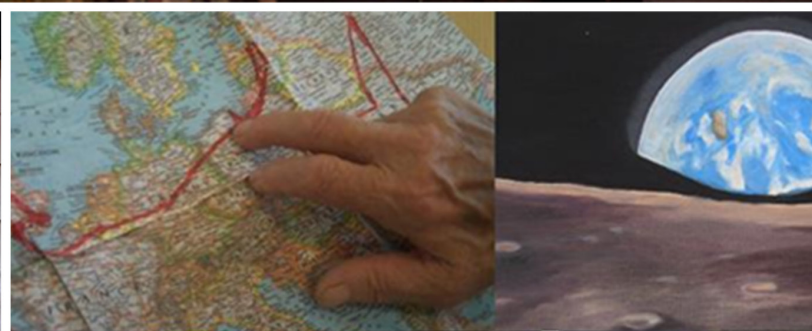
project's website[9] is a platform for users to add stories to their own treasured objects and to connect with other people who share similar experiences. The system allows individuals to attach social data to an object through a website that generates a unique QR code or RFID tag so that others who come across the object can retrieve that data. Contents depend on real people's stories, which can be geo-located through an on-line map of the world where participants can track their object even if they have passed it on.

Tales of Things aims at eliciting the value of old artifacts that contain or evoke memories of people, places, times, events, or ideas, demonstrating that objects may hold qualitative data that affect how users interpret and use physical objects (Leder et al. 2010; Speed 2011, 19). People that register for a free account at the project's website can add new objects to a user-created object database via a web browser interface. They provide some information (e.g. name, keywords, location) and a story (i.e. the tale) about the object (i.e. the thing). Tales can be told using text and any additional media from services such as YouTube, Flickr and Audioboo. In order to add new tales, people need to interact directly with a particular instance of an object via its tag (Barthel, Speed, and Hudson-Smith 2010).

Tales of Things serves two main functions: it grows to become an "archaeology for the future" (Leder et al. 2010) and serve as an arena for contemporary communication. Memories are directly accessible through tagged artifacts and keyword searches on the project website, bringing together people who already share an interest in certain objects, times, or places. In order to facilitate the connection to specific interest groups among users, the website allows the creation of groups of contacts.

Since the first pilot project in 2009 Tales of Things has had many applications in diverse

contexts. Below a brief description of those related to contents recognizable as cultural heritage.

RememberUs

This artwork installation was created by Tales of Things in collaboration with some Oxfam charity shops in Manchester for the "FutureEverything Festivals" in 2010 and 2011. It consisted of a series of secondhand artifacts that have been painted completely white, accompanied by a small book containing blank QR code stickers. Visitors to the gallery were invited to take a sticker from the book, attach it to the corresponding object, and use the Tales of Things App to record a memory on to that object. The QR tags were technically blank and waited to be assigned a memory. Once loaded with data, the tag could be read by other visitors using the same App (Speed 2011, 20). RememberUs enabled the potential for one tangible artifact to be re-associated with multiple memories of other objects. Blank objects become the host for memories that have lost their connection with their original physical artifact (Duncan 2010).

Tales of the City

This project was part of the 2010 "London Festival of Architecture" and extended the Tales of Things concept into the urban realm. It enabled participants to add their own tales to buildings and view stories that other people have left. People could create a personalized tour of London's contemporary history through architecture, by using the Tales of Things free App for leaving comments on the QR codes. Moreover through the projects' website participants could print out their own QR codes and choose other buildings to tag.

Tales of Hillingdon

In 2010 the TOTeM team collaborated with the Uxbridge Library in West London to record stories about Hillingdon residents' personal objects, local monuments, and the changing

9   http://talesofthings.com/.

history of London's cinema landscape.

Wartime Things

In 2010 the TOTeM team collaborated with the Uxbridge Library in West London during the "Battle of Britain Month" to record memories related to wartime things containing fascinating stories of wartime life that resident brought to the Library.

Objects, Stories and Voices from the BME Communities in Greenwich

In 2010 the TOTeM team collaborated with the GAVS - Greenwich Action for Voluntary Service and the Greenwich Council to generate tales for an object exhibition at the Greenwich Heritage Centre. As part of "Black History Month", BME community groups in Greenwich collected things and shared stories relating to their heritage and sense of identity. A QR code-equipped booklet allowed visitors to interact adding personal stories to the exhibit.

Dundee Contemporary Arts

In 2010, Tales of Thing was piloted at the Dundee Contemporary Arts during the "Multiplied Art Fair" in London to explore the effects of attaching stories to artworks at the point of creation, looking at how the story of the artwork may help sell the work, and how telling stories about artworks might affect the artists' process of creation.

Tales of a Changing Nation

During the 2011 "Edinburgh International Science Festival", the National Museum of Scotland featured the project Tales of a Changing Nation, tagging 70 Museum's objects with QR codes linked to extra contents including archive films and photographs from the Scottish Screen Archive. Visitors could scan the QR codes add their own tales to the objects in the gallery.

Instrumental!

Instrumental! was a temporary exhibition at the University of Dundee Museum featuring instruments, models and other equipment used in teaching physics in the University of Dundee from the 1880s onwards. Visitors could access additional information about objects by scanning QR codes on objects' labels in the exhibition or on the project's website.

QRator

QRator was a collaborative project developed jointly by UCL Digital Humanities, Centre for Advanced Spatial Analysis, and Museums and Collections. It was powered by Tales of Things, allowing the creation of a model for two-way public interaction in museum spaces. QRator was tested at the Grant Museum of Zoology and at the Museum of Brands in London. Visitors could type in their thoughts about museums' objects using smartphones or iPads provided by the Museum. The QRator's website featured the ongoing questions and topics proposed by visitors.

Outcomes for participants

Tales of Things, exploring the relationship of objects and personal memories, provides a context for citizens to participate in the creation and sharing of social memories related to heritage experiences.

Operative insights

By linking digital media to physical objects by means of the small printout of a QR code, this project makes evident the attractiveness to museums of the Internet of Things. Using low cost technology, the system enables the public to discuss about object interpretation with museum curators and academic researchers.

The key element of Tales of Things is the ability for users to add their own tale to the QR code, so that, beyond access information and generate external link like in many of other projects based on the QR code technology, personal users' interpretation becomes part of the object's history via the interactive label system.

8.2. Contribution of objects and stories

City of Memory

2011 – 2008
CityLore, New York, NY

Developers

Steve Zeitlin, founding director of CityLore and Jake Barton, principal of Local Project

References

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Zeitlin, Steve. 2011. "Where Are the Best Stories? Where Is My Story? Participation and Curation in a New Media Age." In *Letting Go? Sharing Historical Authority in a User-generated World*, by Bill Adair, Benjamin Filene, and Laura Koloski, 34–43. Philadelphia, PA: Pew Center for Arts & Heritage; Distributed by Left Coast Press.

Description

City of Memory is a participatory and dynamic story map of New York City, that attempts to map stories, memories, imprecise recollections, and tales of neighborhoods related to the city's history, through video clips, images, and text-based stories. City of Memory had its inception in the 2001 project Memory Maps that, during an outdoor festival at the National Mall in Washington DC, allowed visitors to share their stories of the city by pinning memories written on small pieces of acetate to the spot where their stories took

place on enormous borough maps of New York City. These written stories were then archived and enhanced with curated stories. In the years that followed, the project was transformed for the web with grants from a National Endowment for the Arts technology initiative and the Rockefeller Foundation.

"At CityLore, we see the clarion call to 'tell us your story', now ubiquitous on the web, as an invitation emerging from historical precedent." (Zeitlin 2011, pp.36–38)

On the website memories are first person-narrated episodes related to a specific place of the city in a specific time and context. The stories can be accessed principally in two ways: by location, navigating the map to where the story occurred, or by title typing a part of or the whole name into the search bar. New Yorkers are probably the predominant visitors because of their knowledge of the city and the possibility to recognize places and feel empathy with the witnesses.

Some stories (represented on the map by a blue dot) have been selected because more attracting for a wider audience. Those stories are professionally curated by CityLore and linked together on the map around thematic topics. Other stories (represented by an orange dot) are instead directly submitted by online users and just reviewed for avoiding inappropriate or crude content.

Stories, although located on a map, are not geo-referenced. Each story is pinned to a location on the map, which is only a tool to navigate through web content. There are just three levels for zooming (wide, medium, close), and there are no filters for time or other content features. Some elements of the graphical hierarchy work well, primarily the bright and bold colors contrasted against a grey background, but the base map, when zoomed in, fails to expand to include additional labels or references in relationship to the space. The deliberate absence of many landmarks according to Jake Barton "is really to communicate that it's less about this exact street corner and more about jumping into the narrative itself" (Mooney 2008).

The narrative approach is that of a storytelling in which each story (both curated and contributed) is presented as a single narrative unit. Different cultures are represented through New Yorkers' memories, but without highlight the possible interconnections and differences.
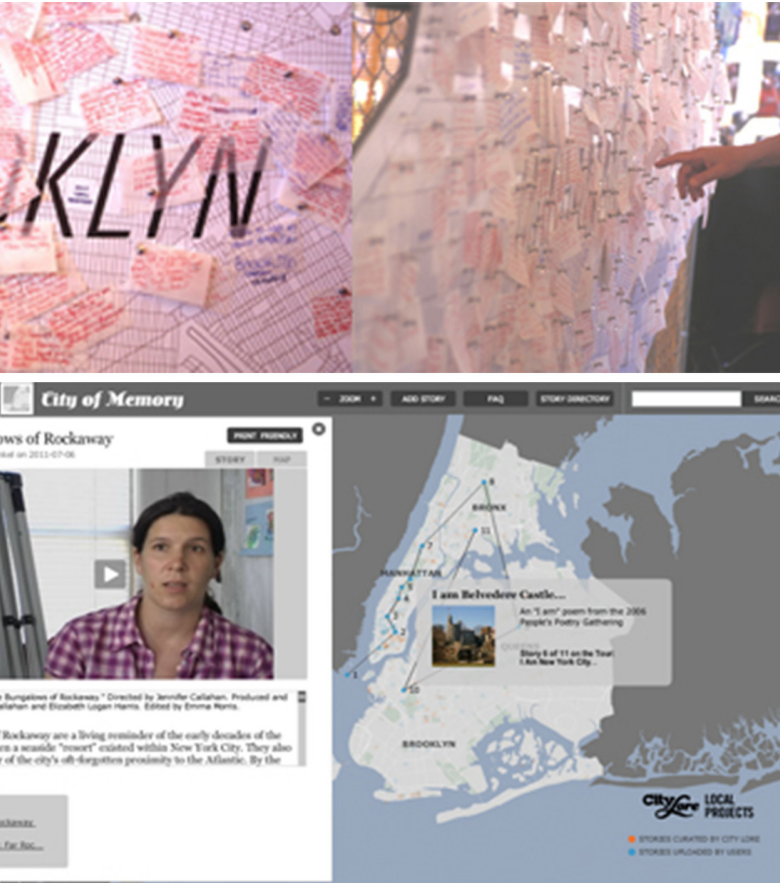
prejudice. Each story is then a unitary representation with no possibility of debate, while the site as a whole could be seen as a repository made of plural representation of the city's diverse communities.

Outcomes for participants

Exploring the cognitive maps of the New York City, visitors can re-discover their city through the memories of others that make evident multiple representations and interpretations of places.

Operative insights

City of Memory highlights the tension between curation and participation. The goal is to be inclusive and participatory, but without giving up to create a meaningful and engaging experience for visitors. The curation of different framework submitted by people ensures a view that incorporate disparate elements and the artistic integrity of the whole. A website that instead simply allows all contributions and where stories are presented without any interpretive key, would probably become simply the sum of its parts and consequently an unsatisfying experience for visitors.[1]

Even the modality of representation of curated stories that brings together some episodes narrated in different places of the city through virtual tours, does not promote a critical discourse around memories because for each tour stories are narrated by the same author. It is up to the users to create their own map of interlocking memories and parallel interpretations among represented stories.

As the site is structured, it only allows indirect social engagement through the observation of stories left by others because it is not possible to add external comments to the stories. The conclusion people draw from hearing other people's stories or telling their own, can have no effect at all, or even confirm their worst

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1   For a different approach in the curation of user-created content compare this case with the projects Historypin, MappaMi, Mapping Main Street, Red Bull Street Art View, Yellow Arrow that present row users' contribution, just eliminating crude or offensive contents.

Europeana 1914-1918

2011 – Ongoing
Europeana, EU

Developers

Europeana, University of Oxford, and EFG1914-European Film Gateway

References

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———. 2013c. "A First World War Friendship." *Europeana Remix*. Accessed April 16 2013. http://remix.europeana.eu.

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Description

The project Europeana 1914-1918. Your family history of World War One is based on an initiative at the University of Oxford in which people across Britain were asked to bring family letters, photographs and keepsakes from the WWI to be digitized. The success of the idea has encouraged Europeana to bring other national and local institutions across Europe into an alliance with the University of Oxford. The main aim of the project is to create a pan-European WWI archive and to provide unique new resources for research, education, exhibitions and events in remembrance of the war and its effect on people's lives through the collection of memorabilia and stories from the period of WWI, focusing on letters,

World War One
1914-1918
Pictures, letters and memories

www.europeana1914-1918.eu

postcards, photographs and stories from Germany, Luxembourg, Ireland, Slovenia and the UK. Thanks to users' contributions over 2,500 stories and 40,000 digital files have been collected (as of May 2013) to illustrate WWI from the point of view ordinary men and women who were affected by that experience. Contributions can be made via the project's website, or at the *Family History Roadshows*, bringing the items to the event. Through the project's website users can add a picture of their objects to the online collection together with related stories. The objects that are submitted are first checked by the project team and then made available online. At the *Family History Roadshows* the public is invited to bring documents, artifacts and stories from the WW1 that are scanned or photographed and then added to the archive by the project staff. As presented by Anne Marie Van Gerwen (Europeana) at 2012 MuseumNext conference, some of the collected artifacts are re-used and

remixed in new digital objects like the short interactive film *Otto & Bernard* that spreads the stories of this critical historical period to new audiences and communities. While watching the film users can browse related contents, such as photos and postcards, and add their own comment that will be displayed directly on the film frames along with the date and the name of the contributor.[5]

The *Europeana Exhibitions* website, which showcases some of the content available on Europeana, includes the virtual exhibition "Untold Stories of the First World War" that features photos, letters and other memorabilia of WW1. Artifacts are organized according to a focal thematic structure (Nicks 2002), grouping contents into six main themes: "The Unexpected," "News From the Front," "Family stories," "A soldier's kit," "People in documents," and "Propaganda." Choosing one theme, users can access to artifacts that are provided with a zoomable photo, extensive curatorial information, and details that include title, creator, description, date, place, source, contributor, and type of license. It is possible add comments and cite the artwork on Wikipedia.

Europeana 1914-1918 is consistent with the four strategic tracks—aggregate, facilitate, distribute, and engage—described in Europeana's Strategic Plan 2011-2015. In particular with the track "engage" that aims at "cultivate new ways for users to participate in their cultural heritage […] creating a richer and more intuitive service that maximizes the users' participation and interaction and increases usage of the content", and states that: "[…] artifacts and written sources in private hands complement those held in public collections.

In the digital environment, these resources can take their place alongside the traditional offerings of the institution" (Europeana 2011, 18).

Outcomes for participants

People can learn untold stories about WW1 through the artifacts submitted by people who lived in first person that tragic experience, and understand history from their point of view.

Operative insights

This project underlines how the engagement of users in the co-construction of cultural collections opens up new possibilities for multiple interpretations of heritage.

Another insight that can be gained from this project is the interactive feature of the film *Otto & Bernard* that may serve as a conceptual model for developing participatory educative tools within museums' digital collection.

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5   The film now forms the basis of the "Europeana Remix initiative" (http://remix.europeana.eu/), an interactive platform combining leading edge technology, and a variety of resources from Europeana and across the web.

MappaMI

2007 – Ongoing
EUMM - Ecomuseo Urbano Metropolitano Milano Nord, Milano

Developers

EUMM
DiAP, Dipartimento di Pianificazione Urbanistica, Politecnico di Milano (now DAStU, Department of Architecture and Urban Studies)
Tramemetropolitane
NextMove - Internet innovation

References

EUMM Ecomuseo Urbano Metropolitano Milano Nord. 2013. "mappaMI". Accessed April 16 2013. http://www.mappa-mi.it.

Description

MappaMi is a geoblog that allows citizens to represent a trace of their passage and presence in the places of their memory, with the goal to promote the active and participated protection of the local heritage.

The design of MappaMi originated from the participatory mapping project "Mappiamo Milano Nord" that the EUMM has undertaken since 2007, starting initially from the territory of Niguarda, and expanding later to the whole north of Milan after the regional recognition obtained in 2009. In 2008 and 2009 a teamwork coordinated by EUMM and Politecnico di Milano, reflected and discussed within citizens the contemporary and past cultural excellence of the Milan neighborhood of Niguarda with the goal to identify the main elements for the design of a shared narration of the territory useful not only for all the Niguarda citizens, but also for the potential visitors of the area. The outcome of this project of active participation in Niguarda was the community-based map, which combined storytelling and infographics in the two-dimensional space of a map that synthesizes on paper the evidence concerning the past and present of the neighborhood. The

participatory map represents some specific features of the territory and its history through a process that involved the community in the co-construction and appropriation of the sense of the place. Such instrument of great impact and effectiveness, however, does not allow the implement and the enrichment of the results of the research with updated contents (EUMM Ecomuseo Urbano Metropolitano Milano Nord 2013).

In 2010, the idea underneath the community-based mapwas implemented in an online "geoblog", using the web as a tool to incrementally continue gathering information on a local map that is constantly enriched with content generated by citizens, whose testimonies are collected and narrated in the form of geo-tagged blog posts published on the project website.

MappaMI allows users to geotagging on a map a path, a specific point or an area of interest related to memories, witnesses, commentaries on news, or ideas for the future. Users can express ideas in the format of a blog post, including photos, external documents and videos. They can also add comments to other visitors' posts. Contributions are moderated by the EUMM staff before their publication on the website in order to avoid offensive or inappropriate contents, but any other curatorial intervention is absent.

Stories are divided between three section, identified on the map with different colors: "yesterday", about the past of the city; "today", about places of everyday life; and "tomorrow", about ideas and desires that citizen want to share. The memories are also categorized using the UNESCO's classification of intangible heritage, distinguishing between stories related to rituality, knowledge, nature, performance, and oral tradition.

This project support the mission of the EUMM aimed at facilitating the socio-historical knowledge, while relating it to the daily experiences of citizens. The participative observation and interpretation of the territory is thus seen as an opportunity for cultural exchanges between diverse generations and social group of citizens of the local community, with the goal to develop behaviors of active protection of the tangible and intangible local cultural heritage.

Outcomes for participants

Citizens can represent and make evident their presence in the area they live, while discovering others memories related to the places they love. Thanks to a process of appropriation of the territory, participants can undertake an active role in the co-construction of a shared sense of place, and in the preservation and promotion of the local tangible and intangible heritage.

Operative insights

Even if there is a comment board below each story, only few of them have a comment, highlighting a relatively low level of participation. This may be due to the fact that the comparison among different stories and a deeper inquiry about cultural issues of narrated memories are missing, and there is no evidence of a further level of interpretation or of a re-negotiation of the meaning of narrated identities. All these issues were instead carefully faced thanks to in person mediation, in the physical *Map of the community* that was first developed.

Web users, seeing individuals' contributions that appear as a row material without any curatorial intervention, are not encouraged to actively engage with contents posting their own comments because the final purpose and common thread are not completely clear.

*mappa*MI
Disegno e racconto partecipato del paesaggio metropolitano milanese

Login | Registrati

EUMM

COS'E'? IL GEOBLOG MAPPA-MI   Partecipa   Termini e condizioni d'uso

Ieri   Oggi   Domani   Classificazione Unesco   Cerca nel sito

La città del passato, la tua memoria, i tuoi ricordi

Percorsi e luoghi del quotidiano Documenta il tuo paesaggio

Idee, desideri, progetti
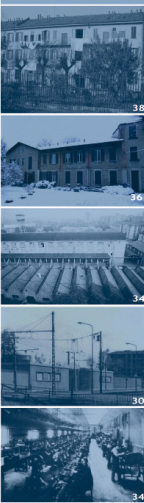
Lascia la tua testimonianza

Ieri
Oggi
Domani

EUMM-n

✓ Mi piace   Ti piace.

EUMM-n piace a te e altre 371 persone.

Map data ©2013 Google   Termini e condizioni d'uso   Segnala un errore nella mappa

La Niguarda contadina

LA VITA SOCIALE

1 Trattoria California
2 Asilo e Scuola Elementare Cesari
3 Circolo Primavera
4 Circolo Verdi
6 Casa redenzione sociale
7 Niguarda Calcio
8 Bar Circolo Unione Cooperativa
10 Circolo Familiare
11 Ceda Coop
12 Ceda Coop
14 Trattoria Ambrosiana
15 Circolo Fratellanza
17 Cinema Imperia
18 Circolo Centro
19 Scuola elementare V.Locchi
20 Chiesa - Acli
21 Società Edificatrice Niguarda
   Teatro della Cooperativa
   Anpi
   Centro Culturale De Crescenzo
   Pandora
   Sede PD
   Sede Rifondazione Comunista
22 Biblioteca - Villa Cerio
24 Scuola Media Cassinis
25 Ciclofficina Unza - Teatro Argom
26 Banca del tempo
27 Ospedale
E Sede Ecomuseo

LE FABBRICHE

28 Bersani
29 Cergiul
30 Tintoria Rosina
31 De Micheli
32 Aitocchio Bacchini
33 Florovivaisti
34 Santagostino
   L'Aquila Condor
35 Silex
36 Vetreria Motta
37 Vetreria Saint Gobain
38 Abitazioni operai Santagostino
39 Abitazioni impiegati Santagostino
40 Ferro
41 Redaelli arredo bar
42 Asilo nido Santagostino
43 Prima sede Santagostino
44 Venesia rutamatt
55 Filanda

LE VILLE STORICHE

5 Villa Clerici
9 Villa Calderara
16 Palazzo Dalimberti
23 Villa Trotti

LA VITA CONTADINA

45 Casin
46 Curt di Bignam
47 Curt Noeva
48 Curt di Ghiringoeu
49 Curt di Muneda
50 Curt di Matt
51 Curt di Bergum
52 Orti Val di Ledro
53 Gelsi e bachi da seta
56 Cascadun

IL SISTEMA DEL VERDE

MILANO

COME SI LEGGE LA MAPPA

LA CRONOMAPPA

Pop-Up Museum
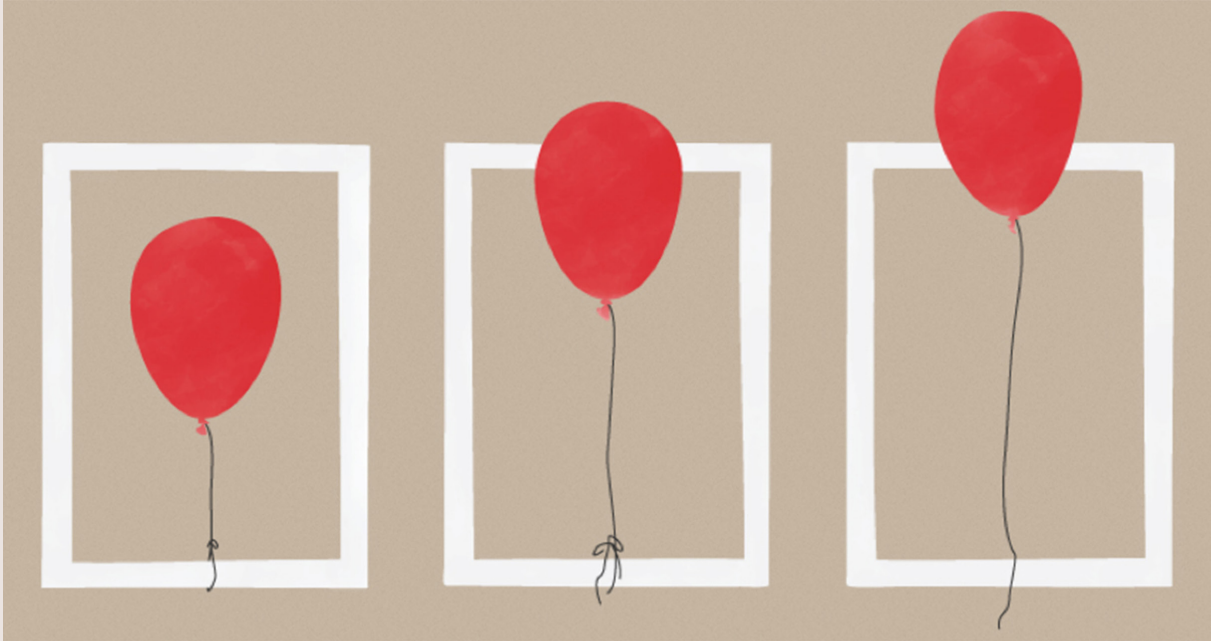
2011 – Ongoing

University Branch of the Seattle Public Library;
Columbia City branch of the Seattle Public Library;
The Australian Museum, Sydney;
The Destination Archaeology Resource Center in Pensacola, FL;
The University of Washington's Center for Experiential Learning and Diversity;
The Seattle YMCA's Cascade People's Center;
he Capitol Hill Branch of the Seattle Public Library;
The Multnomah County Library, Portland, OR;
Santa Cruz Museum of Art & History, Santa Cruz, CA.

Developers

Michelle DelCarlo

References

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———. 2012. "Case Study of The Pop-Up Museum." *ExhibitFiles*. Accessed April 16 2013. http://www.exhibitfiles.org/the_popup_museum.
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Santa Cruz Museum of Art & History. 2013. "Pop Up Museum." *Pop Up Museum*. Accessed April 16 2013. http://popupmuseum.org.

Description

Pop-up Museums are community events where people share a personal object, based on a theme. The Pop-Up Museum model was created in 2011 by Michelle DelCarlo with the mission is to create conversation among people of all ages that, sharing their stories with others, can learn something about someone else.

Pop-up Museums events have been held in libraries, museums, university classrooms, and other non-museum spaces. Since 2012, the project is being directed by the Santa Cruz Museum of Art & History with the support of the James Irvine Foundation. From December 2012 to March 2013, six Pop-Ups have been carried out by the MAH's staff in diverse location in Santa Cruz, CA. The MAH plans to spread Pop-Up Museums in 2013 throughout the Santa Cruz County in partnership with community organizations, businesses, and schools.

Examples of Pop-up themes are: "Homemade," "Objects of Conflict," "Taking Risks," "Vacation," "F my Ex," "Her Story." When participants already knew each other the theme may be tailored to their needs and they are able to share their stories easily both with those from outside the museum and with each other.

The purpose is to create a conversational space that encourages and allows participants to share their own stories, and makes it comfortable enough to have real, meaningful conversations. Participants are invited to an event, which last two hours or less, to share their own object, based on a theme, for which they

write their own label. The so-called 'museum' is based solely on the content provided by the people who show up to participate.

The staffs of the institutions that host the event is truly engaged with visitors in a way that they would not in a normal public program, because they participate as well in the Pop-Up Museum, either as a representative of the institution or as individuals. Through this kind of conversational relationship museums "can be responsive, anticipate needs, and be community resources where people have deeply meaningful experiences" (DelCarlo 2013b).

The Pop-Up Museum Blueprint is a five steps tool to help any cultural institution to create its own Pop-Up Museum, providing questions to ask throughout the process of planning, coordinating, and implementing a Pop-Up Museum. The Pop-Up Museum Evaluation Instrument is evaluation instrument can be used to collect data in order to record, tweak, and improve the experience.[6]

This project accomplishes one of five strategic goals for museums stated in the IMLS 5-year Strategic Plan (2012-2016) that states that museums should be be "strong community anchors that enhance civic engagement" (Institute of Museum and Library Service 2012, 5).

Outcomes for participants

Participants reinforce their sense of community after attending Pop-Up Museums, as they meet new people, learn new things about other participants, and have meaningful conversations, in a safe environment where people can deal with their own perspectives and celebrate their communities.

Operative insights

Connecting individuals through their own personal objects and stories is a way to stimulate sociality and learning within museums.

Moreover, creating a conversational space may be a good strategy to meet the goal of inclusivity. Within a controlled setting in which mutual understanding and respect are at the core, everyone's opinions and perspectives are equally valued and respected, and people who may not usually be heard can gain a voice.

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6   http://popupmuseum.blogspot.com/p/tools.html

8.3.
Co-designing

Creative Community Committee

2012 – Ongoing
The MAH - Santa Cruz Museum of Art & History, Santa Cruz, CA

Developers

Nina Simon, MAH Executive Director

References

Proctor, N., 2011. The Google Art Project: a new generation of museums on the web? *Curator. The Museum Journal*. http://www.curatorjournal.org/archives/635.

Description

In the spring 2012 the MAH started a new committee called Creative Community Committee (C3). C3 is a large, diverse group that meets bi-monthly or quarterly for a highly specific brainstorming session, inviting people to cross-pollinate and share ideas, ranging from exhibition development, community needs, outreach programs and family programs.

The program's main goal is to create a structure that would allow the museum to balance the responsibilities and time commitment of staff and community members to the development process:

- Internally, clearly articulating the programmatic goals and assessing plans against those goals;
- Externally, inviting people with diverse backgrounds and connections throughout the Santa Cruz County to help the Museum's staff understand their needs and brainstorm creative approaches to fulfilling them.

The majority of public programs at the MAH are created and produced through community collaborations. Executive director Nina Simon in a post entry to the Museum 2.0 blog on February 20, 2013[2] illustrates as each month the museum staff works with 50-100 individuals to co-produce their community programs. C3 may be regarded as a model for Museums that need a tool for identify museum communities of reference, what are their needs, their assets, and identify who is represented in the museum and who isn't.

A honeycomb diagram[3] is the main tool used during the C3 meeting by the Museum staff for articulating and assessing the six main goals for MAH community programs against which the community will assess new ideas:

- Meet community needs;
- Connect people to local history and culture;
- Connect people to creativity and art;
- Invite active participation;

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2   http://museumtwo.blogspot.it/2013/02/guest-post-radical-collaboration-tools.html.

3   The diagram was originally created by Beck Tench, Director for Innovation and Digital Engagement at the Museum of Life and Science, Durham, NC, as a way of measuring the success of the social experiments they are conducting. To read more about Beck Tench's honeycomb and download a PDF of the worksheet, see the post entry "Measuring Social Participation in a Science Museum" by Beck Tench to the *Useum* blog on March 19, 2009: http://useum.tumblr.com/post/85903060/measuring-social-participation-in-a-science-museum.
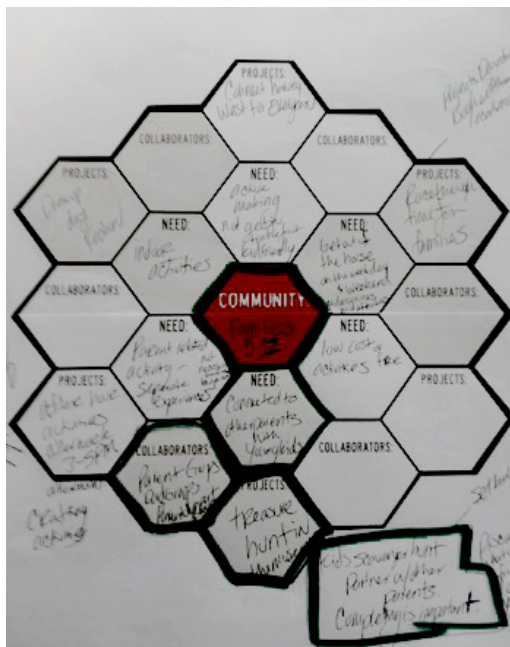
- Strengthens community bound;
- Encourage new relationship.

Outcomes for participants

The Museum constantly also invites collaboration by establishing and maintaining transparency about its partnerships with the public and staff members, as they are regarded as resources for ideas and suggestions. Surveys[4] on Museum's collaborators are the main tool used to improve Museum's programs and activities, and to understand what the participants appreciated and if they benefited from the collaboration.

The Museum's website shares the MAH programing goals, soliciting collaborations in general and for specific events, by clearly stating how collaborations function and by providing easily accessible staff contact information.

Moreover, at the museum the front desk staff is aware of upcoming events and collaboration possibilities, and it is easy for visitors interested in collaborating to contact staff members.

Operative insights

The Museum gives collaborators credit and acknowledgement for their contributions and gets their feedback about the Committee. In this way, members of the community who participate in the program are aware that their contribution serves to effectively shape future Museum's plans and programs.

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4   The link below is a sample of a collaborator survey from the MAH "Poetry and Book Arts" event: http://www.surveymonkey.com/s/ZC8GV3T.

" *Much has been written on how visitors learn in museums; evaluation is a process through which museums can learn.*

(Grewcock 2002, 44)

RESULTS AND DISCUSSION

9

OPERATIVE INSIGHTS FROM THE STUDY OF CASES

This chapter opens the third part of the thesis presenting a critical elaboration of the main operative insights drawn upon the study of cases. The goal is helping to structure the general design framework that is the final output of the research.

Insights are thematically grouped and the discussion is enriched and supported by bibliographic references and further examples selected among the projects listed in the preliminary map.

The last section of the chapter, through the construction of a design-orienting scenario, sums up the work discussed in the first part of the research on the basis of literature review and the study of cases.

9.1. Findable, replicable, and manipulable online collections and legal and ethical motivations for limitations on access and reuse

Contemporary discussions on the impact of native and digitized digital collections museums tend to describe a series of oppositions between the virtual and the actual world (Witcomb 2007, 35). Theorists Walter Benjamin (1969) and Jean Baudrillard (2000) embraced these ideas in their views of media as instruments that destabilizes the real and the truth, complaining that photographic reproductions lack the "aura" of the original (Benjamin 1969, 220), and examining "the murder of the real" by the virtual (Baudrillard 2000, 61). According to Cameron (2007, 51) this "apocalyptic view of the material/immaterial relationship" is based on the fear that viewers may not be able to distinguish the replica from the real, undermining museum culture and practice. While George MacDonald proposes an "antimaterialist museological epistemology" (Cameron 2007, 51) that reframes museums primarily as places for the dissemination of information, rather than a central repository for objects, a materialist epistemology held well into the late twentieth century cult of the real and material world, in which it is the reproduction itself that confers status and importance on the original and where less reproduced art is less significant.

Today, in the era of the "post-Internet museum" (Walsh 2007, 31), digital technology is simultaneously a new art medium and a new way of interpreting and publicizing heritage, exactly like the photographic medium was when it appeared on the scene. However, despite the digitization of enormous quantity of artifacts of various types, the uses museums make of digital artifacts "still closely resemble printed catalogues and exhibition brochures with a few technological flourishes rather than a fundamental change in approach" (Walsh 2007, 31). Virtual environments cannot just replicate the traditional communication and stylistic patterns, but needs to be designed through the use of new languages. In fact, where the space is virtually limitless issues concerning display and organizational strategies become more challenging then in the actual museums galleries where designers and curators have to deal with physical constrains.

While there are several codified strategies and an extensive literature about the types and modes of physical exhibitions, and despite several projects in virtual environment have been carried out in recent years, there is not yet a systemized methodology that can be applied to organizational strategies for what concerns digital collections.

Adopting an approach open to users' contributions, cultural institutions may pursue different kinds of interactions between users and digital

objects that, thanks to the Internet, may serve as reference collection, learning resources and collective memory easily available to all.

Insights from the study of cases reveal that letting users to contribute to online collections, for example through folksonomic tagging or re-contextualizing items according their personal criteria like in the project **Flickr The Commons**, may disclose the public attitudes about the significance of particular objects that could also be dissonant with the meaning attributed by the cultural institution that holds the collection. This kind of approach that encourage online users to act as critics may also push cultural institutions to re-think conceptually and thematically the organization of their collections in a way is responsive of audience's expectations and attitudes. Other mapped projects that present an analogue approach to participation include for example **Arts Combinatòries**, **Clark Remix uCurate**, **Yorkshire's Favourite Paintings**, and **Click! A Crowd-Curated Exhibition**.

Similarly, the social media **ArtStack** may become an occasion for art galleries to better understand topic, trends, and themes that real matter to their audiences. Precisely for the way it is conceived, **ArtStack** reveals interesting patterns about users' attitudes. In fact, facilitating the access to art just through friends and acquaintances recommendations, it do not present any institutional filter or suggestion about the organization of artworks in personal collections and any institutional selecting criteria about the objects to included in the repository is absent. Moreover, the fact that **ArtStack** is a close community, the observable patterns may be even more interesting because the pieces are kept shared among users that are genuinely interested in art.

This focus on the quality of content and its interpretation is also distinctive of the **Google Art Project** that pushes even further the possibilities given to online users, including educational tools and resources for teachers and students to users personal collections. Moreover, the **Google Art Project** demonstrates how digital heritage can be successfully used to complement, rather than imitate, the in-person encounter with the artworks, also thanks to high-resolution images. In fact, the possibility for users to engage with artworks in intimate close-ups at a computer screen is enabling a kind of online engagement that is not only informational, but also emotive.

The "contributory" model of participation (Simon 2010a) is not the only modality by which cultural institutions may engage audiences in effective participatory experiences of digital cultural heritage. The preliminary map of cases include many examples of projects in which users participate in the co-construction of digital heritage both adding user-created content to be included in the collections (e.g. **Click! Photography changes everything**) and helping the cultural institution to collect dispersed

materials (e.g. **Inventory of Intangible Cultural Heritage**, **Oggetti Obsoleti del Contemporaneo**). The project **ArtStack**, discussed above, may also be comprised in this group of cases because users not only critically arrange their personal collections, but also select the artworks to be included in the online repository.

The engagement of the users in the phase of co-construction of digital cultural collections has revealed a favorable field for the development of projects that support the presence of multiple voices and diverse views especially for what concern difficult heritage, like for example in the projects **Children Lodz Ghetto** and **9/11 Memorial Museum**). In fact, the "collaborative" model of participation (Simon 2010a) is greatly enhanced by the possibility of distance collaboration offered by online platforms for public discussion that enable people with diverse provenances and socio-cultural backgrounds to effectively engage virtually with collections that show evidence of the multiplicity of voices involved in their interpretation. It is however to notice, that, as discussed in chapter seven, in the majority of cases, online tools do not promote direct social engagement among users, but rather they support indirect or mediated social engagement through users' multiple interpretations of digital objects.

Whether participants act as critics or collectors, cultural institutions are not completely free to decide potential access and reuse terms of their digital collections. In fact, legal protections require or strongly suggest the control of access and reuse for some works. For example, digital collections may include works for which cultural institutions do not own the copyrights or orphan works (works whose copyright status is unknown or whose copyright holders cannot be identified) for which is impossible providing permission for third–party reuse. Publicity and trademark laws also make not possible the reuse of some digital cultural works both for commercial and non–commercial purposes (Eschenfelder and Caswell 2010).

Moreover, professional norms suggest additional limitations not required by law for certain types of materials. In particular they stress the tension between accessibility and equal terms of access with consideration and respect for cultural traditions and pluralistic values of groups and individuals. In fact, the open sharing of sensitive or traditional cultural knowledge may harm source groups, as well as the open sharing of materials that contain personal information may harm individuals. Critics of this approach point out that limitations on knowledge sharing may reinforce past injustices or continue discrimination, and that it is difficult to determine which groups' cultural property merits protection (Eschenfelder and Caswell 2010).

Museums professionals' codes of ethic also deals with issues concerning interpretation and replicas of objects, stating for example that "[…]

curators are responsible for ensuring that all verbal and written interpretation is accurate and accessible, physically and cognitively" (American Association of Museums Curators Committee 2009), and that replicas, reproductions, or copies of items in the collection should be permanently marked as facsimiles (International Council of Museums 2006).

All these considerations are primarily conceived for the management of physical artifacts, but new and important ethic issues and questions arise in the contemporary context in which informal digital cultural production is increasingly important. Digital collections with legal or ethical entanglements require, in fact, great control and use regulation that:

> [...] acknowledge the varying sensitivity of collections and the varying level of risk associated with different types of reuses that should be achieved trough the development of a multiplicity of access and use regulations. (Eschenfelder and Caswell 2010)

In this direction, the European Commission and Directorate-General for the Information Society and Media states a list of recommendations concerning the digitization of European cultural heritage (2011, 4–7) in which a particular emphasis is given on the guarantee of cross-border access and re-use of public domain material digitized with public funding, and on the adoption of a European legal instrument for the management of orphan and out of distribution works. The report also underline the importance of the process of digitization of European cultural heritage to ensure that "it will not become impenetrable for future generations" (European Commission and Directorate-General for the Information Society and Media 2011, 42).

9.2. The tension between institutional authority and public voices in diverse contexts

As discussed in the first part of the research, the nature of expertise within cultural institutions in recent years has been increasingly called into question. Among the consequences of the redefinition of relationships between experts and amateurs in the space of the web 2.0, museums have been challenged to reflect on their role, consider themselves more as "contributors" (Verboom and Arora 2013), than gatekeeper in the production, preservation, and distribution of knowledge.

The following subsections highlight the tension between institutional authority and public voices in the contexts of diverse cultural institutions through the insights drawn upon the study of cases. The objective is to gain insights about the relationship between the possible modes of participation in respect to the specific institutional goals of the diverse contexts.

9.2.1. ART MUSEUMS

Insights from literature review and data drawn from the study of cases highlight that an approach that is open to visitor contributions is seldom found in the contexts of "systematic" or "orderly" museums (Hein 1999), such as traditional artistic or historical galleries exhibiting artistic artifacts and antiquities in which the authoritativeness of the source is considered essential in order to validate the interpretation of contents.

In fact, the mission of these kind of cultural institutions tends traditionally to pursue self-generated, internal, and academic goals (Skramstad 1999) as they are more focused on the collection and conservation of their valuable, than on being responsive of audience expectations.

As the museum assume an authoritative role by conveying information on its cultural assets (Ciolfi, Bannon, and Fernström 2008) deciding the interpretation of objects *a priori*, the narrative presented to visitors is not really open to challenges or external contributions. Moreover, many art museums, in pursuing the idea of aesthetic communication, avoid any objects' interpretation beyond the simple identification label (Alexander and Alexander 2008, 189). Visitors' voices are seldom displayed along the objects also in those contexts in which works of art are treated as historical documents, with the aim to transmit historical information about the period when the artwork was made.

However, these considerations contrast with certain approaches that can be found in those art museums that do not belong to the "systematic" or "orderly" types. In fact, while all art galleries continue to recognize importance to the role of the individual author, interactive and participatory art projects, explicitly designed to create active visitors' engagement, have sparked a reflection about the authorship of the contents displayed, introducing collaborative practices for the co-creation of art (Diamond 2005). Although, as previously stated, the research has not taken into consideration the specific realm of interactive and participative art, some cases that presents projects of creative participation, in which individuals act as artists in the institutional interpretive framework of an existing institutional collection, have been mapped. In fact, because of issues related to authorship, rather than hosting projects aimed at promoting shared learning, art museums may use their collections as the basis for projects aimed at promoting social inclusion through creative expression like in the **Center for Creative Connections** at the Dallas Museum of Art.

According to Simon (2010b), art museums are best suited for a kind of creative participation because visitors may be inspired to create their own art in response to that on display (e.g. the exhibition **In your face)**. However, while art museums often present the most radical experiences of participatory art led by artists, they do not promote visitors' creative

expression when it is a learning activity lead by internal staff members, because of the prejudice in some traditional art gallery against amateur content that often prevents from encouraging creative participation by visitors.

Art museums appear to be best suited also for the development of projects based aimed at the involvement of the community in the co-design of programs and exhibitions like for example in the projects **Museomix, Shh! It's a Secret!,** and **Hack the Museum Camp**. In this kind of approach, participants' voices are discussed and negotiated among the group of participants and with museum's staff in a process of mediation that is continued and sustained in time. In these cases, facilitating audience participation through in person mediation appears to be the best modality to adopt in order to achieve the goals of promoting creative expression and co-creative work because the direct social engagement between participants and staff is an essential requisite for the success of the project.

Other tools for enabling participation that have been identified in the context of art museums are social media and onsite interactives installations that seem to work best when participants are requested to express their opinion through precise and discrete actions for which institutional mediation is not needed, such as for example voting for their favorite artwork to be included in a particular exhibition (e.g. **Top 40, Yorkshire's Favourite Paintings, Brangulí was here**, and **Click! A Crowd-Curated Exhibition**). However, as Simon (2010b) suggests, a possible issue for the development of this type of participatory projects in art museums might be the separation between the education and curatorial departments, often distinctive of this type of museum: an activity conceived as educational (e.g. vote your favorite painting) might be perceived by curators to distract from the aesthetic experience of connecting with the artworks and therefore cannot be placed in the gallery.

9.2.2. ECOMUSEUMS, CITY MUSEUMS, AND URBAN SPACES

An approach that is open to visitor contributions is more often adopted in those kinds of museums in which the multiple voices of user-created contents can add value to the collections, as for example in ecomuseums, urban ecomuseums, and city museums. In fact, these institutions, that are traditionally acknowledged to be places designed to ensure the participation of the audience with the ultimate goal to develop and strengthen a sense of community, need to carefully consider and question the ways by which the community is represented through their collections.

Since their beginning in the 1960s, ecomuseums and city museums have incorporated traditional museum activities while serving the needs of their communities, blurring the boundaries between museums and other public services agencies (Alexander and Alexander 2008, 287–290) and

serving as cultural centers with workshops, libraries, meeting place for community groups, or urban planning centers. The role of these institutions is to enliven the community they serves, rather than just collecting and preserve objects. For these reasons, many projects among the mapped cases are developed or hosted within the contexts of ecomuseums and city museums with the goal of promoting shared learning, both through visitors' contribution of objects or stories (e.g. **Coney Island History**, **Foresta nascosta**, **MappaMi**, and **Mare Memoria Viva**), and through their interpretation of museum's collections (**Publicview** and **In the Long Run**). Ecomuseums and city museums are well suited also for the development of participatory projects aimed at promoting co-creative work among participants in activities of participatory design (e.g. **New Dialogue Initiative** and **Storie Plurali**), for which – like than in the contexts of art museums – a sustained interaction between the community members and the museum's staff by means of in person mediation seems to be an essential requisite for the success of the participatory project.

The analysis of cases and literature review reveals that some of the issues that have been discussed for what concern ecomuseums and city museums, become especially important when the project is developed within the context of an urban space, intended as "[…] a complex interaction between places, people and images/representations of these spaces that citizens create, transform and share" (Villa 2011, 17).

The conceptual architecture of the "urban database documentary" (Shapins 2011) that "[…] attempts to represent a city through a narrative comprising multiple perspectives and has the ability to be re-configured conceptually or literally by the viewer/participant", can be observed as a key characteristic of the projects of participatory urban storytelling.

Their diverse modalities of curation of UCG adopted in the projects **MappaMI**, **City of Memory**, and **StoryCorps** well emphasizes the tension between curation and participation.

When individuals' contributions are presented without any curatorial intervention or interpretive key (e.g. the section of row contributions on the **City of Memory** website), there is the risk that they are perceived just as the sum of many single parts that do not encourage other people to actively engage with contents. While on the one hand, this approach may ensure a wider representation of multiple individual voices, on the other hand, it may results in an unsatisfying experience for visitors that cannot completely understand the narrative thread of the project and its final purpose.

On the contrary, the curation of different framework submitted by people ensures a view that incorporate disparate elements and the artistic integrity of the whole. Examples of this second approach are the geo-blog **MappaMI** that categorize memories according to he UNESCO's

classification of intangible heritage; the section of curated stories on the **City of Memory** website that links together some selected stories on the map around thematic topics; and the NPR's *Morning Edition* that presents highly refined extracts of stories collected through the oral history projects **StoryCorps**. However, also in these cases, the curatorial approach lacks of a deeper inquiry about cultural and social issues of narrated memories that could promote further conversations around the contents. The comparison among different stories and an additional level of interpretation that included the re-negotiation of narrated identities were instead carefully faced, thanks to in person mediation, in the physical community-based map that was first developed by the EUMM.

Nevertheless, a space – both actual and virtual – for people to share their stories has great potential in supporting intercultural dialogue, as it offers the possibility to explore the personal background of the individuals who can share their experiences through it. The practice of urban storytelling may thus be seen as a way to incrementally open and continue gathering information on a local map that, theoretically, infinitely enriched content generated by citizens (Villa 2011).

In this sense, community-based maps, while being successful visual tools for the representation of multiple citizens' voices, may also constitute an effective metaphors of an inclusive approach that enables and encouraged people to construct their own representations of multiple realities. In fact, while the modernist museum shared many of the cultural and epistemological functions of maps, as "[…] the establishment of collections like the drawing of map, is a form of symbolic conquest" (Hooper-Greenhill 2000, 18), the model of "post-museum" (Hooper-Greenhill 2000) or "reinvented museum" (Anderson 2012) underpins a novel and updated concept of representation that may have its visual evidence in the community-based maps. These representations, both physical and virtual, also thanks to digital technologies, allowed in fact the shift from a representation that was physical, fixed, and closed, to a virtual, mobile, and open representation that can metaphorically exemplify the characteristics of post or reinvented museums.

9.2.3. HISTORY MUSEUMS AND MEMORIALS

The study of cases reveals that history museums and memorials are best suited for participatory projects that involve the critical interpretation of objects through storytelling, like for example in the project **New York Divided**, and the crowdsourced collecting of objects and personal stories to co-construct the institutional collections, like for example in the projects **Open house**, **Sweet & Sour**, and **Children Lodz Ghetto**.

These approaches to participation are due to the fact that history museums are usually especially interested in social history (e.g. **American**

Stories), and in some cases, such as memorials of events or individual, these institutions use their collections as educational tools (e.g. **9/11 Memorial Museum**), rather than as a protected repository of objects. In this sense, an inclusive approach that rely on visitor curiosity and interest in a topic is particular effective in history museums because, having the possibility of expressing their own ideas and feelings, visitors can connect strongly to what they experience, rather than being passive observers of historical artifacts and events that they see as detached and unchangeable. Moreover, because of their social content, history museums and memorials may also be good places for community dialogue aimed at promoting co-creative work, like for example in the project **Hyphenated-Origins**.

However, despite their support for multiple perspectives, history museums have an approach that is strongly concerned about accuracy and authenticity because they need to avoid visitors' stories or perspectives that reflect hateful or offensive views toward other people's background, cultures, and religious beliefs (Simon 2010a). Consequently, validating and moderating visitors' contributions as well as maintaining a narrative thread that is intelligible to all visitors are often major concerns in the context of history museums that should try to balance multi-vocal content with a comprehensive narrative.

Another issues which may arise in developing participatory projects within history museums is the unwillingness of staff members in dealing with contemporary social issues and facilitating the dialogue on contentious topics (Simon 2010a). This may be especially challenging in those institutions that since recently have tended to collect examples of rare objects from the past, rather than those most emblematic of the historical period that was their focus (Skramstad 1999). These museums, in fact, usually present contents according to a systematic view in which the visitor experience is mainly aesthetic and in which multiple voices can hardly being included.

9.2.4. SCIENCE AND TECHNOLOGY MUSEUMS AND CENTERS

Only a small minority among the mapped projects have been developed in the context of science and technology museums and centers, although the long history of interactive display techniques of these institutions would instead suggest science museums and technology centers as naturally suited to encourage active visitor participation. They are actually driven by a strong sense of social purpose and may be described primarily as places of education, entertainment, and influence rather than research and scholarship (Alexander and Alexander 2008, 85–112). However, in the majority of cases, their mission of bringing people into contact with educational and potentially inspiring experiences is pursued through interactive activities rather than participatory engagement.

The terms participation and interaction are often used interchangeably within museums even though they have different implications on the visitor's experience. Interaction implies reciprocity: the user performs an action and something happens in reply to the visitor's action, mechanically, digitally, or kinesthetically.[1] An exhibition is instead participatory if visitors are invited to interact adding personally generated contents that may even become part of the exhibition itself. Moreover, to speak of interaction focuses on how the exhibition reacts to the actions of the visitor, while speaking of participation emphasizes the role of the user in relation to the experience of visiting (McLean 1993, 93).

Insights from the study of cases reveals that, while the design of interactive exhibitions is an established practice in the context of hands-on museums, a participatory approach is seldom used in these contexts. In fact, unlike art museums, history museums, and community museums, science and technology institutions do not value multiple perspectives on basic interpretation of scientific and technological knowledge because it always need to be validated and is not open to visitor reinterpretation. Additionally, the family-oriented focus on shared learning at science centers leads some to avoid controversial topics or visitor experiences that might be perceived as too complicated to integrate into a family visit.

Among the selected case studies, the exhibition **The great fat debate** at the Science Museum in London and the prototype **Hydroscope**, developed for the Kattegat marine center, constitute two exception in this sense: the first because promotes the discussion of a controversial theme through an interactive installation, and the latter because promotes shared learning through an activity that requires visitors to high engage with each other and really concentrate. The participatory learning activity enabled by the **Hydroscope,** promotes direct social engagement among participants that need to socially interact to each other in order to understand and reproduce the ideas imbedded in the virtual fish made by others. Moreover, the **Hydroscope** may be regarded as a very literal manifestation of the so-called "peephole principle" (Dindler et al. 2007; Dalsgaard, Dindler, and Eriksson 2008), because it encourages co-exploration and inquiry by providing a visual glimpse into a virtual hidden ocean beneath the floor surface. Digital peepholes may be employed in the design of mixed reality environments within science and technology centers where shared learning is achieved trough loops of feedback between the users and the system that only gradually reveal what participants are investigating.

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1   It is to be noted that the mere fact of being able to touch something (e.g. a 3D responsive model) does not mean that the exhibit is interactive, and vice-versa it is not always required that the visitor touches something for interactivity to happen (e.g. interaction based on sound or movement).

Other mapped projects in the contexts of science and technology centers are the **Science Museum Object Wiki** and **NaturePlus**. The first uses the Wiki model to collect users' contributions and even if the tool itself is not of particular novelty, what is of interest is its specific application in relation to a scientific museum collection that traditionally only avails of experts and professionals' contributions for the interpretive apparatuses of objects and specimens. The second project is in line with this tendency, but users' contributions are not aimed at explaining and interpreting the collection, but rather at sparking meaningful conversations on the project's website between experts, amateurs, and other like-minded visitors of all ages that are simply interested in the matter.

9.2.5. LIBRARIES AND ARCHIVES

In the context of libraries, audience participation is not a novel concept, as these institutions have seen the key principles of the so-called 'library 2.0' as part of their service philosophies since the 19th century. However, 2.0 technologies that allow users to tag, rating, and share reviews through dynamic OPAC interfaces, may greatly enhance the traditional open approach of libraries and achieves to visitors' contribution, and help libraries to create a customer-driven environment.

With the exception of the project of the **Human library**, all the other cases that have been mapped within libraries and archives use digital tools to enable audience participation, mainly with the goal of promoting shared learning. In recent years, interactive technologies within libraries have mostly focused on services and developments supporting digital, virtual and distributed environments – as for example the project **Arts Combinatòries** does through an interactive digital platforms for accessing cultural contents – rather than trying to make the physical space and artifacts in the library the interface for digital material (Dalsgaard, Dindler, and Eriksson 2008).

Among the few cases that use digital technologies to enhance visitors' services and facilitate active learning within the actual space of the library, are the **BibPhone** prototype and the project of physical tagging at the **Haarlem Oost Library**. Both these projects use RFID technology for enabling participation: the first for annotating physical books with digital recordings, and the latter for labeling books while returning them at the library.

Summarizing the common patterns that can be drawn upon the examples presented in the diverse context, it can be said that when dealing with participation, GLAMs have the potential to do more than just validate and present to the public everyone view. Museums professionals should instead question and negotiate the presentation of highly individualized perspectives with collective identities, acting as enabler and facilitators rather than figures of authority (Hooper-Greenhill 2000, 139; Witcomb 2007, 35).

A long quote by Ed Rodley of the Museum of Science in Boston in Rod Stein's post on the Indianapolis Museum of Art blog on October 11 2011,[2] further explains this concept:

> Participatory culture doesn't do away with the need for authority, but it will privilege a different kind of authority, a more transparent, more engaged one. I believe people still want a trusted voice they can listen to, particularly in the digital realm. […] It means we [museums' professionals] have make being questioned, being challenged, being called out, even being heckled part of what it means to be a museum. To be an authority in the current century will require a level of engagement that we can scarcely imagine.

It is thus to avoid the misconception that all efforts to encourage and facilitate public participation may be inherently destructive to the museum's role as a trusted source of information (Spock 2009, 10), and rather focusing more on the modes by which meaning in museums is constructed through conversation between mediators and active individuals.

9.3. Objects as catalyzer of participatory activities

As already discussed in chapter four in respect to the process of interpretation within museums, objects are always targets for visitors' feelings and actions, as their interpretation is embedded in already existing experience and knowledge and their meanings "[…] are constructed according to the perspectives from which they are viewed and in relation to the discourses within which are placed" (Hooper-Greenhill 2000, 76). It is in fact thanks to the tangibility of artifacts, that abstract notions may be made tangible, and the assemblage of objects is therefore what produces knowledge within museums exhibitions (Hooper-Greenhill 2000, 111). Because of their polysemy, the choice of object collected, their placing in groups or sets, and their physical juxtaposition may construct diverse conceptual narratives and visual pictures. The design of the visitor experience should thus involve the design of the relation between objects and

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2   http://www.imamuseum.org/blog/2011/10/11/please-chime-in-the-challenges-and-opportunities-of-participatory-culture. [Accessed November 18 2013].

visitors and between objects and museum's spaces, and the mediation of this relation is one of the main issues to consider in order to reflect on the communicative and narrative purpose of the objects that the museum choose to exhibit (Trocchianesi 2013).

In fact, acting as symbols, objects may activate both conscious and unconscious visitors' responses that depend on personal biography and cultural background. It is no coincidence that in the majority of analyzed cases, the focal point of the exhibition or program is not build around the objects in their functional, esthetical, or historical dimension, but around the stories and memories they evoke. Moreover, they all stress the importance of the social dimension of learning, as the "symbolic" value (Baudrillard 2005) of objects and their hidden multiple interpretation are enhanced only thanks to the increasing number of actors involved.

The project **Tales of Thing**, in which personal users' interpretations become part of the object's history via the interactive label system, also underlines that participants' contributions should not necessarily be in the form of formal knowledge, but just the ideas and imagination embedded in the objects may enable the public to discuss about object interpretation with museum curators and academic researchers.

Simon (2010a, 127) defines as social objects those physical items that are accessible to visitors, either on display, shared through educational programming, or available for visitors to use, that act as the engines of socially networked experiences because "[…] allow people to focus their attention on a third thing rather than on each other, making interpersonal engagement more comfortable" (Simon 2010a, 28).

It is in fact usually easier for visitors to socially connect with each other through their interests and shared experiences in some way related to the displayed objects, rather than having a conversation on the basis of an abstract concept proposed for the discussion. Even when the object of conversation is about social contemporary major issues, like for example in the projects **Contemporary Issues Forum** and **Free2choose**, the engines that spark participation are physical interactive installation designed with the precise purpose of promoting social engagement among visitors.

According to the categorization proposed by Simon (2010a, 129) social objects, whether physical or virtual, have the common qualities of being "personal," "active," "provocative," and "relational." The ways through which design techniques can activate museum's artifacts as social objects in the design of physical museums' galleries often reflect these characteristics.

Trocchianesi (2013) defines four interpretative paradigms related to exhibitions in which objects explicit their narrative potential: "manifest intimacy"; "the vertigo of collection"; "artistic interference"; and "sensitive objects and technological aesthetic".

The paradigm "manifest intimacy" includes those exhibitions in which objects are expression of the personal stories associated to them. Participants, both authoritative voices (such as for example artists or designers) and general visitors, create the narrative thread of these exhibitions thanks to the contribution of personal objects or stories. Showing a continuous shift from singular to plural points of view is an approach often used in the design of this kind of visitors' experiences (Trocchianesi 2013). The "personal objects" (Simon 2010a, 130) displayed in these exhibitions often stimulate natural and enthusiastic sharing because create an immediate connection to particular event in the life of participants or to other personal objects owned by them. Consequently, asking visitors questions and prompting them to share their reactions to the objects on display may be an effective participatory strategy to be considered in the design of these kind of exhibitions.

The exhibition **American Stories** is a meaningful example of this approach because visitors can easily create personal links to the well-known and everyday objects chosen by curators to illustrate American history. Are also included in this approach those projects designed thanks to the objects that participants own, produce, or contribute themselves, like for example in the projects **Europeana 1914-1918**, and **Pop-Up Museum**.

Similarly, the paradigms "the vertigo of collection" and "artistic interference" (Trocchianesi 2013), whilst not underpinning visitors' participation as a necessary precondition of the narrative thread, often display object that create strong emotive responses in the visitors and personal connections to their background. The first by arranging museums' collections with the precise purpose of stimulating a feeling of wonder and surprise, and the latter by engaging visitors in esthetic experiences through artistic installations and performances that help visitors make a personal connection to artifacts.

The first strategy is recognizable for example in the temporary exhibition **Santa Cruz Collect** that explores the practice of collecting, both on an individual and institutional level, presenting personal collections contributed by Santa Cruz County residents.

Also the "provocative objects" described by Simon (2010a, 131) may be used as catalyzers of social engagement in the context of exhibitions that trigger emotional rather than rational responses in the visitors, because they tend to generate conversations among visitors by genuinely surprising them, also without being placed on purpose into a designed social environment. When dealing with provocative objects, the design of the exhibition gallery often includes provocative presentation techniques that display objects in juxtaposition, conflict, or conversation with each other. An example in this sense is the exhibition **A Matter of Faith** that stimulates social engagement, also between strangers, throughout the entire

Figure 1. Some of the photographs used for the labels of the exhibit Santa Cruz Collect at the Santa Cruz Museum of Art and History, showing Santa Cruz County residents with their personal collections. Photo Credit: Tony Grant

Figure 2. Memory jars created by the visitors, displayed in a section of of the exhibit Santa Cruz Collect at the Santa Cruz Museum of Art and History. Photo by the author

experience of visit by asking people to wear USB-data sticks that show their choice to enter the exhibition as believers or non-believers.

The last paradigm "sensitive objects and technological aesthetic", described by Trocchianesi (2013), is representative of those exhibitions in which the relation between objects and visitors is defined by the technological features of objects themselves. The cases **Tales of Thing** and **bibPhone** are examples of how sensitive objects (everyday objects and books), by using low cost technology (RFID tags), may become a physical link to real-time data, linking its contents to related external data.

Sensitive objects may stimulate social engagement when directly and physically insert themselves into the spaces between strangers and, operating as "active objects" (Simon 2010a, 130), serve as shared reference points for discussions. Example of these objects are the snippets of spoken word layered with music of the sound installation **Scapes** that are streamed through the phones while visitors navigate the DeCordova Park. "Relational objects" (Simon 2010a, 132) are instead explicitly designed for inviting social use because demand interpersonal engagement to function. They not necessarily need digital technology to work if their design implies an invitation for strangers to get involved, giving visitors clear instructions on how to engage with each other around the object, as for example many mechanical interactives of science centers often do. Among the analyzed cases, the **Hydroscope** is for example a relational object specifically designed to stimulate sociality, as it implies to be used at least by two people to enable an interactive inquire about the fish and their environment.

9.4. Inclusivity and conversational spaces within museums

As discussed in the first part of the thesis, the opportunity for audience to actively participate in the co-creation of heritage experiences entails a rearrangement of the relationship between the museums and its communities. This last paragraph discusses the operative insights drawn upon the study of those cases specifically aimed at promoting community engagement, empowerment and development through co-creative work.

Community engagement, beyond being a necessary component of the development of co-creative participatory activities, may also be a way of developing supportive and sustainable partnerships with community groups and further embedding the cultural institution in the community. In fact, the sharing of experience, knowledge, and expertise thanks to these partnerships, while on the one hand may support the community, on the other hand may constantly renew the relevance of the cultural institution.

Cultural institutions can collaborate with community members in a range of different ways, reflecting many different levels of participation. For example, they can work in partnership with charities, local authority, and other organizations for supporting particular groups in the community, organize public days and group activities aimed at the co-design of programs and exhibitions, or create community advisory groups that help to support and develop the work of the institution. While the strength of individual relationships may enrich community activities, activities may strengthen individual relationships. In fact, through different types of activities, cultural institutions can help to develop important social attitudes in community groups like empowerment, ownership, involvement, and citizenship, while individuals can develop mutual understanding and a sense of identity within the community.

At the same time, through these activities, cultural institutions can convey audiences' voices in helping the development of programs and exhibitions that are more relevant to visitors because "audience-responsive" (May 2002, 33). In fact, by incorporating what is learned from audience research, museums' professionals can go beyond the dichotomy "research-based" and "market-driven" (Lord 2002a, 27-28), and rather create activities that link the curatorial research and the institutional collection with interests, expectation, and previous knowledge of the visitors. This process should begin in early stages of conceptualizing the exhibition or program and continue throughout the entire process by means of audience research, evaluations and discussions within community representatives (Lord 2002a, 29-31). When the partnership with communities reaches this objective, the dichotomy between visitors and museum professionals tends to decrease and also the contrast between user-created and curated content tends to dissolve around the "community-generated content" (Salgado, Saad-Sulonen, and Díaz 2009), and expression that refers to:

> […] content produced by visitors, staff (including guards, guides, curators, educators, marketing specialists, cleaning personnel, volunteers), as well as external researchers, artists or designers.

The **Creative Community Committee (C3)** may be regarded as a model for museums that need practical tools aimed at identifying needs and assets of their communities of reference, and better understand who is and is not represented in the museum. The analysis of the case reveals that an important component that contributes to the success of this project is the awareness of participants that their contribution serves to effectively shape future Museum's plans and programs, thanks to the credit and acknowledgement that the Museum gives collaborators and the feedbacks that the Museum gets from the community about the activities of the Committee.

There are also examples of project of community engagement in which mediated communication replaces or supplements face-to-face interaction thanks to online social platforms. For example the museum blog **Dulwich on View,** which posts about the Dulwich Picture Gallery, is run successfully by volunteers from the local community for the community and seems to effectively reflect some of the "Seven Principles for Cultivating Communities of Practice" defined by Wenger, McDermott, and Snyder (2002). In particular the case demonstrate how a good community design requires many different levels of participation: a small core group of people who actively participate in in-person discussions and debates; an active group of members that occasionally attend in-person meetings; a large portion of community members that are peripheral and actively participate to online discussion; and people surrounding the community who are not members but who have an interest in the community and seldom contribute to the blog.

Creating a conversational space may also be a good strategy to meet the goal of social inclusion, promoting tolerance and inter-community respect (Sandell 2003, 45). Through its collection the museum might become a venue for informal learning mediated by specialist support to a particular group in the community, and thanks to participatory activities targeted to under-represented communities, might provide the opportunity for individuals to feel involved in a common project and being appreciated by like-minded people. These projects can be focused on interpretation, like in the project **TAM TAM** that offers a progressive approach to the Museum's collections through the stories shared by individuals with different cultural backgrounds. Or, they can concern the co-creation of an institutional program, like in the project **New Dialogue Initiative** that gives voice to underrepresented ideas and opinions from the Asian Pacific American community by bringing together community members, artists, and other professionals to jointly shape and implement the programs.

9.5. Design scenario

This section synthesizes the discussion conducted on the basis of the literature review and the study of cases in a design-orienting scenario which serves as guide for the development of the general design framework that is the final output of the research.

Scenario making technique, in the meaning identified by Manzini (2004), is used at this stage of the research as methodology. While the most traditional scenarios, which have been developed in the framework of Future Studies and Strategic Planning, are finalized to evaluate the macro-trends impact, and to discuss the related political and economical decisions to

be taken, the design-orienting scenarios (DOS) are, in fact, conceived as tools to be used in the design processes (Manzini and Jégou 2004, 190–192). Regarding their structure, the design-orienting scenarios are articulated in three components: (1) the "vision" that gives an image of the whole context of reference; (2) the "motivation" that rationally explains the initial conditions, the goals and the final assessment of the components of the scenario building process; and (3) the "proposal" that presents some set of services that have to be coherent with the general vision and that have to be feasible in principle (Manzini and Jégou 2004, 190).

Figure 3 shows the design-oriented scenario developed to support the general design framework that will be described in the following chapter. The scheme starts on the left area defining an audience centered cultural institution as an open places for informal learning, conversations and interactions, aimed at the promotion of community engagement, empowerment and development. The key theoretical concepts that underpin and support this vision are outlined in the form of a conceptual map that spreads from two main assumptions about the relations between visitors and contents, and visitors and cultural institution.

In particular, the assumptions presented in the top-left area of Figure 3 are mainly derived from the literature review discussed in chapter three and are arranged around the main idea that visitors construct their own meanings from cultural experiences. The focus in this part is on the motivations that give legitimization to those participatory practices aimed at the co-construction of meanings within museums. The "interactive experience model" by Falk and Dierking (1992) has been considered as a framework that provides a perspective for understanding the museum visitor experience socially, physically, intellectually, and emotionally, acknowledged that the learning process that takes place in museums is an intrinsic learning experience that extends beyond content acquisition, and involves the visitor's larger framework of knowledge, expectations and interests. Moreover, the "affinity spaces" described by Gee (2005) have been taken into consideration as a further evidence of how individual's motivations significantly impact how, what, and how much visitors learn (John H. Falk, Moussouri, and Coulson 1998), resulting in the design of exhibitions that need to be focused on the transformative and affective visitor experience of meaning discovering through the objects on display (Lord 2002b, 18).

The statements presented in the bottom-left area are mainly derived from what discussed in chapter four, and are arranged around the main idea that visitors' voices can inform and invigorate the design of cultural projects. The focus here is on the motivations that give legitimization to those participatory practices aimed at supporting the social role of museums and cultural institutions at large. A process-based view of heritage (in

reference to the 2003 UNESCO Convention for the Safeguarding of intangible Heritage), as well as the need to rethink the museum as a "space of inclusion" (Bodo and Mascheroni 2012), are presented as necessary conditions without which a participatory approach to heritage would not be feasible. Moreover, recognized the emerging role of the public as cultural producer, decision maker, and leader in the creation and dissemination of museum practices (Bodo, Gibbs, and Sani 2009), museums are increasingly urged shift from a substantialist vision of the transmission of knowledge toward the model of the "dialogic museum" (Tchen 1992), where conversation among diverse group of people can generate new forms of meaning-making by means of a "conversational learning approach" (Baker, Jensen, and Kolb 2002). All these themes are not of novelty in the field of museum studies, but need to be carefully re-considered in the contemporary socio-cultural framework, where polysemic interpretive models might be enhanced by novel technological potentialities (Cameron 2012, 226).

Moving toward the central area of Figure 3, some commonly-expressed forms of public dissatisfaction – drawn upon the discussion conducted in chapter three – are reported by making them correspond to the four motivational visitors' profiles defined by Sachatello-Sawyer and her co-authors (2002):

- «Cultural institutions are not a comfortable social place for me» (socializer);
- «The authoritative voice of cultural institutions does not include my view» (skill builder);
- «Cultural institutions are not a creative place where I can express myself and contribute» (knowledge seeker);
- «Cultural institutions are irrelevant to my life» (museum lover).

Insights from the study od cases reveal that through participatory programs, while fulfilling diverse institutional goals – promoting shared learning, creative expression, and co-creative work – cultural institutions may achieve the desired community role (Parman and Flowers 2008), being perceived by the community as: "visitor attraction", "memory bank", "storyteller", "treasure trove", "hall of fame", "attic", "exclusive club", "center of creativity", or "catalyst for change".

Four main participatory actions, identified thanks to the preliminary mapping of cases and presented in chapter 7, are reported in Figure 3 as best suited for supporting specific institutional mission-related goals:

- Commenting and voting: visitors add self-created content in the form of critical interpretations;
- Contributing objects and stories: visitors create content, by collecting data or objects, and sharing personal creative expressions;
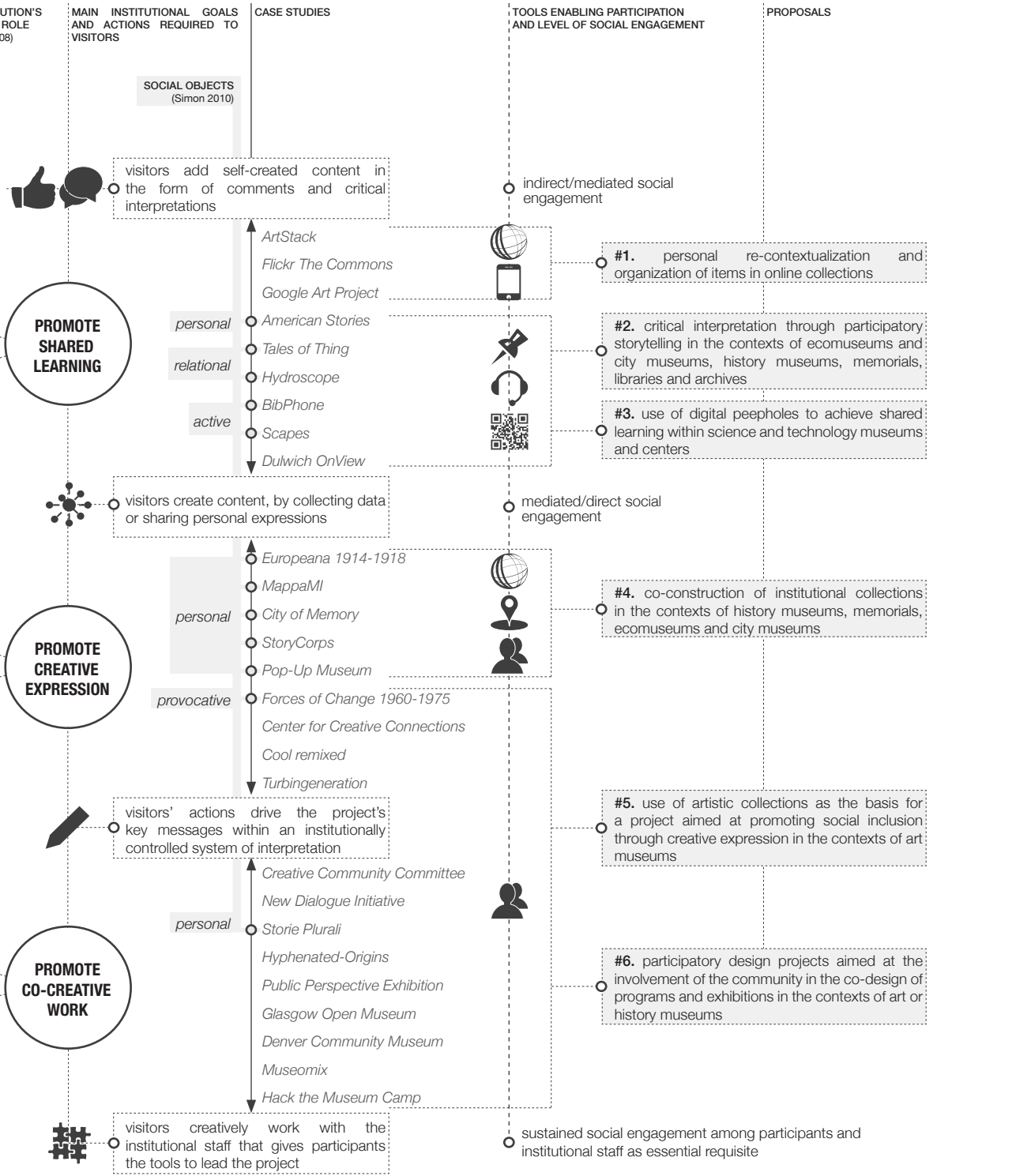
COMMONLY-EXPRESSED FORMS
OF PUBLIC DISSATISFACTION AND
VISITORS' PROFILES
(Sachatello-Sawyer et al. 2002)

* CULTURAL INSTIT
DESIRED COMMUNITY
(Parman and Flowers 20

intrinsic learning experiences that take place in museums extends beyond content acquisition, and involves the visitor's larger framework of knowledge, expectations and interests

the "**interactive experience model**" (Falk and Dierking 1992) provides a perspective for understanding the museum visitor experience socially, physically, intellectually, and emotionally

Cultural institutions are not a comfortable social place for me

socializer

VISITORS CONSTRUCT THEIR OWN MEANINGS FROM CULTURAL EXPERIENCES

exhibitions need to be focused on the **transformative and affective visitor experience of meaning discovering** through the objects on display (Lord 2002b)

visitor attraction

memory bank
storyteller

individual's motivations significantly impact how, what, and how much visitors learn (John H. Falk, Moussouri, and Coulson 1998)

co-construction of meanings

learning is increasingly taking place within the context of the so-called "**affinity spaces**" (Gee 2005)

The authoritative voice of cultural institutions does not include my view

skill builder

AUDIENCE CENTERED CULTURAL INSTITUTION

OPEN PLACES FOR INFORMAL LEARNING, CONVERSATIONS AND INTERACTIONS

" *[...] a place where visitors can create, share, and connect with each other around content* (Simon 2010, ii)

treasure trove

PROMOTION OF COMMUNITY ENGAGEMENT, EMPOWERMENT AND DEVELOPMENT

hall of fame
attic

Cultural institutions are not a creative place where I can express myself and contribute

public **cultural producer**, decision maker, and leader in the creation and dissemination of museum practices (Bodo, Gibbs, and Sani 2009)

social role

museums that adopt a substantialist vision of the transmission of knowledge are urged to rethink their role toward the model of the "**dialogic museum**" (Tchen 1992)

knowledge seeker

exclusive club
center of creativity

process-based view of heritage (UNESCO 2003)

VISITORS' VOICES CAN INFORM AND INVIGORATE THE DESIGN OF CULTURAL PROJECTS

conversation among diverse group of people can generate new forms of meaning-making by means of a "**conversational learning approach**" (Baker, Jensen, and Kolb 2002)

catalyst for change

visitors may be engaged in **critical dialogue** about the messages the museum presents to the public

Cultural institutions are irrelevant to my life

museum lover

polysemic interpretive models might be enhanced by technological potentialities (Cameron 2012)

need to rethink the museum as a "**space of inclusion**" (Bodo and Mascheroni 2012)

| INSTITUTION'S ROLE (08) | MAIN INSTITUTIONAL GOALS AND ACTIONS REQUIRED TO VISITORS | CASE STUDIES | TOOLS ENABLING PARTICIPATION AND LEVEL OF SOCIAL ENGAGEMENT | PROPOSALS |

SOCIAL OBJECTS
(Simon 2010)

visitors add self-created content in the form of comments and critical interpretations

indirect/mediated social engagement

ArtStack

Flickr The Commons

Google Art Project

#1. personal re-contextualization and organization of items in online collections

PROMOTE SHARED LEARNING

personal — *American Stories*

Tales of Thing

relational

Hydroscope

active — *BibPhone*

Scapes

Dulwich OnView

#2. critical interpretation through participatory storytelling in the contexts of ecomuseums and city museums, history museums, memorials, libraries and archives

#3. use of digital peepholes to achieve shared learning within science and technology museums and centers

visitors create content, by collecting data or sharing personal expressions

mediated/direct social engagement

Europeana 1914-1918

MappaMI

personal — *City of Memory*

StoryCorps

Pop-Up Museum

PROMOTE CREATIVE EXPRESSION

provocative — *Forces of Change 1960-1975*

Center for Creative Connections

Cool remixed

Turbingeneration

#4. co-construction of institutional collections in the contexts of history museums, memorials, ecomuseums and city museums

visitors' actions drive the project's key messages within an institutionally controlled system of interpretation

#5. use of artistic collections as the basis for a project aimed at promoting social inclusion through creative expression in the contexts of art museums

Creative Community Committee

New Dialogue Initiative

personal — *Storie Plurali*

Hyphenated-Origins

Public Perspective Exhibition

Glasgow Open Museum

Denver Community Museum

Museomix

Hack the Museum Camp

PROMOTE CO-CREATIVE WORK

#6. participatory design projects aimed at the involvement of the community in the co-design of programs and exhibitions in the contexts of art or history museums

visitors creatively work with the institutional staff that gives participants the tools to lead the project

sustained social engagement among participants and institutional staff as essential requisite

- Creatively expressing themselves: visitors' actions drive the project's key messages within an institutionally controlled system of interpretation;
- Co-designing: visitors creatively work with the institutional staff that gives participants the tools to lead the project.

Moving toward the right area of the scheme, some of the projects analyzed in chapters six and eight are listed to give examples of the aforementioned participatory actions and to introduce the concept of "social objects" according to Simon's definition (2010a, 129) presented in chapter nine.

Cases are organized in three main groups, according to the prevailing participatory action required to participants. When of particular interest for the dynamic of interaction amog participants, the social role of objects as catalyzers of participation is highlighted distinguishing between "personal", "relational", "active", and "provocative" objects (Simon 2010a, 129).

Finally the right part of the scheme presents six design outcomes, which reflect the cases' operative insights discussed in the previous sections of this chapter.

To better specify how the scenario proposals might reflect the design of cultural program and exhibitions, further reflections are following discussed along the statements and participants' roles and relations between visitors and cultural institution are visually represented.

#1. Personal re-contextualization and organization of items in online collections

Supporting and extending traditional functionality of online collections might disclose unknown public attitudes about the significance of particular objects, linking the existing institutional practices to visitors' prior knowledge and experience. In this kind of projects, due to the digital nature of contents, audience participation is enabled by social media or mobile applications and the study of cases reveals that the level of social engagement among participants is mainly indirect or mediated.

Figure 5. Relationships between participants and cultural institution when participants are asked to re-contextualize and organize items in online collections

non-participants　　collectors　　critics　　creators
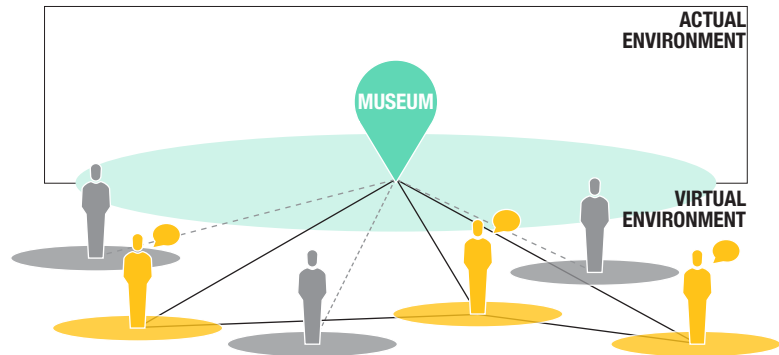
Figure 4. Legend of participants' role in the following figures

#2. Critical interpretation through participatory storytelling in the contexts of ecomuseums and city museums, history museums, memorials, libraries and archives

Emphasizing the potential of dialogical systems that encourages visitor input might promote the sharing of multiple representations of reality. As this process necessitates active involvement in processes of construction and contribution, it may also results in further social interactions among participants. Participation may be enabled by onsite interactives, multimedia installations, or smart objects, and the level of social engagement among participants generally varies from mediated to direct.

ACTUAL ENVIRONMENT

MUSEUM

VIRTUAL ENVIRONMENT
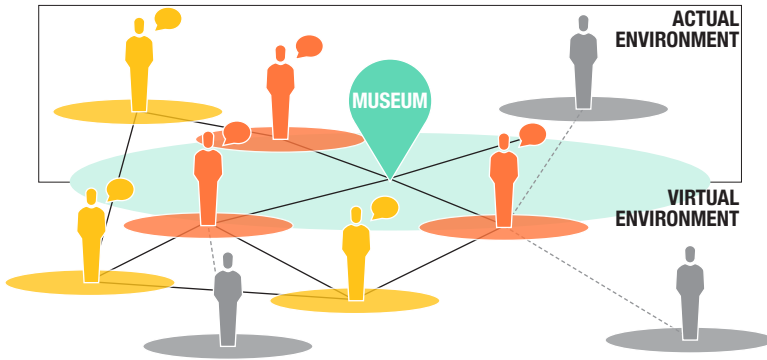
Figure 6. Relationships between participants and cultural institution in projects of participatory storytelling

#3. Use of digital peepholes to achieve shared learning within science and technology museums and centers

The study of cases reveals that in the context of science and technology museums and centers, audience engagement is best achieved by promoting inquiry and exploration. As discussed by Dalsgaard, Dindler, and Eriksson (2008), science and technology institutions can scaffold these processes of active inquiry by framing intriguing situations and providing means for exploring them in participatory and social ways.

ACTUAL ENVIRONMENT

MUSEUM

VIRTUAL ENVIRONMENT
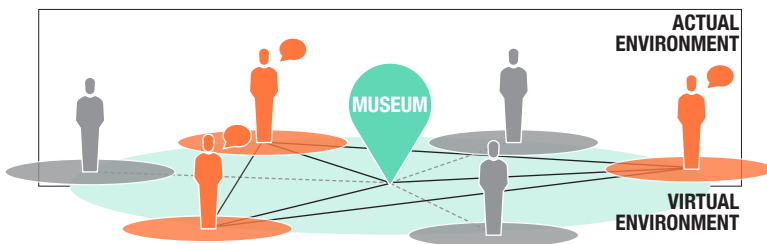
Figure 7. Relationships between participants and cultural institution in projects aimed at promoting sharing learning by means of digital peepholes

#4. Co-construction of institutional collections in the contexts of history museums, memorials, ecomuseums and city museums

When cultural institutions are rooted in communities, the dual nature of their tangible and intangible heritage often embodies shared socio-cultural meanings and practices that, along with the existing physical collections, are resources especially best suited for projects based on the collection of personal objects, stories, and memories. Participation is enabled by social media, geotagging maps, or in person mediators, depending on the desired level of social engagement among participants, which may vary from mediated to direct.

Figure 8. Relationships between participants and cultural institution in projects aimed at the co-construction of institutional collections
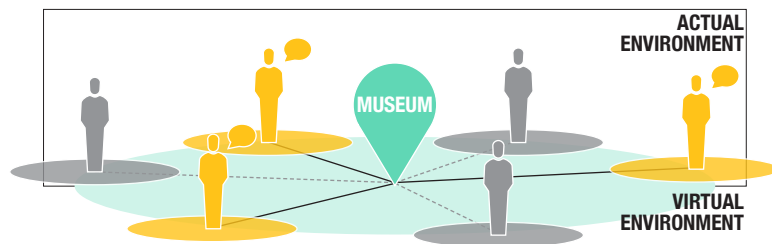
#5. Use of artistic collections as the basis for a project aimed at promoting social inclusion through creative expression in the contexts of art museums

Acknowledged that visitors build knowledge through all of their senses and using many diverse forms of intelligence, this design outcome aims at enabling multimodal participation by providing visitors with the means to creatively express themselves in the framework of an institutionally controlled process of interpretation of museum collections. The study of cases identifies in person mediation as the best way to achieve the project's goals and sustain participation in co-creative projects because, direct social engagement between participants and institutional staff is an essential requisite.

Figure 9. Relationships between participants and cultural institution in projects aimed at at promoting social inclusion through creative expression
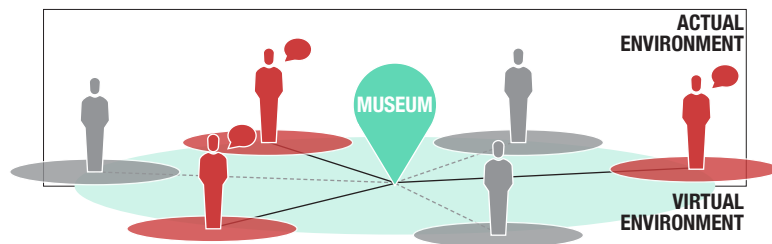
#6. Participatory design projects aimed at the involvement of the community in the co-design of programs and exhibitions in the contexts of art or history museums

This scenario proposal sees cultural institutions as hubs for new encounters, where the presence of a multiplicity of visitors with varying backgrounds and intentions might become a further resource for design, and enabling and supporting the development of fruitful social practices. Due to the strong collaborative nature of participation in co-design project, in person mediation is the best way to ensure a continued and sustained social engagement among participants and institutional staff.
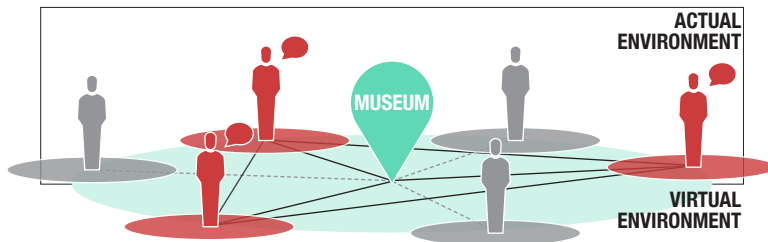
Figure 10. Relationships between participants and cultural institution in projects of co-design of programs and exhibitions

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10

A DESIGN FRAMEWORK FOR THE DEVELOPMENT OF PARTICIPATORY EXPERIENCES OF HERITAGE

Chapter ten proposes a general framework that support the design of participatory experiences of heritage, which is described with two different levels of details.

The first section addresses the general structure of the framework by outlining a recursive methodology that informs the design process.

Then, the second and last section, mirroring the framework's units–development, preliminary design, and evaluation– outlines a practical meta-design tool that might facilitate museums' professionals and designers to control the most critical issues related to the design process of participatory projects.

10.1. The recursive design process of museum's programs and exhibitions

This section outlines a recursive design methodology that informs planning process of museum's programs and exhibitions. The aim is making readers understand the general structure of the framework in its essential components before describing in detail the sequence of actions and choices that inform the question-like model proposed as meta-design tool for the design of participatory experiences of heritage in the next section.

Figure 9 summarizes the four main steps of the proposed design process: development phase, design phase, implementation phase, and assessment phase. These four steps basically reflect those of the widely diffused design process: brief analysis and concept, design, implementation, and evaluation. As it is structured, it is thus a general design methodology that may be applied to the design process of any kind of museum's program and exhibition, but because of its cyclic structure, it appears to be especially effective for the design of participatory program and exhibition in which the involvement of visitors in diverse recursive stages of evaluation and corrections is an essential requisite for avoiding the risk of failure. In fact, as discussed in chapter five, evaluation is an essential component of participatory projects because allows museums moving from experimenting with visitor participation to integrating and managing it into core functions and services over the long term.

The description of the design process that follows is largely based on literature review. In particular the works by Belcher (1991), McLean (1993), Alexander and Alexander (2008), Lord and Lord (2002), and Ambrose and Pain (2012) have been used as references. These authors mainly discuss the design process for what concern the development of museum's exhibitions, but most of these considerations may also be applied to the design of programs of community engagement within museums and cultural institutions at large, like public workshops of co-design and public events that, through the study of cases, have been identified as favorable opportunities for stimulating audience participation.

It is important to note that this framework is conceived for the application and implementation in the context of those "reinvented" (Anderson 2012) cultural institutions that see themselves as, or aim to become, places for informal learning "visitors can create, share, and connect with each other around content" (Simon 2010, ii). On the contrary, in the context of those cultural institutions that adopt a linear model of the transmission of knowledge, the framework here proposed cannot work because a continued and sustained engaging between the cultural institution and the visitors is needed as an essential prerequisite.

museum's mission
collections
learning theories
visitors studies

ASSESMENT PHASE

DEVELOPMENT PHASE

IMPLEMENTATION PHASE

DESIGN PHASE

operational phase

concept development

feasibility assesment

SUMMATIVE EVALUATION

FRONT-END EVALUATION

REMEDIAL EVALUATION

VISITORS

closing

opening

production

Main Message

preliminary design phase

installation

production planning

FORMATIVE EVALUATION

final gallery design

detailed design phase

exhibition brief

Figure 9. Museum's programs and exhibitions design process

10.1.1. DEVELOPMENT PHASE

In the development phase the preliminary concept of the main theme is created, tested and refined. It may be part of a long-term strategic exhibition plan of the institution, part of a collection conservation project or a culmination of strategic planning and marketing to draw in new audiences or members and needs to be assessed in order to determine its feasibility. In fact, the theme might be supportive of museum's mission, relevant, multifaceted, adequately internally supported, supportive of museum's collection, connective whit other museum's programs, and fundable.

Once a topic is chosen, the phase of conceptual development begins, resulting in the development of the "Main Message" or "Purpose

Statement" (Belcher 1991, 86; McLean 1993, 54), often also referred as "Big Idea" (Serrell 1994) or "Core Idea" (Nicks 2002, 357). According to Serrel (1994):

> The Big Idea says what is going on, using a subject, an action and a consequence. A Big Idea is not vague or compound. It is not more than 25 words long. It implies what it is not about.

Both the specific institutional goals and the intended visitor experiences are derived from this statement. In this phase the actual and intended target audience of the program or exhibition is preliminary defined and the "visitor's identity-related visit motivations" (John Howard Falk 2009, 35) are identified through the characterization of visitors' motivational profiles.

10.1.2. DESIGN PHASE

The design phase occurs when the project's Main Message is defined and translated into the design of the visitors' experience. This phase is often divided in two subsequent steps: preliminary and detailed design phases. The preliminary design phase, which results in the definition of the project's brief, includes a range of specific activities:

- Definition of project plan and deliverables;
- Detailed development of institutional goals;
- Definition of the "Take-Home Messages" (McLean 1993, 55) to help developers and designers clarifying the focus of the project and seeing it from visitors' perspective. These messages may be diverse from institutional goals, because represent what the institution think should be the outcome for audience, i.e. what visitors might "take away with them" (McLean 1993, 55) from the experience of visit. They express with very simple statements messages about the main them or topic of the program or exhibition, about the cultural institution, and about the visitors themselves;
- Front-end evaluation and visitors' researches that may tweak the Main Message and the institutional goals previously envisioned;
- Preliminary selection of objects, in case of an object based exhibition;
- Development of the project's storyline.

The detailed design phase, which results in the final operative organization of the program or in the final gallery design, is the longest phase of the process in the case of an exhibition that features interactive, immersive, or participative experiences that need to be tested with visitors through recursive stages of evaluation. Main steps of the detailed design phase include:

- Beginning of formative evaluation on prototypes;
- Completion of the project's storyline;

- Conclusion of formative evaluation;
- Revisions on the prototypes' design;
- Final selection of objects (if any);
- Planning of educational programs;

10.1.3. IMPLEMENTATION PHASE

The implementation phase leads to building and installing the physical structures and digital apparatuses, and comprise three stages.

1. Production planning: it is a refinement of what has been already outlined and results in the beginning of construction. In this stage the final budget and the time schedule of the project are created; loaned objects start to arrive at the institution and their condition reports are made; if needed, conservation on objects takes place; and, construction documents and reports are created;

2. Production: the physical structures, digital apparatuses, and objects are installed and the labels and environmental graphics are prepared. The marketing of the project begins, and the educational programming is finalized.

3. Operational stages: in case of an exhibition, this stage includes the beginning of the ongoing maintenance that will last for the entire period of time in which the exhibition is open to the public, and of remedial evaluation that may results in final tweaking and adjustments.

10.1.4. ASSESSMENT PHASE

The assessment phase, which takes place at the end of the project, should occur for every type of institutional program, including temporary and permanent exhibitions, because in this phase the summative evaluation of the entire process takes place, establishing if the project was both effective and successful. In this phase the project's apparatuses are dismantled, the objects are returned to the collection storage or to lenders; final reports are created as part of the institutional archive and for the agencies of granting or funding; and the accounts are balanced.

10.1.5. THE EVALUATION CYCLE

Evaluation within museums is generally a four-stages cycle that includes front-end, formative, remedial, and summative evaluation, with opportunities at each stage to test the effectiveness of cognitive and affective goals, messages, and interpretive approaches. The specific focus of the evaluation in each stage is defined by its position in the design process. Each stage requires in fact different evaluation methods (e.g. focus

groups, unobtrusive observations, interviews and questionnaires) in order to obtain a broad spectrum of data.

Front-end evaluation

Front-end evaluation occurs in the feasibility stage of a project, before the finalization of plans and ideas. Through front-end evaluation the museum addresses the project's learning objectives and the target audiences, that will be reflected in the proposed modes of visitor apprehension and intended presentation styles (Grewcock 2002, 49).

In order to better defining project limits, formulating goals, and determining content and communication strategies, front-end evaluation involves learning about the visitors' level of knowledge, preconceived ideas, and misinformation about the subject, which can be influenced by diverse background and culture (Dierking and Pollock 1998). Key areas to investigate include visitor motivation, expectations, and perceptions, the physical environment and its use, and barrier to visiting (Grewcock 2002, 46–47).

Front-end evaluation can takes place off site to explore the ways in which the museum can appeal and relate to the interests of new audiences, or it can be held within the exhibit halls, especially if the project involves the renovation of a long-standing exhibition. It is generally done as informal interviews or questionnaires, but it may also include market research studies, literature reviews, evaluation reports for similar projects, and community consultation in case of collaborative exhibitions (Nicks 2002, 357).

While audience surveys usually require large samples because the data is used to characterize a whole population, project evaluation require a much smaller samples size (usually fewer than 25), depending upon how much sampling error the evaluator is willing to tolerate, and the size and variability of the audience.

Formulating the questions for front-end evaluation is an iterative process that starts defining the assumptions about the topic, so that they can be later compared whit the findings; it continues assembling a list of assumptions; and finally drafting five to ten general questions based on the assumptions. These first questions will be refined through the evaluation process depending on the visitors' answers until the visitors begin to repeat the same answers.

Formative evaluation

While front-end evaluation is most valuable for shaping the direction and intentions of a new project, formative evaluation usually reveals very specific problems when the design team begins to develop a more detailed project plan and when the content is worked up. It is aimed at

determining the appropriateness of the design, how effectively the project communicate concepts, and whether visitors perceive the project as intended, allowing the findings to be incorporated into the final product. In considering alternative display and interpretive media, formative evaluation proceeds to ask how the content may best be communicated within the project setting. At this stage project components are developed, evaluated, developed and then re-evaluated (Grewcock 2002, 50), using mock-ups or prototypes to test the effectiveness of label copy, instructions, mechanical and digital devices (Serrell 2003). The methods used usually include semi structured interviews and workshops with staff or special interest groups. Repetitive methodologies are used to incorporate findings from each stage until the developers are satisfied with the items being tested.

Remedial evaluation

Remedial evaluation gives designers a chance to make last-minute changes, immediately after the exhibition or program opens, focusing on physical and architectural features such as lighting, placement of thematic headlines, entrances and exits and psychological factors including disorientation, crowds, thematic layout, and social activity (Kelly 2009).

Summative Evaluation

Summative evaluation is conducted with actual visitors within the context of the finished project. The aim is to give feedback about the achievement of objectives, suggest research, identify problems with visitor usage, interest and learning, and identify effective design and communication strategies. Evaluators need to consider on which measurable criteria the project should be evaluated, tacking into account that cultural institutions are primarily a venue for affective learning rather than for transferring knowledge. This requires the development of relevant measures, such as visitor motivation and expectations, physical use of the building, and visit outcomes, not wholly reliant on statistic and other classic indicators of performance. The methods used for sommative evaluation include structured observations to assess visitor interest, formal testing with groups, and in-depth interviews. This information might also be compared with the museum's more general information about its visitors (Grewcock 2002, 51–52).

10.2. A proposal for a meta-design tool

To be a meta-design tool, the design process described above lacks of the interconnections among the diverse stages of the process and of a precise path to follow in order to optimize the decision-making. The question-like model proposed in the this section is thus conceived as a more operative tool that may support the design activity of designers and planners when dealing with the design of participatory projects.

While the previous section considered the general design methodology, describing the entire process from the development to the assessment and the evaluation cycle, this meta-design tool just refers to the first two stages of the planning process – development and preliminary design – and to the evaluation cycle.

This choice is motivated by the purpose of the proposed operative tool of facilitating the process of decision-making specifically for what concern the design of participatory museum's programs and exhibitions. In fact, designing for participation mainly differs from any other design process in particular in the preliminary design phases when visitors are involved in front-end and formative evaluation, and when the museum professionals need to identify the participatory modes that better may enable audience engagement in a precise context. Once the design is defined and the construction phase begins, the design process continue instead without the need of involving visitors in the implementation of the project, until the assessment phase, when visitors' engagement in remedial and summative evaluations is required again.

The meta-design tool here proposed is drawn upon the results of the study of cases discussed in the part two of the research, and incorporates Simon's (2010, 190–191) and Parman and Flowers's (2008, 83) practical suggestions for helping cultural institutions designing the program that best reflects the community role they want to achieve.

These considerations are organized into the wider structure of the sequential design process described in the previous chapter section, which served as starting point for the definition of the subsequent stages of the practical tool.

It is important to specify that this model is not meant to be a technical tool for the decision-making process, so that for each decision corresponds a single and definite design outcome, rather it is intended to be used as a meta-design tool for facilitating the discussion of the most critical issues addressed in the preliminary design phase.

The model is composed of three macro-sections: (1) Planning the program or exhibition, (2) defining participation, and (3) summative evaluation, each of which is divided into the sub-section outlined below. At the

end of each macro-section, an overview table is presented with the aim of providing a practical tool useful for museums professionals to spark the discussion and guide the design process.

10.2.1. PLANNING THE PROGRAM OR EXHIBITION

In this phase, the preliminary concept of the program or exhibition is created and assessed in respect to the museum's mission and specific institutional strategic objectives for producing the project.

Cultural institution's community role and main institutional goals
The preliminary idea needs to be assessed in respect to the expected outcomes for visitors for verifying if the program or exhibition is supportive of the community role that the museum wants to play. The first step of the meta-design tool asks museum's professional to define the desired ways in which the community might perceive the program or exhibition. The categories about "The Museum's Community Role" defined by the authors Parman and Flowers's (2008, 83), described in chapter four, have been taken into consideration in the model as references.
As showed in Table 1, along with the list of some possible cultural institution's community role (Parman and Flowers's 2008, 83), the main institutional goals for producing a participatory program or exhibition are proposed. These goals – promote shared learning, co-creative work, and creative expression – have been identified through the study of cases and are not meant to cover the entire spectrum of the specific motivations for which a cultural institution may decide to promote a participatory program or exhibition. The aim of this simplification is rather to facilitate museum's professionals to summarize the preliminary development work in a simple statement, as it is the Main Message, which is the outcome of the development phase, and from which the design opportunities and constrains derive.
The cultural institution may often indeed have more than one view for what concern its community role, and more than one general goal for the program or exhibition; in this case, the design process will continue on several directions that will be refined through front-end evaluation.

10.2.2. DEFINING PARTICIPATION

After having outlined the Main Message, in this phase, the meta-design tool is aimed at helping museum's planners and designers to define through a series of subsequent stages, the visitors' operations that will constitute the final storyline of the project.
This section of the meta-design tool is structured for being used when audience participation is the outcome of the project and the design is led

1. PLANNING THE PROGRAM OR EXHIBITION

1.1. CULTURAL INSTITUTION'S COMMUNITY ROLE AND MAIN INSTITUTIONAL GOALS

Desired ways in which the community will perceive the project (Parman and Flowers 2008, 83)

	Promoting shared learning	Promoting creative expression	Promoting co-creative work
Visitor attraction: The project gives visitors an overview of what is unique about the territory and its community	●	●	●
Catalyst for change: The project delivers a message that encourage people to think differently about their relationship to others	●	●	●
Center of creativity: The project engages visitors in creative activities where are visitors to determine the outcomes	●	●	●
Memory bank: The project displays aspects of the history of a place or cultural tradition	●	●	●
Storyteller: The project interprets the history of a place, person, or cultural tradition, in ways that relate the past to the present	●	●	●
Attic: The project preserves objects and images that would otherwise have been discarded	●	●	●
Treasure trove: The project preserves valuable, meaningful, rare, and unusual objects and images	●	●	●
Shrine/hall of fame: The project honors a particular group or individual and assume visitors have a built-in interest in the topic	●	●	●
Exclusive club: The project is primarily aimed at people with special interests and knowledge of the topic	●	●	●

Main institutional goals

1.2. MAIN MESSAGE

by the museum's staff without involving visitors in the decision-making phases, as well as when visitors are actively engaged since the preliminary design phases and collaborate with museum's staff through co-design methods and techniques. In both cases, the outcome of the preliminary design phase is the project's brief that, as seen in the previous chapter section, includes: the final Main Message, refined after front-end evaluation; the purpose and nature of the project; affective, cognitive, and performance goals; "Take-Home Messages" (McLean 1993, 55); and the project's storyline.

Visitors' profiles and cultural institution's commitment to participation
At the first stage of the preliminary design phase, the target audience's motivational profiles, which have been identified in the development phase, are combined in Table 2 with the institutional approaches to the management of the project and the work with participants.

Among the several segmentations of museum visitors based on visitors' motivations and personal identities proposed by diverse authors and presented in chapter three of this research, the profiles defined by Sachatello-Sawyer and her co-authors (2002, 8–10) are here used because they specifically analyze participants primary motivations for actively attending museum's programs. Participants' profiles include: "knowledge seekers", "socializers", "skill builders", and "museum lovers".

The possible institutional approaches to the management of the project with participants are drawn upon Simon's table of practical question and answers (2010, 190–191) that has the goal to help museums finding the participatory model (between contributory, collaborative, co-creative, and hosted) that work best for their goals.

These possible institutional approaches described by Simon comprise:
- The lightly management of participatory activities (ideally the same efforts for the maintenance of an interactive exhibit);
- The investment of more time and resources to make sure participants are able to accomplish institutional goals;
- The commitment to support the needs of target communities, whose goals align with the institutional mission.

The section 2.1 of Table 2, intersecting the visitors' profile with the possible institutional approaches described by Simon proposes three main general participatory experiences, which will be better defined in the subsequent stages of the model:
- Visitors may engage briefly in specific activities during the experience of visit or in special events;
- Some visitors participate casually, but most engage with the explicit intention to participate;

Table 1 - previous page. Question-like model for planning the program or exhibition

- Participants are intentionally engaged and dedicated to seeing the project all the way through.

The goal is stimulating the discussion about the kind of commitment to participation that the cultural institution seeks from participants that should reflect both visitors' expectations about the experience of visit and institutional commitment to participation.

Specific institutional goals and modes of participation
The definition of participants' commitment to participation leads to outlining affective, cognitive, and performance institutional goals (section 2.2 of Table 2).
The next stage of the meta-design tool (section 2.3 of Table 2) asks museum professionals to choose which sentences, among those proposed, best describe the approaches by which the cultural institution wants to convey affective, cognitive, and performance goals, both for participating and non-participating visitors.
The sentences here proposed are partially derived from Simon's table of practical question and answers (2010, 190–191) previously cited. This section of the model is aimed at facilitating the decision of the mode of participation that best may support the achieving of the objectives set for the program or exhibition. The suggested modes of participation are those identified through the preliminary analysis of cases: contribution of objects and stories, personal interpretation of existing heritage, voting systems, personal creative expression, and co-designing.

"Take-Home Messages"
The outcome of this phase is the definition of the "Take-Home Messages" (McLean 1993, 55) that describe the affective, cognitive, and performance goals from the visitors' point of view, and serve at this stage of the process to verify the choice of the modes of participation that will be adopted.

Tools enabling participation and desired level of social engagement
Once the mode of participation and the "Take-Home Messages" are defined, the meta-design tool proposes a synthetic table (section 2.4 of Table 2) aimed at facilitating the identification of the tools enabling participation taht are best suited for supporting the desired level of social engagement among participants, in respect to the mode of participation. The operative insights derived from the study of cases have been used in the development of this operative table, describing how certain modes of participation, enabled by specific tools, demand participants to act according to a specific role, and are more suitable than other in order to promote the desired level of social engagement.

Project's storyline

This stage of the preliminary design phase led to the to the definition of the projects' storyline (section 2.5 of Table 2). The storyline described below is partially drawn upon the models presented by Nicks (2002, 365) and Parman and Flowers (Parman and Flowers 2008, 21), which have been adapted for their specific use in the development of projects featuring participatory activities as key components of the visitors' experience. The storyline lists the main themes and sub-themes of the program or exhibition specifying:

- The thematic organization of contents when the nature of the project is an exhibition (both onsite and online). The thematic structures listed along the storyline are those proposed by Nicks (2002, 359) and described in chapter three of the research: "focal", "hierarchical", "sequential", "parallel", "matrix", "onion", "pizza", "environmental," and "archetypal". This categorization, described by Nicks for its use in the development of physical exhibitions, has been chosen for its possible translation also to virtual environments. It is to specify that these categories are here presented not as definite models to be chosen, rather as starting point for sparking the discussion about contents organization, contextually at the development of the visitors' experience;

- Affective, cognitive, and performance institutional goals for each theme or sub-theme;

- The objects displayed or used (if any) for each theme or sub-theme;

- The possible use "social objects" (Simon 2010, 28) as engines of socially networked experiences, distinguishing between "personal", "active", "provocative", and "relational" objects, according to the categorization proposed by Simon and described in chapter nine;

- Physical and digital apparatuses needed to enable visitors' participation and their technical requirements for each theme or sub-theme;

- Story outline according to the diverse visitors' profiles.

The construction of the story outline, which is the final section of the storyline and serves as input for the implementation phase, is of particular importance because helps focus the design efforts on the visitors' requirements, expectations and needs that may be differentiated according to the diverse visitors' profiles.

The story outline is the description of the visitors' interaction with the participatory apparatuses proposed along the program or exhibition. It addresses all the relevant aspects of the interaction, including cultural and attitudinal issues and could be rendered in the form of a written story, as well as a storyboard, or by using any textual and/or visual technique that works best to describe the experience to all the actors and

stakeholders involved in the project, including who do not have any technical background.

The story is therefore also suitable to be used for stimulating co-creative work among participants during co-design activities.

10.2.3. SUMMATIVE EVALUATION

This section of the meta-design tool concerns summative evaluation, which occurs at the end of the program or exhibition with the goal of collecting data that could be used again in future participatory programs and exhibitions.

While front-end and formative evaluation of participatory projects within cultural institutions are usually conducted using those tools typically employed within user-centered design processes in domains other than museum studies, summative evaluation of cultural participatory projects needs specific tools to capture and measure the distinct behaviors that are not part of traditional visitors experiences. Moreover, as discussed in chapter five, it is important to define goals and assess outcomes not only for those visitors who actively participate in the program or exhibition, but also for the staff members who manage the process, and for those visitors who do not actively participate.

The tool presented along the meta-design model at this evaluation stage (Table 3), is drawn upon Simon's "Evaluation Questions Specific to Participation" (2010, 308–310) that addresses diverse specific sets of issues to participants, staff, and non-participant visitors, and upon Parman and Flowers's (2008, 67) worksheet about projects' outcomes.

The methods that museums evaluators may use for conducting summative evaluation are essentially the same used for non-participatory projects and include: structured observations to assess visitor interest, formal testing with groups, and in-depth interviews.

2. DEFINING PARTICIPATION

2.1. VISITORS' PROFILES AND CULTURAL INSTITUTION'S COMMITMENT TO PARTICIPATION

		Cultural institution's commitment to managing the project and working with participants (Simon 2010, 190–101)		
		Lightly management of participatory activities (the same efforts for the maintenance of an interactive exhibit)	Investment of more time and resources to make sure participants are able to accomplish institutional goals	Commitment to support the needs of target communities, whose goals align with the institutional mission
Motivational visitors' profiles of actual and expected participant audience (Sachatello-Sawyer et al. 2002, 8–10)	**Socializers** They attend cultural programs expressly for social interaction with family members or friends	Visitors engage briefly in specific activities during the experience of visit or in special events	/	/
	Skill builders They like to learn by doing and wish to improve specific skills		/	/
	Knowledge seekers They seek challenging content and additional resources that allow them to follow up their interests		Some visitors participate casually, but most engage with the explicit intention to participate	/
	Museum lovers They are the core audience for most adult programs and often volunteer at the museum			Participants are intentionally engaged and dedicated to seeing the project all the way through

2.2. SPECIFIC INSTITUTIONAL GOALS AND MODES OF PARTICIPATION

Affective goals: (e.g.: «Visitors will care about sharks»)

Cognitive goals: (e.g.: «Visitors will recognize that sharks are endangered»)

Performance goals: (e.g.: «Visitors will test variation in sharks sizes interacting with the kiosks in the exhibition»)

Ways to convey the affective and cognitive goals of the program or exhibition	Suggested modes of participation				
Visitors understand key messages conveyed by the program or exhibition by adding self-created content in the form of critical interpretations that relates the main topic to their background experiences	[speech bubble]	[thumbs up]			
Visitors' actions drive the content and key messages conveyed by the program or exhibition within an institutionally controlled system of interpretation	[network]			[pencil]	
Visitors creatively work closely with the institutional staff that will give participants the tools to lead the project and will support their activities					[grid]

Performance goals that the cultural institution aims to achieve	Suggested modes of participation				
Visitors have the ability to analyze, curate the content on display and to share their view, along the institutional interpretation	[speech bubble]	[thumbs up]			
Visitors create original content by collecting data or sharing personal expression	[network]			[pencil]	
Visitors will have the ability to collaborate with cultural institution's staff in the project conceptualization, goal setting, and evaluation					[grid]

Goals for non-participating visitors (Simon 2010, 190–101)	Suggested modes of participation				
The project will help visitors see themselves as potential participants and see the institution as interested in their active involvement	[speech bubble]	[thumbs up]			
The project will help visitors see the institution as a place dedicated to supporting and connecting with community	[network]				
The project will help visitors see the institution as a community-driven place. It will also bring in new audiences connected to the participants				[pencil]	[grid]

2.3. TAKE HOME MESSAGES
Messages about the topic of the project: (e.g.: «The most dangerous creatures in the ocean are not necessarily big»)
Messages about the cultural institution: (e.g.: «The museum is about the tradition of community, rather then its history»)
Messages about the visitors' personal meaning: (e.g.: «People like me are welcome at museum XY»)

2.4. TOOLS ENABLING PARTICIPATION, PARTICIPANTS' ROLES AND DESIRED LEVEL OF SOCIAL ENGAGEMENT

Tools enabling participation

	Modes of participation				
(globe)	Participants act as collectors, critics, or creators, and their direct social engagement is not an essential requisite				/
(location pin)	Collectors — Indirect social engagement	Critics — Indirect social engagement	/	/	/
(phone)	/	Critics — Indirect or mediated social engagement		/	/
(QR code)	Collectors — Direct social engagement	Critics — Direct social engagement	/	/	/
(headphones)	Collectors — Indirect social engagement	Critics — Indirect social engagement	Critics; the commitment to participate may be superficial — Indirect social engagement	/	/
(pushpin)	/			/	/
(people)	Collectors — Mediated or direct social engagement	Critics — Mediated or direct social engagement	/	Creators — Direct social engagement	Creators — Direct social engagement

Thematic structure (Nicks 2002, 359)				
Focal	Hierarchical	Sequential	Parallel	Matrix

Theme and sub-themes	Institutional goals	Objects (if any)

Onion	Pizza	Environmental	Archetypal
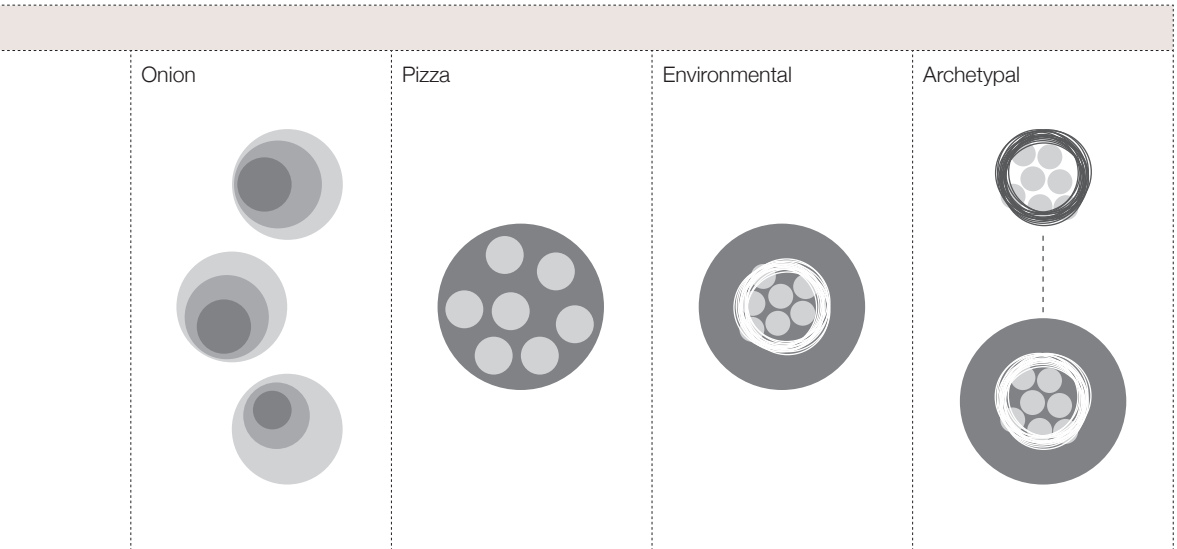
"Social objects" characteristics (If any) (Simon 2010, 28)	Physical and digital apparatuses enabling participation	Story outline	
		Visitor profile A	Visitor profile B

3. SUMMATIVE EVALUATION

Questions about participants (Simon 2010, 309–310)

If participation is voluntary, what is the profile of visitors who choose to participate actively?

If there are many forms of voluntary participation, can you identify the differences among visitors who choose to create, to critique, to collect, and to spectate?

How does the number or type of model content affect visitors' inclination to participate?

Do participants describe their relationship to the institution and/or to staff in ways that are distinct from the ways other visitors describe their relationship?

Do participants demonstrate new levels of ownership, trust, and/or understanding of institutions and their processes during or after participation?

Do participants demonstrate new skills, attitudes, behaviors, and/or values during or after participation?

Do participants seek out more opportunities to engage with the institution or to engage in participatory projects?

Questions about staff (Simon 2010, 309–310)

How do participatory processes affect staff members' self-confidence and sense of value to the institution?

Do staff members demonstrate new skills, attitudes, behaviors, and/or values during or after participation?

Do staff members describe their relationships to colleagues and/or visitors as altered by participation?

Do staff members describe their roles differently during or after participation?

How do staff members perceive the products of participation?

Do staff members seek out more opportunities to engage in participatory projects?

Questions about non-participating visitors (Simon 2010, 309–310)

If participation is voluntary, what is the profile of visitors who choose not to participate?

Do visitors describe products created via participatory processes differently from those created via traditional processes? Do they express comparative opinions about these products?

If participation is voluntary, do visitors understand the opportunity to participate?

Why do visitors choose not to participate?

What would make them interested in participate?

Question about the community (Parman and Flowers 2008, 67)

What are the project's positive outcomes for the community (if any)?

(e.g. Visitors gained a deeper understanding of some aspects of community life / The museum become a more significant cultural resource for the community / The museum attracted and engaged people of varied ages and backgrounds / etc.)

Questions about the cultural institution (Parman and Flowers 2008, 67)

What are the project's positive outcomes for the cultural institution (if any)?

(e.g. Increased attendance / Increased volunteer involvement / Increased financial support from government agencies, individuals, businesses, and foundations / Increased recognition from professional associations / Network development / etc.)

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11

PILOT PROJECT. THE EXHIBIT EVERYDAY HISTORY

The pilot project Everyday History has been designed and implemented in the summer 2012 at the Santa Cruz Museum of Art and History at the McPherson Center (MAH) in Santa Cruz, California, in the context of my Ph.D. curricular internship as fellow of the Museum exhibition team.

After an introduction that outlines the context within which the project has been developed, chapter eleven describes the concept generation of the project that is largely based on two of the outcomes of the design-driven scenario discussed in chapter nine: critical interpretation through participatory storytelling and co-construction of institutional collections.

The pilot project is presented in detail describing how it has been designed, implemented, and realized. The objective is to verify if the proposed design framework proved to be effective in supporting the design process of a participatory exhibit in the specific context of the MAH.

The last section of the chapter then discusses the operative insights derived from the pilot project that might be useful for the development of future works.

11.1. Planning the exhibit

11.1.1. THE CONTEXT

The pilot project Everyday History is a temporary exhibit developed in summer 2012 within the Santa Cruz Museum of Art and History at the McPherson Center (MAH), in Santa Cruz, CA, with the twofold purpose of achieving the institutional project's goals set by the Museum and verifying the general design framework proposed in this research. I developed the project collaboratively with the Museum staff, interns, and volunteers, while working at the MAH in the context of my Ph.D. curricular internship as fellow of the Museum exhibition team with the position title of "Special Projects Intern".

In recent years, under Nina Simon's executive direction, the MAH has more and more become a hub dedicated to the Santa Cruz County community thanks to the implementation of exhibitions, programs, family festivals, and educational experiences aimed at engaging members and visitors about contemporary art and local history. As of November 15, 2013, the Museum states on its website,[1] the Museum accomplish its mission "to ignite shared experiences and unexpected connections" through active participation, by bringing people together across differences, and through experimentation.

The MAH collaborates with community members on all of its exhibitions and programs, inviting visitors to actively contribute their own ideas and skills, or asking people to share their experiences in exhibitions and programs that highlight the connections between diverse people and ideas. The goal is helping people to build understanding and social capital with community members from different cultures, generations, and backgrounds, in a community-engaged and experimental environment.

11.1.2. OVERALL EXHIBIT PLAN, INSTITUTIONAL GOALS, AND MAIN MESSAGE

The concept that underpins the pilot project Everyday History was first conceived answering the Museum's call for ideas to develop, design, execute, document, and evaluate "an original project that helps make the MAH a thriving, central gathering place that brings people together around active exploration of art and history".

As the institutional goals and the desired ways by which the community should have perceived the exhibit were already well specified in the statement of the call for ideas of the project, the first section of the meta-design tool was just filled-in ex post to test the applicability of Parman and Flowers's (2008, 83) categories to the MAH specific context. As reported

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1   http://www.santacruzmah.org.

in the section 1.1 of Table 1 - Appendix B.3, the community roles that the MAH wanted to play through this project have been defined as "visitor attraction", "catalyst for change", and "storyteller", and the project's main institutional goal was related to the promotion of shared learning. The preliminary main idea was to use the "symbolic" value (Baudrillard 2005) of obsolete objects, rather than their "functional" or "exchange" value, to display in the Museum's History Gallery everyday objects commonly used in the past sixty years focusing on their potential in enabling personal memories and experiences of the Santa Cruz County residents and conveying shared meanings.

This approach was especially effective in the context of the MAH, where once-common everyday objects, not officially recognized as cultural heritage, are part of the Museum collection displayed in the History Gallery. This preliminary concept was first assessed through front-end evaluation with a sample of potential visitors.

11.1.3. FRONT-END EVALUATION

Purpose statement for the evaluation
The purpose of front-end evaluation was to know potential visitors' interests and reactions within the general themes of "obsolete object/once-common things" and "everyday history" and to compare the findings with the assumptions made by the Museum staff, in order to formulate the goals and the Main Message. In particular, the purposes of front-end evaluation was to find out:

- What comes to mind associated with the terms used to describe the topic and if people associate them to a positive or negative attitude;
- What are people's expectations of an exhibition about once-common objects;
- People's feelings about once-common objects, in particular if they assign a symbolic value to these objects;
- If people are interested in learning about the recent history of their community and/or country;
- If people relate once-common objects to some particular past episodes of their life and/or particular events.

Methodology
After an online research of studies, projects, and exhibition about the same topic, an online questionnaire was submitted to 20 people, using the free online tool Survey Monkey.[2] While taking the questionnaire, people

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2   www.surveymonkey.com.

could not see the following questions, so they could not be influenced in their responses. After having received the first round of answers, the questionnaire was revised: one question was revised and two others were replaced. The questionnaires can be seen online at http://svy.mk/18k0vKj and http://svy.mk/1dRJxHY, and are reported in Appendix B.2.

- Open questions (100 characters textbox) were used to know people free associations within the topic;

- Images of what we meant as "obsolete objects" were shown to know if there were possibility of misunderstanding in the use of the terms used to describe the topic;

- Multiple choices questions were used for all the other questions to reveal if people were interested in the recent history of their community and/or country; if they related "obsolete objects" to some particular past episode of their life or events; and if they were likely to share their story (if any);

- Some basic demographic information were finally requested to reveal if there were differences in the attitudes about the topic according to age, gender and provenance.

Sample Size

Front-end evaluation didn't focus on a specific targeted audience, as the exhibition was intended to be addresses to general public, even though with different motivational profiles.

The sample was composed of 20 people born between 1952 and 1991, with an unintended majority between 1982 and 1985; 70% of the sample were women and 30% men; 55% from U.S., 30% from Italy, and 15% from other European Countries.

The questionnaire was first submitted to 15 people, and, after the refinement, to other 5 people.

Online search results

The preliminary online search did not produced any finding concerning audience evaluations regarding this topic. Two online museums[3] were used as references about obsolete objects: Oggetti Obsoleti del Contemporaneo[4] (Contemporary Obsolete Objects) in which users can suggest obsolete objects to be added to the online collection and add their comments to the displayed ones, and the YouTube channel Museum of

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3   These organizations call themselves 'museum' even though they cannot be considered cultural institutions according the ICOM's definition.

4   http://www.oggettiobsoleti.com.

obsolete Objects.[5] However, both these websites do not present any information about users' knowledge, attitudes and expectations. It is noteworthy the presence on Flickr of several photographs and groups about obsolete objects, and in particular about vintage technology and old computers, some of which with users' comments. This might be an indication of a widespread interest in the topic, but, as it is possible to find Flickr groups about almost any topic, this finding could not be considered of great importance. However, this search on Flicks was useful to observe the terms people use to describe these objects, registering that "obsolete" and "stuff" were popular terms.

Questionnaires results

Understanding of the terms used to describe the topic and people expectations and attitudes

Q1. Please list three objects (if any) that you own and you have not used for at least 5 years.

A total of 29 different responses were collected. Some people listed objects that are no more used not because of obsolescence, but for other personal reasons (e.g., ballet shoes, juicer, clarinet, tennis racket, skis, guitar). With only one exception (antique coffee grinder), the majority of responses (21) involved only outdated technological objects: videocassette recorder/video tapes (5), film camera (3) cassette tape (2), portable CD player (2), CD player (2), mp3 reader, turntable, old iPod, mini-cassette voice recorder, steel disc music box, rotary phone, old cellphone, land-line telephone.

Q2. What is the first word that comes to mind when you look at the objects in the image below?

A total of 13 different word associations were collected with the image of what we intended as obsolete objects. The most common response (30%) includes words related to technology and history of technology; other common responses are "old" (20%) and "vintage" (10%). Single responses with similar meanings are "retro", "obsolete", out-of-date"; other responses are "history", childhood", "archives".

Q3a. What comes to mind associated to "obsolete objects"?

This question was only asked in the first questionnaire. The majority of people (40%) didn't express a particular feeling about the topic, but they gave a sort of neutral description of the terms (e.g. "objects that have no more perceived use in common daily life"; "items that have become

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5   http://www.youtube.com/user/MoooJvM.

outdated and most likely no longer in use"; "no longer useful"; "objects last longer than the need and era they came out of"). Some people (25%) associated obsolete objects with feelings of sadness and melancholy and other common responses (15%) referred to outdated technology. Further responses were "consumerism"; "history"; "one man's trash is another man's treasure"; "obsolete habits". The feelings of sadness and melancholy expressed by the 25% of the people were relevant and implied to reconsider the use of the term 'obsolete', as it was perceived with a negative connotation.

Q3b. What comes to mind associated to "everyday history"?

In the second questionnaire, **Q3a** was substituted with **Q3b**, in order to broaden the context within the topic and to not limit the answers to the idea of old things. Only three answers were collected (out of a total of five consulted people): "pictures", "everyday life", and "me". A so low percentage of answers to the question – although interesting ones – lead to the consideration that that for the majority of people these terms were hard to relate to something concrete. All these answers highligh the connection in people's perception between the terms "obsolete objects" and outdated technology. Moreover, the answers show that the majority of obsolete things that people own are technological. In my previous assumptions obsolete objects of course included also old technology, but not with a so strong emphasis.

Q4. State if the following objects [typewriter, a vinyl record, a floppy disk, portable audio cassette player, vinyl record, videotape] have for you: a functional value (instrumental purpose); an exchange value (economic value); a symbolic value (a value that you assigns to an object in relation to something else, like a special event, an anniversary, etc.).

For the purposes of this evaluation, the average percentage of the value assigned to all objects was taken into consideration, while the value assigned to each object was not considered. The majority of people (about 70%) assigned to the displayed objects a symbolic value, followed by functional (about 20%), and exchange (10%). Two people commented the answer writing that none of the displayed objects had a particular value to them. These answers confirm that people tend to have emotional ties with obsolete objects, rather than consider only their functional and economic value.

Interest in the recent history of the community and/or the country and link with obsolete objects:
Q5a. How likely are you to learn about the recent history (last 30 years) of your community? **Q6a.** And how likely are you to learn about the recent history (last 30 years) of your country?

For both questions, the majority of people (90%) indicated a moderate to strong interest and no one expressed a complete lack of interest. Although confirming my assumptions, the homogeneity of the responses, made me realize that the questions were probably too vague and apparently not related to the topic, and two more specific questions were then articulated.

Q5b. Do you associate obsolete objects to some particular past episodes of your life? And if yes, how likely are you to share your story?

A slightly majority of people (three out of five) associated obsolete objects to some past episodes of their life, but only two of them would have shared them.

Q6b. Do you associate obsolete objects to some particular historical events?

The totality of people associated obsolete objects to some particular historical events. The answers to **Q5b** and **Q6b** suggest that linking obsolete objects to past events, especially historical ones, could be an effective interpretive strategy, but the participatory aspects of the exhibit needed to be reconsidered because only few people expressed the willingness of sharing personal episodes of their life.

Demographic information:
While gender and provenance did not seem to influence people's attitudes about the topic, it was to notice that the responses that expressed feelings of melancholy were given by people born before 1970.

Summary statement
The results of front-end evaluation were collaboratively discussed with the Museum's executive director Nina Simon and the Curator of Collections Marla Novo. For what concern the choice of the appropriate terminology, the term "obsolete" was avoided for its negative connotation, using instead the expressions "once-common things" and "everyday history".
As many people associated obsolete objects with analogic technological devices, the exhibit could have included a specific section about the shifting from analogic to digital technology. Moreover, because outdated technology seemed to be a familiar theme to many people, it might have been interpreted in its wider and less obvious connotations, including other kinds of once-common technological objects, such as old kitchen supplies, household appliances, sports equipment, etc. In doing this, the suggestion of one response to focalize on once usual daily gestures and the way objects shape our way of living and acting was embraced.
After front-end evaluation, and re-considering the desired engagement objectives expressed in the Museum's mission and the strategic

institutional objectives for producing the project, the initial concept was lightly modified focusing more on the local tangible and intangible heritage, expressed through everyday objects related to the local community, rather than focusing on obsolete objects in general. Moreover, it was decided to take into consideration only the 1980s, 1990s and 2000s as reference periods to best promote inter-generational social engagement among the visitors (e.g. grandparent-grandchildren, parents-children, groups of adults of different ages). Finally, rather than asking people to share their personal stories related to the objects, it was decided to ask people to tell stories about the objects themselves, and find other ways to engage people in the local/national history.

The final purpose statement of the exhibit was then to update the Museum's History Gallery – which ended with the narration of the 1989 big earthquake in the Santa Cruz area – by adding to the collection some objects related to events that took place in the County over the last thirty years. The overall goal was to help building a sense of community and identity as deemed culturally significant by the community itself (Harrison 2010), by promoting a participatory storytelling related to the local recent history.

The refined Main Message summarized these main ideas in the sentence: "Everyday History uses everyday objects of the past thirty years as enablers of a participatory storytelling related to the recent history of Santa Cruz".

11.2. Preliminary design phase

The first stage of the preliminary design phase was the definition of project plan and deliverables, needed to effectively manage the project's timing by defining the intermediate project's results that were intended to be delivered.

11.2.1. PROJECT PLAN AND DELIVERABLES

The project plan, reported in Appendix B.1, is organized in seven main time frames corresponding to the operative stages that broadly reflect the phases of the recursive design process described in the previous chapter: concept development, content development, graphic design, interaction and facilitation design, fabrication, installation, and evaluation. For each stage, objective, activities, and deliverables are listed.

11.2.2. VISITORS' PROFILES AND CULTURAL INSTITUTION'S COMMITMENT

In order to define the visitors operating requirements, the motivational profiles of actual and expected participants were discussed.

Everyday History addressed mainly to the Museum's members that are

the core audience of most MAH's programs, local residents, and visitors from neighboring areas of the Santa Cruz County, as well as to American and international tourists that are not part of the usual audience constituency of the MAH and might visit the Museum during their summer vacation because interested in the local history or just to spend time together with friends and family. These audience contituencies may be synthesized and expressed using the motivational profiles of "museum lovers" and "socializers" (Sachatello-Sawyer et al. 2002, 8–10), as reported in the section 2.1 of Table 2 - Appendix B.3.

The Museum had a lightly commitment to manage the project and work with participants because Everyday History was conceived as a temporary special and experimental project with a limited financial budget, and the initial idea of engaging visitors briefly in specific activities during the experience of visit or in special events was confirmed.

11.2.3. SPECIFIC INSTITUTIONAL GOALS

Specific institutional goals and "Take-Home Messages" (McLean 1993, 55), as well as the intended visitor experience were derived from the Main Message.

Affective goals
-   Visitors will be able to assign symbolic meanings to once-common everyday objects, beyond their economical or functional value;
-   Visitor will care about once-common everyday objects, by recognizing something that they own among the displayed objects;
-   Visitors will enjoy the local history of the County in a more engaging way thanks to the partial updating of the History Gallery till nowadays, and by discovering unknown stories about their community;
-   Young visitors will value the knowledge and experience of older people, through their first-hand stories about the objects.

Cognitive goals
-   Visitors will learn about the characteristics and transformations over time of everyday objects;
-   Visitors will learn about the way objects shape our way of living and acting;
-   Visitors will learn about the history of their community.

Performance goals
-   Visitors will be engaged in participatory activities, by suggesting objects to be included in the exhibit and by sharing (writing/recording) memories related to the displayed objects;

- Visitors will be engaged in social activities, by voting for their favorite objects and seeing the preferences of other people.

11.2.4. MODES OF PARTICIPATION

Specif institutional goals served as the starting point for discussing the the mode of participation and for setting the goals that the MAH wanted to achieve for non-participating visitors.

As described in chapter ten, the section of the meta-design tool about the modes of participation (section 2.2 of Table 2 - Appendix B.3) is drawn upon Simon's practical table (2010, 190–191) aimed at helping cultural institution finding the participatory model that work best for their particular institutional goals.

Having worked collaboratively with Nina Simon to design the project, in this phase there was a complete match between her guidelines and the criteria suggested in the tool. This situation, while on the one hand was a very favorable condition for the project's development, on the other did not allow the assesment of the model, as it would have been possible instead in the context of a cultural institution not not so focused on participation.

The modes of participation that have been identified for Everyday History are the contribution of objects and stories, the personal interpretation of existing heritage, and the voting system, confirming the visitor operating requirements previously defined.

In Everyday History, in fact, visitors had both curatorial and interpretive control on contents because they simultaneously act as:

- Subjects of the exhibit, by contributing to the exhibit with their personal stories related to the objects on display;
- Curators, by suggesting an object to be displayed;
- And audience, by learning about the recent history of the Santa Cruz County through the stories left by others.

11.2.5. TAKE-HOME MESSAGES

At this stage of the design process, the "Take-Home Messages" (McLean 1993, 55) were defined and discussed with the Museum's exhibition team.

Take-Home Messages about the topic of the exhibit

- «I didn't know that the *XY* concert venue was so cool in the 1980s!»
- «In the two years I lived here, I never saw so many imported trees!»
- «The compact cassette format has recently seen a revival due to its low cost and the difficulty in sharing tape music over the Internet»

Take-Home Messages about the cultural institution
-    «The MAH really value my view»

Take-Home Messages about the visitors' personal meaning
-    «People like me are welcome at museum the MAH»

11.2.6. TOOLS ENABLING PARTICIPATION AND SOCIAL ENGAGEMENT

As promoting social engagement was a key objective for the Museum, the choice of the tools for enabling participation were discussed in relation to their potential of supporting social interaction among participants and between participants and the Museum's staff. Moreover, the constrain of the relatively limited budget was considered in order to plan visitors' operations that were feasible to realize only using in-house fabricated components.

Among the possible tools for enabling the contribution of objects and stories, the personal interpretation of existing heritage, and the voting system, it was decided to use non-digital interactives to be fabricated with internal resources and inexpensive materials, as well as to foresee the mediation of dedicated staff members and volunteers to facilitate participation during special events (section 2.4 of Table 2 - Appendix B.3). Moreover, it was decided to develop a simple online questionnaire to be integrated in the Museum's webpage dedicated to the project in order to collect further suggestions of objects and comments from online visitors. The questionnaire was built using the free survey tools Polldaddy.com,[6] chosen because easily integrated in Wordpress, the CMS platform on which the MAH's website is developed.

It is to notice that the use of digital technologies, in particular QR code associated to the objects on display, was considered a powerful tool to enable visitor engagement in this context, and was not employed just for reasons related to timing and budget constrains.

11.2.7. PROJECT'S STORYLINE

As the nature of the project evolved during its development, it was not possible to develop a storyline based on the model in the meta-design tool because it is conceived for the production of a finite exhibit and it would not have reflected the evolving and experimental nature of the project. In fact, the outcome of the projects was a single exhibit placed in the Museum's History Gallery, conceived, more than a finished product, as an ongoing space for experimentation of participatory practices related to the history of the County aimed at testing novel strategies for

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6   https://polldaddy.com.

audience engagement that will be eventually transferred in the realization of a more comprehensive makeover of the Museum's History Gallery.

However, a preliminary hypothetic storyline, focused on thematic and spatial organization of contents was, first developed in order to test the potentiality of the theme of being developed in a complex exhibition composed of many diverse areas and sub-themes (section 2.5 of Table 2 - Appendix B.3).

11.3. Detailed design phase

Due to the high recursive design process that characterized the nature of Everyday History it is not possible to clearly distinguish when the detailed design phases ends and the implementation phase starts because production planning, production, and operational stages beginned before than the design was completely defined in order to obtain early feedbacks from visitors through formative evaluation on prototypes.

11.3.1. FORMATIVE EVALUATION ON FIRST PROTOTYPES

Two interactives were first tested with visitors during the "First Friday"event[7] at the Museum in August.

Eras' calendar
This prototype was aimed to verify if people were eager to share their personal memories related to the 1980s, 1990s, and 200s. The interactive asked visitors to write their stories and pin them to a big calendar hung at the entrance of the History Gallery. The prompt for the interactive and one simple sign with a short explanation of the upcoming exhibit in the History Gallery was prepared in order to make visitors aware of the purpose of the prototype.

Suggest an object
The second prototype was aimed to collect visitors' suggestions about the objects from the 1980s, 1990s or 2000s related to the Santa Cruz County that they wanted to be displayed in the History Gallery. People were asked to write on small adhesive papers their ideas for objects and additional comments and stick them on three posters placed on big tables that showed all the objects proposed by visitors. Posters had initially only six blank spaces for writing objects; when I added more blank spaces for objects to be filled, people feel less intimidated to express themselves.

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7   Every first Friday of the months, the MAH is open with extended hours during which special participatory activities are organized, and prototypes for future exhibitions are tested. Visitors are admitted for free in the Museum.

Figure 1. "Eras' calendar" prototype on August 2012 "First Friday"

Figure 2. Prompts and graphics elements for the "Eras' calendar" prototype

Several blank balloon-shaped papers for adding comments were placed on the tables, along with simple prompts: *How would you describe it? What made this object important to you? Has its meaning changed over time? Why do you relate it to Santa Cruz County? Do you remember when you first encountered the object? Me too ...*

While the eras' calendar went flat, many people wrote their favorite objects. About thirty suggestions and almost a hundred comments were collected. This interactive revealed that people wanted to include in the gallery not only objects, but also places that have now disappeared.

11.3.2. SELECTION OF OBJECTS

Starting from visitors' suggestions, it was discussed how to sort objects to be displayed in the exhibit, and working with the Museum's the Curator of Collections Marla Novo it was decided to select up to ten objects among those that collected more comments, to be periodically rotated on display.

Figure 3. "Suggest an object" prototype on August 2012 "First Friday"

Figure 4. Prompts and graphics elements for the "Suggest an object" prototype"

1. Junior Lifeguard: a popular summertime event, Junior Lifeguards is designed to improve young people's physical conditioning and their understanding and respect for the environment and themselves;

2. Skateboard: with local innovations, inventions, and skate parks popping up in the area in the 1980s, skateboarding became a Santa Cruz phenomenon;

3. Chi Pants: it was a brand of pants manufactured locally and sold out of a store downtown by the same name. The store was demolished after the Loma Prieta Earthquake. Chi Pants incorporate a design from 14th century clothing, the gusset, that reduces the bulkiness and eliminates the 'knot';

4. Cooper House: the new Cooper House, a mixed-use retail/office building, was built to replace the original building that was demolished after the Loma Prieta Earthquake damaged it. It was once the courthouse of Santa Cruz and from the 1970s to 1989 there were small shops and a restaurant and bar with outdoor seating;

5. Big hair: common symbol of the 1980s (this is the only "object" not specifically related to the County, selected because many visitors liked it);

6. Woodies on the wharf: it is an annual woodies show that takes place on the Santa Cruz Wharf. The idea is rooted in the surfing culture of Santa Cruz because of the historical significance of woodies in the sport of surfing;

7. Surf: Santa Cruz offers one of the greatest surf spots in California. Together with Huntington Beach, Santa Cruz is defined the "Surf City USA". It is the home of O'Neill Wetsuits and Santa Cruz Surfboards;

8. Yoga pants;

9. Bicycle;

10. Concert venues: until the 1980s there was plenty of venues where listening to live music, including performances by the Beach Boys, Neil Young, Pearl Jam, and Nirvana.

Two objects would be displayed using physical artifacts, along with photographs and institutional interpretative labels, while the others just through photographs. All the objects would be periodically rotated, according to visitors' comments and suggestions.

11.3.3. DESIGN REVISIONS

Formative evaluation made on the first prototypes helped to determine the appropriateness of the design, how effectively the exhibit communicated concepts, and whether visitors used it as intended.

Formative evaluation first resulted in some changes in the terminology used for the interactives' instructional graphics and in the simplification of the prompts.

Moreover, taking into account how visitors had responded to the prototyping activities, the calendar removed, focusing instead on the suggested objects and on the stories they could convey.

The idea at this stage was to ask people to contribute in three ways:

1. By sharing their own story related to a particular object on display;

2. By suggesting other objects they want to be displayed in future;

3. By voting for their favorite object.

The exhibit would be installed in the History Gallery without changing the objects on display for three weeks. During this timeframe, its final design would be assessed with the actual Museum's visitors, testing the rotating display system and the effectiveness of participatory activities.

Figure 5. Final graphic representation of the exhibit components at the end of design phase

Figure 6. Representation of the exhibit design after tweaking and adjustments, and final realization
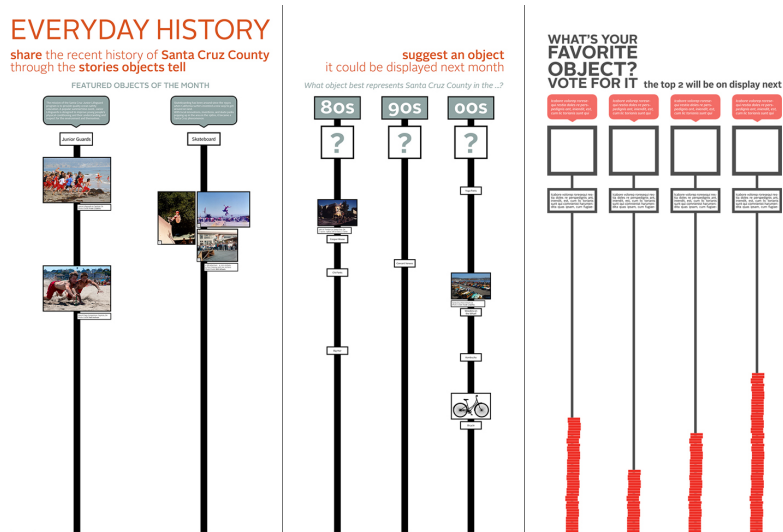
11.4. Implementation phase

In this phase, physical structures, objects, labels, and environmental graphics were prepared and installed. The voting system, previously designed, was not realized because, in further discussions during the production planning stage, it was considered too elaborated to be effectively maintained over time. The result was the final exhibit design constituted of two participatory components: share and comment.

Visitors could share their personal memories and stories related to the two featured objects on display (initially Junior Lifeguard and skateboard), by writing them on balloon shaped papers to be pinned on the background panel along with the institutional interpretation provided. On the other panel, some objects were displayed by means of photographs (Cooper House and woodies on the wharf) and short captions or simple labels (Chi Pants, big hair, yoga pants, concert venues, bicycle). Visitors could suggest further objects and explain the reason of their choice, or add comments and express their appreciation for the objects already listed or left by others, by pinning a thumbs-up signage.

The prompts printed on balloons for both sharing and suggesting activities were: *What made this object important to you? Has its meaning changed over time? Why do you relate it to Santa Cruz County? Me too ...*

11.4.1. REMEDIAL EVALUATION

Even if a relatively big number of stories, comments and suggestions of objects were collected, it was noticed that people preferred to add comments to the objects on display, rather than suggesting new objects

EVERYDAY HISTORY

share the recent history of *Santa Cruz County* through the **stories objects tell**

FEATURED OBJECTS OF THE MONTH

Junior Guards

Skateboard

suggest an object
it could be displayed next month

What object best represents Santa Cruz County in the ...?

80s

?

90s

?

00s

?

SHARE YOUR STORY HERE

during non-guided visits. The exhibit worked better during guided tours and in presence of a Museum's facilitator mainly because people had the opportunity to socially discuss what they were sharing.

Remedial evaluation, conducted after the exhibit was installed in the History Gallery through day-by-day observation and informal interviews, resulted in the reduction in the level of complexity of the exhibit that appeared to discourage some visitors from participating. In fact, the presence of two distinct activities (share and choose), both about the recent history of the County, was perceived by some visitors as a task that required to spend too much time in understanding the interactives' dynamics.
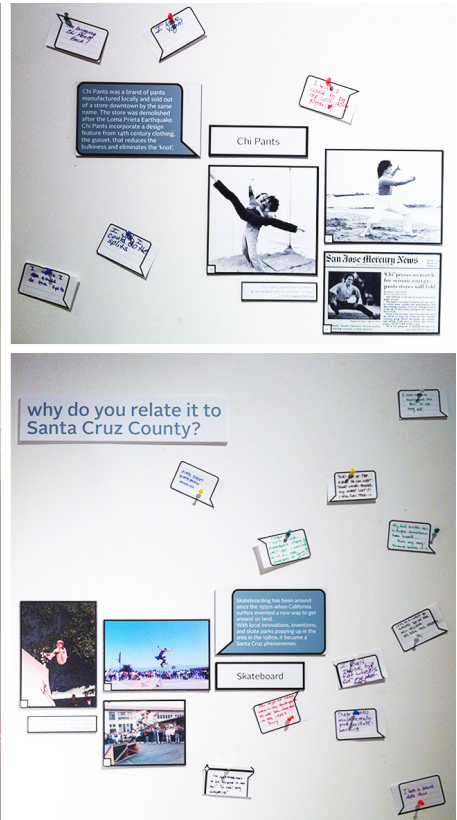
The exhibit was simplified, using only two objects on display to be changed every three weeks in order to stimulate returning visits. The entire background panels were dedicated to the stories added by visitors and the objects were displayed in transparent showcases, as they were antiquities or valuable artifacts.

Figure 9. The final exhibit design after remedial evaluation, and zoom on some visitors' comments

11.4.2. SUMMATIVE EVALUATION

Summative evaluation, which usually takes place when the exhibit closes, in this case was conducted while the exhibit was still open to the public, after the second time frame of three weeks.

The objective was twofold: to verify if this last design worked more effectively in engaging visitors within the County recent history and within the Museum's history collection; and to identify those more effective strategies of interaction to be used again in future exhibition.

For what concern the first goal, the summative evaluation of the simplified exhibit reveals that the number of visitors' comments actually increased thanks to the greater participation of individual and occasional

visitors, and the feedbacks collected through informal interviews were almost entirely positive.

The question-like model about summative evaluation (Table 3 - chapter ten) was mainly used to assess the achievement of the engagement goals for helping identifying the participatory modalities that worked best.

11.5. Discussion of results

The pilot project Everyday History was developed with the twofold purpose of verifying the usefulness, feasibility and efficacy of the general design framework proposed in the research proved to be feasible and effective in supporting the design process of a participatory exhibit, with the final goal of achieving the institutional project's goals set by the Museum. Summative evaluation verified the achievement of the affective, cognitive, and performance goals of the project. In particular, informal interviews with visitors in the History Gallery revealed that visitors gained a deeper understanding of some aspects of community life thanks to the opportunity to the opportunity to actively participate at the project. Moreover, Museum's volounteer expressed a positive feedback about the connections that they were able to estabilish with participants while facilitating the interactives, which resulted in their increased involvement in volunteering activities.

While the effectiveness and applicability of the general recursive design process was successfully verified, the practical meta-design tool was not tested in all of its sections. In fact, the first section aimed at facilitating the discussion about the mueum's community role in relation to the institutional goals was only partially verifyed applying Parman and Flowers's (2008, 83) categories to the specific context of the MAH because the call for ideas of the project clearly set since the beginning the project's goals. It is then to notice a criticality in the proposed question-like model in the section related to the tools enabling participation (section 2.4 of Table 2), because, although useful in sparking the discussion, it does not take into consideration other key factors that condition the decision-making process, such as constrains related to the financial budget, and staff members' competencies.

This makes even more important to emphasize the fact that the question-like model is intended as a meta-design tool aimed at facilitating and supporting the design process, and not instead as a systematic tool to which to every decision correspond a precise and definite action to be taken.

The last consideration about the applicability of the meta-design tool for the development of Everyday History in the specific context of the MAH, concerns the storyline section (section 2.5 of Table 2). In fact, although a

preliminary storyline was first developed in order to test the potentiality of the theme of being developed in an exhibition composed of many diverse areas and sub-themes, the actual exhibit did not reflect the preliminary ideas because of the evolving and experimental nature of the project.

Mostly thanks to its experimental approach, the pilot project Everyday History confirmed that what is learned from visitors through the evaluation of one exhibit can be transferred to the design of other exhibitions, to such an extent that it was decided to use Everyday History as a sort of ongoing and never-ended laboratory for the experimentation of participatory practices to be eventually applied to the future makeover of the entire Museum's History Gallery.

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12

DISCUSSION AND CONCLUSIONS

This last chapter proposes a discussion of the research contribution, answering the research questions listed at the beginning of the thesis.

The proposed design framework is then considered in the light of the operative insights derived from the pilot project, and discussing the role of the designer as a facilitator able to synthesize the variety of disciplines that inform the design process of participatory programs and exhibitions within GLAMs.

Finally, the last section of the chapter discusses the limits of the research, from which possible future works partially derive.

12.1. Research contribution and generalization

This section is structured following the research questions proposed in chapter one, synthesizing the issues considered along the thesis on the basis of literature review and study of cases, and finally discussing the proposed design framework.

The first research question aims at defining which theories of learning can be fostered in the development of participatory programs and exhibitions and how the communication style might influence visitors' engagement. Acknowledged that the learning process that takes place in museums involves the visitor's larger framework of knowledge, expectations and interests, the communication style needs to be focused on the transformative and affective experience of meaning-making mirroring the models of the "discovery" and "constructivist" museums (Hein 1999). The second research question concerns the social role of GLAMs, with the goal of outlining the modalities by which museums and cultural institutions at large can best promote intercultural dialogue among participants. Chapter four defines audience-centered cultural institutions as open places for informal learning, conversations and interactions, aimed at the promotion of community engagement, empowerment and development, and acknowledge that visitors' voices can inform and invigorate the design of cultural projects. The operative insights drawn upon the study of cases highlight that cultural institutions can work in partnership with charities, local authority, and other organizations for supporting particular groups in the community, while conveying audiences' voices in helping the development of programs and exhibitions that are more relevant to visitors.

The third question addressed by the research aims at defining the possible roles that participants can assume while experiencing heritage in a participatory way, as well as outlining how the diverse participatory models influence the level of social engagement among participants. The definitions of diverse participatory models, given by different authors, are discussed in chapter five. Starting from these classifications and thanks to the preliminary mapping of cases, four main participatory actions have been then identified as best suited for supporting specific institutional mission-related goals: commenting and voting; contributing objects and stories; creatively expressing themselves; and co-designing.

The map of cases presented in chapter seven also highlights how diverse tools used to enabling participation influence the visitors' experience, answering to the fourth research question about the effectiveness of digital technology in mediating participatory experiences of heritage. What emerges from literature review is that although public participation is not a novel concept in the field of museum studies, it needs to be carefully

re-considered in the contemporary socio-cultural framework, where polysemic interpretive models might be enhanced by the potentiality of novel digital technologies. The main issues to which the study of cases tried to give answers are thus which technologies should be preferred and in what institutional contexts, considering the relationships, differences, and synergies between the emerging digital tools. Chapter seven discusses the results of the preliminary mapping of cases, considering seven possible tools that also include non-digital enablers of participation: social media; geotagging maps; mobile applications; smart objects; onsite multimedia installations; onsite interactives; and in person mediators. Both the preliminary map and the in depth analysis of cases highlight that, depending on the context, certain participatory modalities supported by specific tools are more suitable than other in order to achieve the desired institutional goals.

Synthesizing the operative insights drawn upon the study of cases, the design-oriented scenario described in chapter nine presents six possible design outcomes:

1. Personal re-contextualization and organization of items in online collections, in which, due to the digital nature of contents, audience participation is enabled by social media or mobile applications and in which the level of social engagement among participants is mainly indirect or mediated;

2. Critical interpretation through participatory storytelling in the contexts of ecomuseums and city museums, history museums, memorials, libraries and archives. Participation may be enabled by onsite interactives, multimedia installations, or smart objects, and the level of social engagement among participants generally varies from mediated to direct.

3. Use of digital peepholes for enabling audience engagement by promoting inquiry and exploration within science and technology museums and centers.

4. Co-construction of institutional collections in the contexts of history museums, memorials, ecomuseums and city museums, where the dual nature of tangible and intangible heritage embodies socio-cultural meanings and practices that are resources especially best suited for projects based on the collection of personal objects, stories, and memories. Participation is enabled by social media, geotagging maps, or in person mediators, depending on the desired level of social engagement among participants, which may vary from mediated to direct.

5. Use of artistic collections as the basis for a project aimed at promoting social inclusion through creative expression in the contexts

of art museums, by providing visitors with the means to creatively express themselves in the framework of an institutionally controlled process of interpretation. In these projects, in person mediation is the best way to achieve the goals and sustain participation because direct social engagement between participants and institutional staff is an essential requisite.

6. Participatory design projects aimed at the involvement of the community in the co-design of programs and exhibitions in the contexts of art or history museums. Due to the strong collaborative nature of participation in co-design project, in person mediation is the best way to ensure a continued and sustained social engagement among participants and institutional staff.

Chapter nine also discusses the tension between institutional authority and public voices in diverse contexts, answering to the fifth research question that addresses issues related to curatorial, educational or design responsibility when dealing with participatory project in diverse institutional contexts. In fact, an approach that is open to multiple personal interpretations raises important issues about museum's authority and the museum's educational function. Summarizing the common patterns drawn upon the study of cases, GLAMs have the potential to do more than just validate and present to the public everyone view when dealing with participation. It is in fact to avoid the misconception that public participation may be destructive to the museum's role as a trusted source of information, and rather, focusing on the modes by which interpretation might incorporate the perspectives of current and potential visitors. The sixth research question is aimed at investigating if participatory design methods and tools needed if designing *for* participation. Chapter five addresses this issue, highlighting that while when designing *for* participation usually visitors are not involved in the design process that is managed entirely by institutional staff, when the focus is instead on the process, this must be shared in all its phases with the community. Chapter five also presents some techniques used for facilitating participatory design activities, selected because of their possible application in museum practices, even if not specifically developed for this purpose.

Thanks to its experimental nature, the design process of the pilot project was useful for stressing the differences and possible synergies between the design approaches based on participatory design methods and projects designed *for* participation. In fact, although Everyday History was designed institutionally without engaging the Museum's community in the concept generation and in the design of interactives, visitors influenced the design of the exhibit thanks to the subsequent stages of evaluations conducted to ensure that the interactives were the most immediate and

intuitive as possible.

Generalizing these considerations, what emerges is that in projects designed *for* participation, visitors – while acting according to "contributory" or "collaborative" models, (Simon, 2010) – may also serve as informants in shaping the design of the apparatuses enablers of participation, through a recursive design methodology that can indeed effectively shape the final design of the program or exhibition.

These findings are also related to the last research question that aims at defining a general design framework that could support the development of effective participatory experiences of heritage. The structure of the recursive design process, as well as a more practical meta-design tool are thoroughly discussed in chapter ten, and the pilot project Everyday History has been designed and implemented reflecting their structure with the goal of testing the usefulness, feasibility and efficacy.

As stated in chapter 11.5, while the effectiveness of the general recursive design process was successfully verified, the practical meta-design tool was not tested in all of its sections because of the specific conditions and constrains of the context of the MAH, where the project was developed. It is however to underline that the proposed model is aimed at facilitating and supporting the design process by sparking the discussion, and must not be considered as a systematic tool to which to every decision correspond a precise and definite action to be taken.

The pilot project confirms that a user-centered design methodology – widely explored within the discipline of interaction design – might be an effective design strategy also if applied to the design of museum's exhibitions. In fact, if designing *for* participation, the design process must include key phases of prototyping and testing with the visitors. In this perspective, not only design, but also curatorial practice are considered as processes, rather than exhibitions as products, till the extent of conceiving the final exhibition as an unfinished product still subject to visitors' evaluation in order to meet the expectations of the community the museum serves.

The design framework proposed in this thesis is specifically addressed to cultural institutions, but can also be implemented for the development of projects non-strictly related to the valorization of officially recognized cultural heritage[1] that could be enriched by a design approach aimed at supporting audience engagement. For example, urban festivals and events developed in non-institutional contexts, where the audience expect to be engaged and socialize, might be effectively supported by an approach of design *for* participation according to the "contributory" or "collaborative" models, (Simon, 2010). Moreover, participatory design methods might

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1 As intended according to the definition given by the International Council of Museums (2006).

support the development of those projects aimed at promoting inter-cultural and/or inter-generational social engagement among participants not only within GLAMs, but also in other social contexts like schools and retirement homes, by working collaboratively and co-creatively on the co-construction of shared memories with educators, students (and their parents), and elderly people.

12.2. The role of the exhibition designer

As the research has been conducted from a design perspective, answering to the questions addressed by the research underpins the objective of de-fining which competences are required to the designer for bridging the instances of the disciplinary domains that the research intersects: cultural learning, digital technologies, and social issues related to community en-gagement, empowerment, and development within cultural institutions.

The discussion concerning this issue moves from the assumption that the authority that a museum claims is increasingly built through those resources engaged in conversation with the audiences it serves, and giving more credence to the diversity of ideas, cultures, and values in contem-porary societies, GLAMs need to diversify the pool of curators, exhibit developers, and designers who have control of exhibition content and style of presentation (McLean 1999).

While these considerations apply to every type of cultural project, when dealing with participatory programs and exhibitions, the role of the de-signer become even more pivotal in communicating the exhibition con-tent effectively to the museum visitors who, often not knowing, are part of the exhibition medium. Working with curators, conservators, interpretive planners, educators, subject specialists, and other museum professionals, the exhibition designer might play a role that resemble the function of a film producers, ensuring that everyone on the project has the needed information, resources, and intellectual environment to craft a work of art. Exhibition designers are in fact those professional figures that, espe-cially in participatory projects, must be acutely aware, on the one hand, of the goals of the curator and other institutional collaborators, and on the other, of the needs, interests, and expectations of museum visitors, finding solutions that might link the expectations of these groups.

The role of this professional figure, here identified in the designer, is de-fined by McLean (1993, 37–39) with the oxymoron "expert generalist" portraying a professional who must be able to synthesize the variety of disciplines that inform the exhibition process, to recognize the impor-tance of accurate and appropriate content, to manipulate the intellectual dynamics involved in the exhibit environment design, and to be sensitive

to the expectations of a diverse audience. This professional should therefore be fluent, even if not necessarily a specialist, in communication, environmental psychology, learning theory, conceptual and spatial design, and visitor needs.

Assigning these functions to the designer, implies the shifting in the focus of the design discipline from a range of specialized expertise that concern the design of technological, performance, and aesthetics characteristics of the communicative and interactive apparatuses, toward a more strategic role that underlies the notion of heritage valorization design oriented, as intended within the research group Design for Cultural Heritage (DeCH), Department of Design, Politecnico di Milano, within which this research has been developed. This vision design oriented acts on the identification and contextualization of the cultural assets and focalizes on their interpretation through legitimation and activation by the community (Lupo 2009). Without excluding the technical competencies of the design discipline – useful to effectively designing the visitor experience – the more comprehensive notion of designer's role here proposed is thus aimed at outlining those methodologies that could support participatory processes of heritage valorization, in which the designer acts as a mediator among the actors involved that include institutional staff, external stakeholders, and visitors.

12.3. Research limits and future works

The main limits of the research concern the assessment of those participatory design methods that have been identified as best suited for promoting audience engagement through literature review and the study of cases, but have not experimentally tested in a pilot project. In fact, while all the six possible design outcomes of the design-oriented scenario described in chapter nine are coherent within the context of an audience-centered institution, and feasible in principle, for reasons due to serendipitous opportunities, the pilot project developed at the Santa Cruz Museum of Art and History is mostly based only on the assumptions that underpin the outcomes #2 and #4 (critical interpretation through participatory storytelling and co-construction of the institutional collection).

Moreover, as explained in chapter eleven, mostly due to the lack of timing and financial resources, the pilot project developed did not involve the use of digital tools (e.g. social media and smart objects), which were instead identified as possible effective enablers of audience participation to complement onsite interactives and in person mediation.

Another research limit concerns the evaluation of the proposed design framework for the development of participatory projects in those

institutional contexts not so committed to audience participation as the MAH is. In particular, I am referring to those art and history museums or historic house museums that largely still adopt a linear model of transmission of knowledge, according to the model of the "traditional" museum (Anderson 2012), which are the great majority in Italy. In fact, mostly due to the history of these museums – developed throughout the late 1800s and early 1900s – and to the nature of their collections – objects and artworks of extraordinary intrinsic value – the modes of visitor apprehension that characterizes many Italian museums are contemplation and comprehension, mirroring the models of "systematic" and "orderly" museum (Hein 1999) described in chapter three. Moreover, these museums often lack of a clear and accessible communication strategy that uses the potentialities of the Internet for engaging actual and potential visitors.

These factors contribute to a peculiar condition in which, however Italian museums own an immense heritage of extraordinary value, many citizens do not attend museums programs and exhibitions because consider themselves as extraneous to the cultural offer of these institutions, which are to often perceived as non-welcoming places because non responsive of their needs and motivation for visiting. Literature review and the study of cases thoroughly discussed along the thesis confirmed the preliminary hypothesis that, although through diverse participatory modalities, visitors' active engagement might respond to the emerging expectations of contemporary audiences.

A legitimation of the possible application of participatory models of heritage experience within the context of Italian museums recently comes from the 2014 grant "Protagonismo culturale dei cittadini" by Fondazione Cariplo[2], addressed to those cultural projects aimed at promoting and supporting audience participation with the goal of shaping cultural institutions as places of aggregation, exchange, and development of the sense of civic duty for their communities of reference.

In this perspective, in early 2014 I interviewed conservator Lucia Pini of the historical house museum Bagatti Valsecchi in Milan[3] in order to gain operative insights from her institutional perspective for a preliminary assessment of the feasibility of a participatory approach within the Italian

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2   http://www.fondazionecariplo.it/static/upload/aec/aec-protagonismoculturale. pdf. Fondazione Cariplo is an Italian philanthropic organization, which manages the assets of the Cassa di Risparmio delle Provincie Lombarde, fulfilling the mission of helping social and civil organizations better serve their community.

3   http://www.museobagattivalsecchi.org. The Bagatti Valsecchi Museum is one of the best-preserved historic house museums in Europe. The house was inhabited until 1974 by the descendents of Barons Fausto and Giuseppe Bagatti Valsecchi that in the second half of the 19th century restructured the family's Milanese mansion like a home inspired by lordly Lombard mansions of the 16th century.

context and precisely in those cultural institutions that have a static approach for statute.

The conversation strongly confirmed the feasibility of the idea of developing participatory projects within this kind of cultural institutions. The possibility of organizing actions (both single events and more structured programs) of audience engagement based on participatory design methods was favorably received and discussed as a particularly useful opportunity that, without elevated institutional commitments to participation for what concern costs and timing resources, could strengthen the relation between the museum and its community of reference and better knowing actual and target audience's motivations and expectation for visiting the museum. Moreover, the possibility of letting visitors to participate in a less institutionally controlled situation – like for example asking visitor to contribute their comments during the experience of visit using the symbolic value of objects displayed and without any institutional mediation and – was also unexpectedly welcomed as a possible strategy for engaging diverse target groups of visitors with various needs (e.g. school groups, tourists, and families) in effective conversations about the museum's holdings.

Future works can thus foresee the application of the proposed recursive design methodology to the development of participatory projects in those institutional contexts that, due to the nature of their collections, are apparently less suitable for promoting programs of audience engagement, but that could more benefit from a participatory approach.

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APPENDIX A

PRELIMINARY ANALYSIS OF CASE: CONSIDERED PARAMETERS

	Participatory approach	Participants' role	Level of social engagement	Tool enabling participation	Main action required to participants	Institutional goal	Context	Area of influence	Modalities of curation of UCG
21st Century Abe	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	History museums and memorials	Global	Non-institutionally curated
7 billion Others	Design for audience participation	Collectors	Indirect	In person mediators	Contributing objects and stories	Shared learning	Informal exhibition space	Global	Institutionally curated
9/11 Memorial Museum	Design for audience participation	Collectors	Mediated	Social media	Contributing objects and stories	Shared learning	History museums and memorials	Global	Institutionally curated
A Matter of Faith	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	Shared learning	Art museums	Local	Non-institutionally curated
American Stories	Design for audience participation	Critics	Mediated	Mobile applications	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated
Art of Storytelling	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Creative expression	Art museums	Global	Non-institutionally curated
Arts Combinatoires	Design for audience participation	Critics	Indirect	Social media	Commenting	Shared learning	Libraries and achieves	Global	Non-institutionally curated
ArtStack	Design for audience participation	Critics	Indirect	Social media	Commenting	Shared learning	Informal exhibition space	Global	Non-institutionally curated
BibPhone	Design for audience participation	Critics	Mediated	Smart objects	Commenting	Creative expression	Libraries and achieves	Local	Non-institutionally curated
Branguli was here. What about you?	Design for audience participation	Critics	Indirect	Social media	Voting	Creative expression	Art museums	Local	Non-institutionally curated
Center for Creative Connections	Design for audience participation	Creators	Mediated	In person mediators	Creatively express themselves	Creative expression	Art museums	Local	Institutionally curated
Choose the piece	Design for audience participation	Critics	Direct	In person mediators	Commenting	Shared learning	Natural history and anthropology	Local	Institutionally curated

Project	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Urban environment	Local	Non-institutionally curated
City of Memory	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Urban environment	Local	Non-institutionally curated
Clark Remix uCurate	Design for audience participation	Critics	Mediated	Social media	Commenting	Creative expression	Art museums	Local	Non-institutionally curated
Click! A Crowd-Curated Exhibition	Design for audience participation	Critics	Indirect	Social media	Voting	Creative expression	Ecomuseums and city museums	Local	Non-institutionally curated
Click! Photography changes everything	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Art museums	Global	Non-institutionally curated
Children Lodz Ghetto	Design for audience participation	Collectors	Mediated	Social media	Contributing objects and stories	Shared learning	History museums and memorials	Global	Non-institutionally curated
Coney Island History	Design for audience participation	Collectors	Indirect	In person mediators	Contributing objects and stories	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated
Contemporary Issues Forum	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated
Cooking: the Exhibition Chefs	Participatory design	Creators	Direct	Social media	Co-designing	Co-creative work	Informal exhibition space	Global	Institutionally curated
Cool remixed	Design for audience participation	Creators	Indirect	In person mediators	Creatively express themselves	Creative expression	Ecomuseums and city museums	Local	Institutionally curated
Creative Community Committee	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Art museums	Local	Institutionally curated
Culture Shock!	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated
Denver Community Museum	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Ecomuseums and city museums	Local	Non-institutionally curated
Designing democracy	Design for audience participation	Critics	Direct	Onsite multimedia installations	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated

	Participatory approach	Participants' role	Level of social engagement	Tool enabling participation	Main action required to participants	Institutional goal	Context	Area of influence	Modalities of curation of UCG
DialogTable	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	Art museums	Local	Non-institutionally curated
Digital Natives	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Art museums	Local	Institutionally curated
Diritti al cubo	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated
Doha Memories Prototype	Design for audience participation	Collectors	Indirect	In person mediators	Contributing objects and stories	Shared learning	Informal exhibition space	Local	Institutionally curated
Dulwich OnView	Design for audience participation	Critics	Direct	Social media	Commenting	Shared learning	Ecomuseums and city museums	Global	Non-institutionally curated
Europeana 1914-1918	Design for audience participation	Collectors	Indirect	Social media	Commenting	Co-creative work	Ecomuseums and city museums	Local	Non-institutionally curated
Flickr Museums	Participatory design	Creators	Direct	Social media	Co-designing	Co-creative work	Informal exhibition space	Local	Non-institutionally curated
Flick The Commons	Design for audience participation	Critics	Indirect	Social media	Commenting	PShared learning	Informal exhibition space	Global	Non-institutionally curated
Forces of Change 1960-1975	Design for audience participation	Creators	Mediated	In person mediators	Creatively express themselves	Creative expression	Ecomuseums and city museums	Local	Institutionally curated
Foresta nascosta	Design for audience participation	Collectors	Direct	In person mediators	Contributing objects and stories	PShared learning	Ecomuseums and city museums	Local	Institutionally curated
Franklin Remix	Participatory design	Creators	Direct	Social media	Co-designing	Co-creative work	Libraries and achieves	Local	Institutionally curated
Free2Choose	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	PShared learning	History museums and memorials	Local	Non-institutionally curated

	Design approach	Audience role	Participation	Technology	Activity	Value	Institution type	Scope	Curation
From Memory to Action	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	Shared learning	Natural history and anthropology	Local	Non-institutionally curated
Glasgow Open Museum	Design for audience participation	Creators	Direct	In person mediators	Co-designing	Co-creative work	Ecomuseums and city museums	Local	Institutionally curated
Google Art Project	Design for audience participation	Critics	Direct	Social media	Commenting	PShared learning	Informal exhibition space	Global	Non-institutionally curated
Haarlem Oost library	Design for audience participation	Critics	Indirect	Onsite interactives	Commenting	Shared learning	Libraries and achieves	Local	Non-institutionally curated
Hack the Museum Camp	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Art museums	Local	Institutionally curated
Historypin	Design for audience participation	Collectors	Indirect	Geotagging maps	Contributing objects and stories	Shared learning	Urban environment	Global	Non-institutionally curated
Human library	Design for audience participation	Critics	Direct	In person mediators	Commenting	Shared learning	Libraries and achieves	Local	Non-institutionally curated
Hydroscope	Design for audience participation	Critics	Direct	Smart objects	Commenting	Shared learning	Science and technology museums	Local	Non-institutionally curated
Hyphenated-Origins	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	History museums and memorials	Local	Institutionally curated
In the Long Run	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated
In your face	Design for audience participation	Creators	Indirect	In person mediators	Creatively express themselves	Creative expression	Art museums	National	Institutionally curated
Inventory of Intangible Cultural Heritage	Design for audience participation	Collectors	Mediated	Social media	Contributing objects and stories	Shared learning	Ecomuseums and city museums	National	Non-institutionally curated
MappaMi	Design for audience participation	Collectors	Mediated	Geotagging maps	Contributing objects and stories	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated

	Participatory approach	Participants' role	Level of social engagement	Tool enabling participation	Main action required to participants	Institutional goal	Context	Area of influence	Modalities of curation of UCG
Mapping Main Street	Design for audience participation	Collectors	Indirect	Geotagging maps	Contributing objects and stories	Shared learning	Urban environment	National	Non-institutionally curated
Mare Memoria Viva	Design for audience participation	Collectors	Direct	In person mediators	Contributing objects and stories	Shared learning	Ecomuseums and city museums	Local	Institutionally curated
MN150	Design for audience participation	Critics	Indirect	Onsite interactives	Voting	PShared learning	History museums and memorials	Local	Non-institutionally curated
Museomix	Participatory design	Critics	Direct	In person mediators	Co-designing	Co-creative work	Art museums	Local	Institutionally curated
Nationale Automatiek	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated
NaturePlus	Design for audience participation	Critics	Mediated	Smart objects	Commenting	Shared learning	Natural history and anthropology	Global	Institutionally curated
New Dialogue Initiative	Design for audience participation	Creators	Direct	In person mediators	Co-designing	Co-creative work	Ecomuseums and city museums	Local	Institutionally curated
New York Divided	Design for audience participation	Critics	Indirect	Onsite multimedia installations	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated
Nubes	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Informal exhibition space	Global	Non-institutionally curated
Object Stories	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Shared learning	Art museums	Local	Institutionally curated
Oggetti Obsoleti del Contemporaneo	Design for audience participation	Collectors	Mediated	Social media	Contributing objects and stories	Shared learning	Ecomuseums and city museums	National	Non-institutionally curated
Open house	Design for audience participation	Collectors	Direct	In person mediators	Contributing objects and stories	Shared learning	History museums and memorials	Local	Institutionally curated

	Design for audience participation	Critics	Direct	Onsite multimedia installations	Commenting	Shared learning	Informal exhibition space	Local	Non-institutionally curated
Parlamentarium	Design for audience participation	Critics	Direct	Onsite multimedia installations	Commenting	Shared learning	Informal exhibition space	Local	Non-institutionally curated
Passerby Museum	Design for audience participation	Collectors	Mediated	In person mediators	Contributing objects and stories	Creative expression	Informal exhibition space	Local	Non-institutionally curated
PhilaPlace	Design for audience participation	Collectors	Indirect	Geotagging maps	Contributing objects and stories	Shared learning	History museums and memorials	Local	Non-institutionally curated
Pop-Up Museum	Design for audience participation	Collectors	Direct	In person mediators	Contributing objects and stories	Shared learning	Informal exhibition space	Local	Non-institutionally curated
Public Perspective Exhibition Series	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Ecomuseums and city museums	Local	Institutionally curated
Publicview	Design for audience participation	Critics	Indirect	Geotagging maps	Commenting	Shared learning	Ecomuseums and city museums	Local	Non-institutionally curated
QRpedia	Design for audience participation	Critics	Mediated	Smart objects	Commenting	Shared learning	Informal exhibition space	Global	Non-institutionally curated
Queensland stories	Design for audience participation	Collectors	Indirect	Onsite multimedia installations	Contributing objects and stories	Shared learning	Libraries and achieves	Local	Non-institutionally curated
Re-Tracing the Past	Design for audience participation	Critics	Mediated	Smart objects	Commenting	Shared learning	History museums and memorials	Local	Non-institutionally curated
Red Bull Street Art View	Design for audience participation	Collectors	Indirect	Social media	Contributing objects and stories	Creative expression	Urban environment	Global	Non-institutionally curated
San Francisco Mobile Museum	Design for audience participation	Collectors	Mediated	In person mediators	Contributing objects and stories	Creative expression	Informal exhibition space	Local	Non-institutionally curated
Santa Cruz Collect	Design for audience participation	Collectors	Mediated	In person mediators	Contributing objects and stories	Creative expression	Art museums	Local	Institutionally curated
Scapes	Design for audience participation	Critics	Indirect	Mobile applications	Commenting	Creative expression	Art museums	Local	Non-institutionally curated

	Participatory approach	Participants' role	Level of social engagement	Tool enabling participation	Main action required to participants	Institutional goal	Context	Area of influence	Modalities of curation of UCG
Science Museum Object Wiki	Design for audience participation	Collectors	Mediated	Social media	Contributing objects and stories	Shared learning	Science and technology museums	Global	Non-institutionally curated
Shapeshifting	Design for audience participation	Critics	Mediated	Social media	Commenting	Shared learning	Ecomuseums and city museums	Global	Non-institutionally curated
Shh! It's a Secret!	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Art museums	Local	Institutionally curated
Silence of the Lands	Design for audience participation	Collectors	Indirect	Geotagging maps	Contributing objects and stories	Creative expression	Urban environment	Local	Non-institutionally curated
Storie Plurali	Participatory design	Creators	Direct	In person mediators	Co-designing	Co-creative work	Ecomuseums and city museums	Local	Institutionally curated
StoryCorps	Design for audience participation	Collectors	Indirect	In person mediators	Contributing objects and stories	Shared learning	Informal exhibition space	National	Institutionally curated
Sweet & Sour	Design for audience participation	Collectors	Mediated	In person mediators	Contributing objects and stories	Shared learning	History museums and memorials	Local	Institutionally curated
Tales of Thing	Design for audience participation	Critics	Mediated	Smart objects	Commenting	Shared learning	Informal exhibition space	Local	Non-institutionally curated
TAM TAM	Design for audience participation	Critics	Direct	In person mediators	Commenting	Shared learning	Natural history and anthropology	Local	Institutionally curated
The great fat debate	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	Science and technology museums	Local	Non-institutionally curated
The Secret Life of Objects	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	Informal exhibition space	Local	Non-institutionally curated
The Shannon Portal	Design for audience participation	Critics	Mediated	Onsite multimedia installations	Commenting	Shared learning	Informal exhibition space	Local	Non-institutionally curated

Top 40	Design for audience participation	Critics	Indirect	Onsite interactives	Voting	Creative expression	Art museums	Local	Non-institutionally curated
Turbingeneration	Design for audience participation	Creators	Mediated	Social media	Creatively express themselves	Shared learning	Art museums	Global	Non-institutionally curated
Yellow Arrow	Design for audience participation	Collectors	Indirect	Smart objects	Commenting	Creative expression	Urban environment	Global	Non-institutionally curated
Yorkshire's Favourite Paintings	Design for audience participation	Creators	Indirect	Social media	Voting	Creative expression	Art museums	Local	Non-institutionally curated

APPENDIX B.1

EVERYDAY HISTORY: PROJECT PLAN AND DELIVERABLES

CONCEPT DEVELOPMENT: JULY 2 – 14 2012

Objectives:
- Determine overall plan
- Develop the main message for the exhibit
- Identify exhibit components, summary description, goals, and visitor operating requirements

Activities:
- Research
- Brainstorm and develop ideas
- React to others' ideas

Deliverables:
- Exhibit main message, summary description, and goals
- Reactions to Nina Simon and Marla Novo ideas and suggestions
- Final exhibit operational description
- Explanation of why each component is included and how they function together

CONTENT DEVELOPMENT: JULY 12 - AUGUST 11 2012

Objective: Develop specific content assets (text and images) to support the website, the interactive prototyping on August 3th and the exhibition.
Activities:
- Research
- Prototyping
- Selection and assembly of any external content
- Produce final content
- Interface with Chief Preparator on content infrastructure

Deliverables:
- Final list of content assets, ready for design
- Final content for the prototyping on First Friday produced
- Final content for the exhibit produced

GRAPHIC DESIGN: JULY 16 - AUGUST 11 2012

Objective: Design and produce graphic assets for the final exhibition and any marketing collateral.
Activities:
- Develop conceptual look and feel for exhibit and website
- Produce draft graphics based on initial asset list
- Produce graphics for the website
- Produce final graphics based on prototyping

Deliverables:

- Look and feel board
- Draft exhibit graphics
- Final website graphics
- Final exhibit graphics

INTERACTION AND FACILITATION DESIGN: JULY 24 - AUGUST 18 2012

Objective: Design and produce interaction structures to support any visitor actions per the visitor operating descriptions.
Activities:

- Prototype interactions
- Produce final interaction infrastructure for fabrication

Deliverables:

- Detailed interaction plan
- Prototyping
- Final interaction design and production

FABRICATION: JULY 16 - AUGUST 18 2102

Objective: Build things to support the content, graphic and interaction design.
Activities:

- Develop materials lists
- Source materials
- Fabricate exhibit components (web and physical)

Deliverables: Exhibit components built

INSTALLATION: AUGUST 22-23

Objective / Activities: Install the exhibit
Deliverables: Exhibit opens on August 24th

EVALUATION: AUGUST 20 – SEPTEMBER 19 2012

Objective: Support formative and summative evaluation for the exhibition.
Activities:

- Where appropriate, develop evaluation tools for prototyping and formative evaluation
- Develop evaluation tools for summative evaluation
- Perform summative evaluation

Deliverables:

- Summative evaluation plan with intended metrics and tools
- Summative evaluation report

APPENDIX B.2

EVERYDAY HISTORY: FRONT-END EVALUATION QUESTIONNAIRES

FIRST QUESTIONNAIRE "OBSOLETE OBJECTS"

Obsolete Objects

1. Please list 3 objects (if any) that you own and you have not used for at least 5 years.

1.
2.
3.

2. What is the first word that comes to mind when you look at the objects in the image below?

3. What comes to mind associated to "obsolete objects"?

4. State if the following objects have for you:
- a functional value (instrumental purpose)
- an exchange value (economic value)
- a symbolic value (a value that you assigns to an object in relation to something else, like a special event, an anniversary, etc.)

	functional	exchange	symbolic
typewriter			
floppy disk			
portable audio cassette player			
vinyl record			
videotape			

Comment (if you have any)

5. How likely are you to learn about the recent history (last 30 years) of your community?

Extremely likely

Very likely

Moderately likely

Slightly likely

Not at all likely

6. And how likely are you to learn about the recent history (last 30 years) of your country?

Extremely likely

Very likely

Moderately likely

Slightly likely

Not at all likely

7. Some basic infos about you.

Birth Year:

M/W:

City:

Birth Place:

Done

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SECOND QUESTIONNAIRE "EVERYDAY HISTORY"

Everyday History

1. Please list 3 objects (if any) that you own and you have not used for at least 5 years.

1. _____

2. _____

3. _____

2. What is the first word that comes to mind when you look at the objects in the image below?

_____

3. What comes to mind associated to "everyday history"?

_____

4. State if the following objects have for you:
- a functional value (instrumental purpose)
- an exchange value (economic value)
- a symbolic value (a value that you assigns to an object in relation to something else, like a special event, an anniversary, etc.)

	functional	exchange	symbolic
typewriter			
floppy disk			
portable audio cassette player			
vinyl record			
videotape			

Comment (if you have any)

5. Do you associate obsolete objects to some particular past episodes of your life?

yes

no

6. If yes, how likely are you to share your story?

Extremely likely

Very likely

Moderately likely

Slightly likely

Not at all likely

7. Do you associate obsolete objects to some particular past historical events?

yes

no

Done

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APPENDIX B.3

EVERYDAY HISTORY:
THE META-DESIGN TOOL

1. PLANNING THE PROGRAM OR EXHIBITION

1.1. CULTURAL INSTITUTION'S COMMUNITY ROLE AND MAIN INSTITUTIONAL GOALS

Desired ways in which the community will perceive the project (Parman and Flowers 2008, 83)

	Promoting shared learning	Promoting creative expression	Promoting co-creative work
Visitor attraction: The project gives visitors an overview of what is unique about the territory and its community	● (red)	●	●
Catalyst for change: The project delivers a message that encourage people to think differently about their relationship to others	● (red)	●	●
Center of creativity: The project engages visitors in creative activities where are visitors to determine the outcomes	●	●	●
Memory bank: The project displays aspects of the history of a place or cultural tradition	●	●	●
Storyteller: The project interprets the history of a place, person, or cultural tradition, in ways that relate the past to the present	● (red)	●	●
Attic: The project preserves objects and images that would otherwise have been discarded	●	●	●
Treasure trove: The project preserves valuable, meaningful, rare, and unusual objects and images	●	●	●
Shrine/hall of fame: The project honors a particular group or individual and assume visitors have a built-in interest in the topic	●	●	●
Exclusive club: The project is primarily aimed at people with special interests and knowledge of the topic	●	●	●

Main institutional goals

1.2. MAIN MESSAGE

Everyday History uses everyday objects of the past thirty years as enablers of a participatory storytelling related to the recent history of Santa Cruz

2. DEFINING PARTICIPATION

2.1. VISITORS' PROFILES AND CULTURAL INSTITUTION'S COMMITMENT TO PARTICIPATION

		Cultural institution's commitment to managing the project and working with participants (Simon 2010, 190–101)		
		Lightly management of participatory activities (the same efforts for the maintenance of an interactive exhibit)	Investment of more time and resources to make sure participants are able to accomplish institutional goals	Commitment to support the needs of target communities, whose goals align with the institutional mission
Motivational visitors' profiles of actual and expected participant audience (Sachatello-Sawyer et al. 2002, 8–10)	**Socializers** **They attend cultural programs expressly for social interaction with family members or friends**	Visitors engage briefly in specific activities during the experience of visit or in special events	/	/
	Skill builders They like to learn by doing and wish to improve specific skills		/	/
	Knowledge seekers They seek challenging content and additional resources that allow them to follow up their interests		Some visitors participate casually, but most engage with the explicit intention to participate	/
	Museum lovers **They are the core audience for most adult programs and often volunteer at the museum**			Participants are intentionally engaged and dedicated to seeing the project all the way through

2.2. SPECIFIC INSTITUTIONAL GOALS AND MODES OF PARTICIPATION

Affective goals: (e.g.: «Visitors will care about sharks»)

Visitors will be able to assign symbolic meanings to once-common everyday objects, beyond their economical or functional value;

Visitor will care about once-common everyday objects, by recognizing something that they own among the displayed objects;

Visitors will enjoy the local history of the County in a more engaging way thanks to the partial updating of the History Gallery till nowadays, and by discovering unknown stories about their community;

Young visitors will value the knowledge and experience of older people, through their first-hand stories about the objects.

Cognitive goals: (e.g.: «Visitors will recognize that sharks are endangered»)

Visitors will learn about the characteristics and transformations over time of everyday objects;
Visitors will learn about the way objects shape our way of living and acting;
Visitors will learn about the history of their community.

Performance goals: (e.g.: «Visitors will test variation in sharks sizes interacting with the kiosks in the exhibition»)

Visitors will be engaged in participatory activities, by suggesting objects to be included in the exhibit and by sharing (writing/recording) memories related to the displayed objects;
Visitors will be engaged in social activities, by voting for their favorite objects and seeing the preferences of other people.

Ways to convey the affective and cognitive goals of the program or exhibition	Suggested modes of participation				
Visitors understand key messages conveyed by the program or exhibition by adding self-created content in the form of critical interpretations that relates the main topic to their background experiences		💬	👍		
Visitors' actions drive the content and key messages conveyed by the program or exhibition within an institutionally controlled system of interpretation	✴️			✏️	
Visitors creatively work closely with the institutional staff that will give participants the tools to lead the project and will support their activities					🧩

Performance goals that the cultural institution aims to achieve	Suggested modes of participation				
Visitors have the ability to analyze, curate the content on display and to share their view, along the institutional interpretation		💬	👍		
Visitors create original content by collecting data or sharing personal expression	✴️			✏️	
Visitors will have the ability to collaborate with cultural institution's staff in the project conceptualization, goal setting, and evaluation					🧩

Suggested modes of participation				

Goals for non-participating visitors (Simon 2010, 190–101)

	(network)	(speech bubble)	(thumbs up)	(pencil)	(puzzle)
The project will help visitors see themselves as potential participants and see the institution as interested in their active involvement		●	●		
The project will help visitors see the institution as a place dedicated to supporting and connecting with community	●				
The project will help visitors see the institution as a community-driven place. It will also bring in new audiences connected to the participants				●	●

2.4. TOOLS ENABLING PARTICIPATION, PARTICIPANTS' ROLES AND DESIRED LEVEL OF SOCIAL ENGAGEMENT

Tools enabling participation

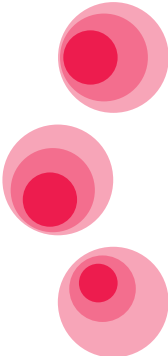|	Modes of participation				
	(network)	(speech bubble)	(thumbs up)	(pencil)	(puzzle)
(globe)	Participants act as collectors, critics, or creators, and their direct social engagement is not an essential requisite				/
(location pin)	Collectors: Indirect social engagement	Critics: Indirect social engagement	/	/	/
(smartphone)	/	Critics: Indirect or mediated social engagement		/	/
(QR code)	Collectors: Direct social engagement	Critics: Direct social engagement	/	/	/
(headphones)	Collectors: Indirect social engagement	Critics: Indirect social engagement	Critics: The commitment to participate may be superficial — Indirect social engagement	/	/
(pushpin)	/			/	/
(people)	Collectors: Mediated or direct social engagement	Critics: Mediated or direct social engagement	/	Creators: Direct social engagement	Creators : Direct social engagement

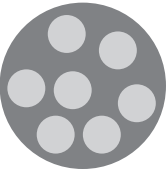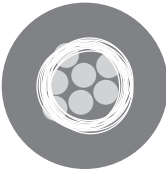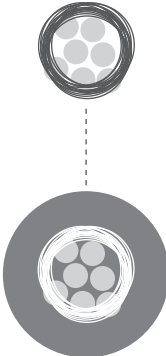| Thematic structure (Nicks 2002, 359)				
Focal	Hierarchical	Sequential	Parallel	Matrix

Onion

Pizza

Environmental

Archetypal

Collateral materials

- Exhibition website, that includes: online repository of the displayed objects; interactive sections for adding comments and stories to objects and suggesting one object to be included in the repository; didactic materials for teachers and children;
- Recorded videos of older people first-hand stories.
- Brochures and posters for marketing the exhibition.