**MeLa\*** Books

# DESIGNING MULTIVOCAL MUSEUMS

*Intercultural Practices at Museo Diocesano, Milano*

**edited by
Rita Capurro and Eleonora Lupo**

*Designing Multivocal Museums:*
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# Designing Multivocal Museums

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# Design Envisioning for Museums: the experience at Museo Diocesano

→ **ELEONORA LUPO, RAFFAELLA TROCCHIANESI**

→ **METHODOLOGICAL APPROACH**

For several years now the museum has been changing: from a place that preserves cultural assets to a dynamic place where people can interact with content and dialogue with each other. This shifting vocation of the museum should be particularly explored in institutions such as those focused on historical memory, cultural traditions, and religious belief. In the age of migration it is imperative that the content of these institutions be communicated in a multi-directional and multi-vocal way in order to improve an inter-cultural experience. Through a design driven approach, it is possible to elaborate some possible scenarios and models that could envision new ways of museum visitation and engagement, thanks to an interactive and participatory methodology.

In this context, the goal would be to represent the collection through several interpretative keys, and above all to include in the exhibit multiple pathways and interaction points that allow just as many moments for dialogue.

A multi-vocal fruition can be created both through analogical tools (integrated in the exhibit space or "overlapped" thanks to a temporary added system) and through new technologies (also integrated in the exhibit space, or via mobile technology and the web). In this sense the visitor experience pre-visit, during the visit, and post-visit are all equally important. In the pre-visit phase one can focus on some topics the museum wants to aim for and around which it wants to activate dialogue and debate. During the visit one can focus on interactive touch points that facilitate the visitor's participation and organizes content. In the post-visit

*PREVIOUS PAGE, IMG.01—
"Italian Limes" by Folder,
Venice Biennal 2014. Photo
by Eleonora Lupo.*

one can focus on the continuation of the visitor relationship, furthering dialogue out of the museum.

The experiment presented in this book is one of the activities included in MeLa Project's research. MeLa Project is a four-year research project funded by the European Commission under the Seventh Framework Programme. Its main objective is to define innovative museum practices that address the challenges of the contemporary processes of globalization, mobility, and migration. As people, objects, knowledge, and information move at increasingly higher rates, a greater awareness of an inclusive approach is needed to facilitate mutual understanding and social cohesion (Basso Peressut and Pozzi 2012).

Among the other project partners, the Design department has the task to develop experimental design proposals for museum exhibitions, in particular those connected with the Information and Communication Technology (ICT) role in museums. The aim of this cross-disciplinary research is to develop possible scenarios that can be translated into the production of various experimental exhibition designs as test verification of the theoretical investigations (Capurro et al. 2013).

In the "age of migration" scenario, novel practices that continuously re-discuss, re-create and re-negotiate intercultural heritage need to be designed and enabled, in order to face the varied expectations from people with different cultural values. In this frame, digital technologies are tools both for increasing the opportunity for different cultures to connect and for deconstructing the mediated experience of heritage, allowing the users to play a more active rather than passive role (via their participation and co-creation of content). Both these factors impact the nature of heritage itself, whose meaning is always more related to practice and appropriation, than to a tangible form, with the result of assuming as heritage the diverse cultural representations of people.

In this intersection of cultural frictions, evolving heritage, and touch-screen devices, we used a design discourse to explore the combination of technological tools and multi-vocal content to enable diverse dynamics of cultural representation. The resulting aim of this work is to create multicultural narratives, foster intercultural dialogue and stimulate transcultural practices.

Various issues have been explored and questioned with the aim of improving, through design strategies and digital technologies, the models of valorisation of heritage. This models range from a conservative musealisation to more active reproduction and re-negotiation practices aimed at enabling open dynamics of representation of culture, and promoting multiple and plural representations, rather than monolithic perspectives.

The design team focused on an agenda including research tracks such as:

→ Narrative frameworks and performative processes in the design of intercultural practices and experiences in museums;

→ The role of museums and cultural institutions in addressing ethnic diversity in (multi)ethnic neighbourhoods;

→ Audience engagement and visitors' participation through digital technology as a means to foster intercultural experiences;

→ Mechanics and models of interaction enabled by digital and mobile technologies, as well as by design strategies;

→ Forms and types of the "heritage/museum continuum": from tangible to intangible collections, open archives, outreach museums, etc.

This provided the general research framework in which the experimental action was conceived and developed, with a specific focus on some of the aforementioned issues. The experimental action is grounded principally on the theoretical reflection about the opportunities of intercultural exchange among people and between people and content within a museum context.

The Museo Diocesano di Milano was a suitable context for the experimental action mainly for two reasons. First, the museum is rich in various and interesting works of art that do not clearly express their content and thus could benefit from museological and interpretive strategies (especially for a general audience). Second, the religious topics in these works include archetypes and symbols that could become interesting subjects of discussion and interpretation.

"The Museo Diocesano [is] an appropriate setting for religious narratives portraying religion as a controversial component of culture, stimulating debate and fostering equality and dialogue among diverse communities" (Capurro 2014, 27).

We envisioned three possible approaches through which museums and cultural institutions could invite—and in fact are already inviting—audiences to deal with cultural diversity (Lupo et al. 2013):

→ **Multicultural storytelling.** This approach conceives and represents different cultures alongside one another but separately.

→ **Intercultural dialogue.** This approach identifies and highlights the interconnections between cultures while representing them. It represents dialogue and hybridisation among cultures, but the audience is not asked to name his/her identity or cultural background. In this respect, the term 'intercultural' is used here differently from how it is used in heritage education in an intercultural perspective described above (Bodo and Mascheroni 2012).

→ **Transcultural practice.** This approach 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.

These three approaches are recognisable in four models[1] used within museums to create representation and experience of cultural diversity. From

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1 The information related to these four models is extracted from: Eleonora Lupo, 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, 65-77. London: Ashgate.

the following four models one can also recognise and derive some significant features of the development of the experimental action.

*1–The Amplified Heritage Model*

The first model encompasses all those experiences in which the cultural institution and its collections are augmented and amplified through digital technologies. Multimedia booths and digital and interactive devices amplify the relationship between visitors and cultural content, allowing a diversified and customised access for the visitor. The experience is extended in terms of time (pre- and post-visit) and place (on-site and online).

This model does not automatically imply a confrontation between cultures, but the visitor experience is enhanced. In this model the design dimensions are characterised by different levels of enhancement. Examples of such enhancements include: the use of mixed languages and media narrative settings, and spatial re-organization, in which ICT amplifies the physical environment, creating immersive (simulated or virtual) spaces and connecting cultural assets with their place of origin. Some design elements can therefore address the key issue of 'situativity' - creating localisation, delocalisation and re-localisation in terms of bodily interactions.

In the MeLa-Museo Diocesano experimental action one can recognise part of this model because the content is augmented via the use of new technologies (in particular the use of mobile phones) in order to amplify the space of representation of the works of art and the interpretation of meaning.

*2–The Multifaceted Heritage Model*

The second model encompasses experiences in which digital technologies are able to offer a plural and multifaceted view of heritage. Using digital technologies, such as interactive screens or displays, the users can choose a specifically designed point of view, and compare different viewpoints alongside one another, or even add their personal one. In terms of cultural dynamics, this confrontation can allow for both the recognition of cultural contact points and frictions. In so doing, it can stimulate discussion on heritage, its renegotiation and, eventually, its transformation. In this scenario, the dynamic of auto-/hetero-representation becomes relevant: who represents who and for whom? The topic of authorship is also relevant because it raises the issue of individual or collective curatorship of content, which in turn impacts the diversity of points of view available to the visitor. In this model, cultural content is characterised by a 'plurality of layered meanings', that can be represented by creating parallels and juxtapositions or highlighting dissonances or similarities.

In the MeLa-Museo Diocesano experimental action the visitor can intervene in the various layers and levels of content via new technologies and in the process creates interesting intercultural paths.

*3–The Connective Heritage Model*

The third model, called 'connective', refers to those cases in which digital technologies are employed as enablers of social relations. This model can incorporate the methods of the multifaceted model examined above but it goes a step further, towards the building of new social ties (connections between people and cultures) around a common heritage. These ties enrich and amplify the experience of heritage thanks to a continuous and bidirectional interaction. The model is characterised by the presence of digital devices, systems, or applications that allow social and collaborative processes and exchange, acting as enablers of social engagement in both direct and indirect ways. Through systems of social relations people's awareness and knowledge of heritage increases, and the value of cultural assets is in turn increased by the recognition of these visitors' backgrounds.

Sociality and space—the most relevant design dimensions of this model—are characterised by forms of relations that allow specific people and cultures to connect in a particular spatial setting and context. Exchange, participation, and collaboration are therefore the key elements to be addressed in terms of design in order to create these interactions between visitors.

This model has been a reference in the MeLa-Museo Diocesano project because one of the crucial components of the project has been the intercultural dialogue mediated through new technologies. For example, the visitor can discover connections of meanings and activate connections with people (of different religious belief) starting from an object of the museum collection.

*4–The Performing Heritage Model*

The last model encompasses those experiences in which heritage can be interculturally performed, allowing visitors to literally practise or act another culture in a controlled context. In this model the cultural content is activated not by digital interactions (e.g. a touch screen), but by actions similar to or coherent with those that normally make the culture alive in its original contexts, such as particular dances, rituals, or gestures. This model is particularly suitable for dealing with intangible heritage, experienced by the user in the first person, playing and performing cultural practices, alone or in a shared situation. The culture of the 'other' is not therefore represented, described, or testified, but practised, thus affording a deeper comprehension.

This model is not yet present in the MeLa-Museo Diocesano experimental action both because the resources of the MeLa project do not allow for this kind of development, and because the performance script requires additional elements and cohesion between the content, staging, and the technology included. One of the goals of the project is to finalise this script so that it would be available for visitor participation.

IMG. 02 — *How the models of heritage experience can foster the understanding of cultural diversity.*

| EXPERIENCE MODEL | APPROACHES TOWARDS CULTURAL DIVERSITY | | |
|---|---|---|---|
| | **Multicultural Storytelling** (representing cultures alongside) | **Intercultural Dialogue** (highliting interconnections among cultures) | **Transcultural Practice** (identifing with other cultures) |
| **Amplified Heritage** | ✓✓✓ A confrontation between cultures is not automatically implied , but the visitor experience is enhanced | ✓✓✓ | ✓✓✓ |
| **Multifaceted Heritage** | ✓✓✓ Plurality of layered meanings creating parallels and juxtapositions or highlighting dissonances or similarities | ✓✓✓ Stimulating the reflection on contact points or frictions | ✓✓✓ |
| **Connective Heritage** | ✓✓✓ | ✓✓✓ Enabling social relations, exchange, participation, and collaboration among visitors | ✓✓✓ |
| **Performative Heritage** | ✓✓✓ | ✓✓✓ | ✓✓✓ Activating other cultures contents with culturally consistent gestures and actions |

→ **EXPERIMENTAL ACTION: FRAMEWORK, PROCESS AND PHASES**[2]

The methodology adopted is based on a close collaboration between design and the human sciences; in particular between designers that deal with the valorisation of cultural heritage and critics specialising in sacred cultural assets.

The work was developed in an iterative "research-by-design" process, going back and forth between theory and practice in a progression of design, testing, and reflection, and involving several actors at different phases of the project.

This research has been structured in two categories of activities: research actions and field-based experimental actions. The research actions define a theoretical framework for the project, combining design potential with artistic and religious content, and choosing languages and communication registers (also through new technologies) in order to allow the multi/inter/transcultural experience and to evaluate the test sessions. The field-based experiments aim to gather information through the participation of expert users. They also aim to verify the theoretical requirements of the practical process and to create a circle of content acquisition, content exchange, and content generation.

Such a framework was created in order to define a process that could be tested by real users in a real context, and to verify the hypotheses through an empirical methodology, able to be repeated in the future. Thus, this

2    The contents of this paragraph and of the following one have been debated also in the essay: Capurro, Rita, Sara Chiesa, Eleonora Lupo, Davide Spallazzo, and Raffaella Trocchianesi. 2014. "Rethinking religion representation as transcultural experience in museums: the on-field experimental action at Museo Diocesano di Milano". In *Museum Multiplicities: Field Actions and research by Design*, edited by Luca Basso Peressut, Cristina Colombo, and Gennaro Postiglione, 66-93. Milan: Politecnico di Milano.

model could be applied to different contexts, but also customised according to the specific features of the cultural asset(s) involved. This process presents two different directions of work:

→ a museological approach focused on the relationship between works of art and the knowledge of the works' content;

→ a museographical approach focused on the relationship between exhibition devices and the visitor.

Six main phases defined the general structure of the project:

*Phase 1. Institutional interpretation (research)*

The first phase consisted of defining the curatorial framework of the project and in the preparation of the first user test. In this phase the collaboration among designers, art critics and museum curators is very important because it establishes the basis of the whole theoretical process aimed at developing an actual visitor experience for augmented and intercultural knowledge.

*Phase 2. Authoritative and multicultural contents gathering (first test)*

The second phase was focused on the set up of a prototype to conduct a test with experts and specialists in the field of intercultural dialogue, religion, art history and interpretation. It is important that the experts themselves come from different cultural backgrounds, as the aim of the test is to get feedback about the prototype, and to gather content as well as interpretation on the part of experts.

*Phase 3. Data analysis and content selection (research/reflections)*

The third phase was comprised of the evaluation of the prototype in light of the expert users' feedback, and the selection and re-arrangement of these contributions in order to create a multi-vocal interpretation of the artworks.

The following phases are an iteration of the previous ones:

*Phase 4. Design of a multi–vocal interpretation/narration (research/envisioning)*

In this phase the content created in the first phase was discussed and implemented on the basis of the expert user-generated feedback (phase 2). At this point the role of museum curators is highly relevant in order to build up a coherent multifaceted interpretation of the artworks. A model of interpretation and intervention was then developed and elaborated, specifically through the use of new technologies. In this phase, the theoretical framework, the structure of the content and the register and method for visitor engagement are brought together.

*Phase 5. Performance and social–oriented intercultural experience (second test)*

The fifth phase was based on a second field-based experimental action involving non-expert users (e.g. second generation immigrants and foreign

| PHASE | ACTIVITY | | ACTORS |
|---|---|---|---|
| | Research & envisening | On field- experimentation | |
| 1. Institutional interpretation & design | Definig the curatorial structure of the project (contents curation, narration) 1st prototype design (video narration, questionnaire) | | Museum curators Design team |
| 2. test#1 (experts) | | Authoritative and multicultural contents gathering for multivocal interpretation | Expert users Design team |
| 3. Data analysis and content selection | Evaluation of the prototype and selection of expert users consistent contents | | Design team |
| 4. Multivocal interpretation design | Envisioning multivocal contents and narration 2nd prototype design (app) | | Design team Museum curators |
| 5. test#2 (general public) | | Performing a social oriented intercultural experience | Intercultural public Design team |
| 6. Critical evaluation and implementation | Evaluation of interreligious mutual understanding and envisioning new development and applications | | Design team |

communities residing in Milan). The second test was meant to evaluate the ability of the designed interpretive model to encourage intercultural dialogue and direct social engagement. This activity entailed an actual involvement of the users that were then also asked to express feedback including comments, opinions, frictions and so on.

*Phase 6. Data analysis and envisioning (research/envisioning)*

The last phase comprised a critical evaluation of the project in light of the second user test. The evaluation aimed at determining if the proposed model was successful in actually stimulating and enhancing intercultural dialogue and confrontation.

The two tests were very important phases of this co-curation process. They were conducted, conceptualised, and tailored for different visitor targets, such that expert users and the general audience were provided with different appropriate visitor paths.

Both the specialist and non-specialist paths mixed some of the six dynamics of interaction envisioned in the general frawework; these interaction dynamics included: contemplative, interpretative, contributive, explorative, performative and connective.

**Contemplative:** in this modality visitors were invited to look closely at one of the five paintings showing different aspects of the miracle in the Sala della Confraternita. A digital tablet was given to them and then this device was pointed at the painting in order to reproduce the image on the screen, triggering a video. Visitors would then watch the video on the tablet highlighting specific elements of the painting useful in understanding the composition, the symbolic meaning of the objects, the gestures, and the sacral clothing and accessories. The idea of this intervention was to increase the viewing experience through digital technologies, amplifying and enriching temporal and spatial horizons of vision, and also to show some of the less obvious links among the works.
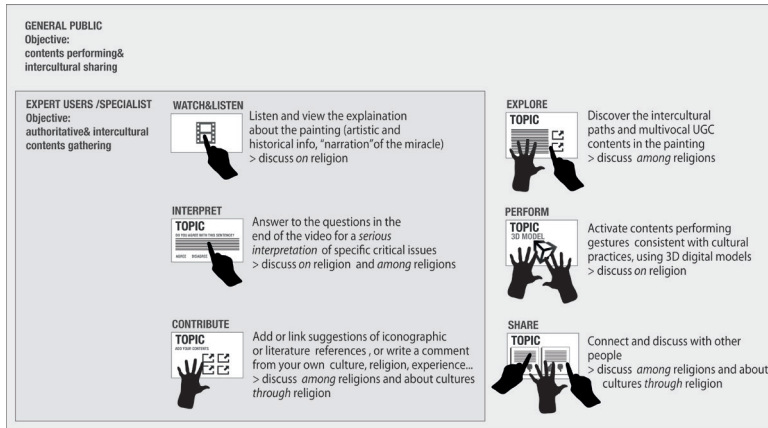
**Interpretative:** at the end of the video-narrative a questionnaire appeared on the device, encouraging visitors to relate information they had received through the aforementioned video, together with their own previous knowledge. The questionnaire proposed some topics about the subject of the painting, but also about crucial topics emerging from the painting. Technology itself acted as a facilitator, providing the user with different interpretations of the subject and stimulating critical reflection.

**Contributive:** visitors could add a personal contribution directly to the tablet's folders (i.e. a literary, historical, philosophical or artistic reference; links to other topics or objects and their meanings; or an imaginative representation of their religious view or expression of their culture). This kind of dynamic contribution involved the direct participation of the user to provide a personal interpretation of the work. Further, the visiting experience thus embraced the visitor's previous knowledge, cultural references or relevant quotations. In this way, a sort of 'basket of religious references' is enriched by the contribution-to-contribution approach—thereby enhancing future visits.

**Explorative:** visitors explored intersecting paths and intercultural meanings through the use of technological devices and/or the intervention of cultural mediators. Each painting offered visitors several levels of reading and interpretation. In addition, they could discover several links between sacred objects represented in the featured paintings, as well as in other works within the museum collection, or works in collections from around the region. This intervention creates a model of cultural experience consisting of a visit in situ and also featuring external references, beyond the museum site.

**Performative:** one of the aims of the project was to introduce performative (or gestural) action through digital technologies. The general user (non-specialist path) should be able to activate some content on the tablet with gestures and actions consistent with numerous cultural practices, avoiding standard interactions with the technological tools and stereo-

types of interaction (i.e. touch, click, move and drag). This methodology then aims to create the memory of the visit through a memory of the body. The theme of the featured paintings has a strong ritual content; therefore the introduction of the gesture in the visit is coherent with the framework of the expected cultural experience.

**Connective:** digital technologies connecting people to cultural heritage should act as a facilitator for social relations. Community-building processes should be fostered as a result of direct social involvement, or through a consistent presence of technology, allowing a better knowledge of other cultures. The museum should have this aim: to increase intercultural dialogue through a transcultural practice. In this way this "connective" dialogue can continue beyond the museum visit and outside the museum walls, implementing intercultural knowledge through works of art.

As a result of this research, the visitor experience was conceived as a mix of different possible activities corresponding to the six interaction dynamics mentioned above. Also it is important to note here that these activities were not meant to be performed in a chronological order or necessarily all together. While for the experts we hypothesized a path composed mainly of listening/watching/interpreting/contributing, for the public the path was composed mainly of listening/exploring/performing/sharing. As described later, not all of these activities were fully developed in the design development phase.

### → EXPERIMENTAL ACTION: CRITICAL ASPECTS

The research-by-design approach adopted by the design team, the four models of visitor experience and the six dynamics of interaction needed to be tested in practice. Therefore the experimental action was planned in order to test some of the design assumptions and directions. In particular the experimental action was meant to investigate the possibilities provided by technologies for the following: (1) enriching and amplifying the cultural contents of a heritage experience (i.e. the augmented heritage/museum model), (2) offering a multi-vocal perspective to create a multicultural experience related to contentious issues (multifaceted heritage model), (3) transforming the visitor experience from a contemplative to an interactive one, possibly activating social relations (connective heritage model), as well as gestures, actions and behaviours to explore the institution's content (performing heritage model).

This experimental action is meant to balance the double nature of the research-by-design process: a process composed of "meta-design" (Deserti 2003; Collina 2005; Celaschi 2007; De Moraes 2010), an activity that is theory and research driven, characterized by problem setting, modeling and envisioning, and complemented by a design activity, practice led, focused on concept generation, prototyping, testing and evaluation and possibly further development. The research-by-design process is described in Chapter 4 of this book.

While the meta-design is usually open to different possibilities, the design phase is context-based and site/problem specific. Because of this, some aspects of the design needed to be defined before commencing with the operative structure of the experimental action.

1. First, the selection of a relevant topic as cultural content of the experience became a priority. It was important that the chosen topic was suitable to be explored in a meaningful multicultural dimension, not avoiding dissonant or controversial issues. After exploring various possibilities (art museums, material culture, and local museums) a religious museum was chosen. Religious heritage has been considered a stimulating cultural content to challenge the visitors understanding, to empower the sense of belonging or detachment of identities, and most importantly, to stimulate debate and dialogue exploring the intercultural potential of religion. The topic of religious heritage and its implication in the museographical discourse in supporting intercultural dialogue and mutual understanding is framed in Chapter 2 of this book. In particular, here we want to underline how the experimental action had the aim of reclaiming the original function of religious art in a contemporary multicultural and multi-religious society. For this reason the content of the experimental action is not just religion, but religious heritage, that is the result of a process of "heritagization of the sacred" (Meyer and De Vitte 2013, 277). While some religious topics (like dogmas) seem sometimes too far from daily life, others (like beliefs and rituals) very often represent contested terrains where religious identities (and the related cultural identities in the background) are questioned or undermined. Museum exhibitions and educational activities, as well as artists are exploring and interrogating such contentious issues.

In the Museo Diocesano di Milano, five paintings from the eighteenth century, of the so-called "Sala della Confraternita del SS. Sacramento e S. Caterina", representing various miracles about the Eucharist, were chosen because of the exclusively Christian topics they address (miracles and the Eucharist) and because their figurative, as well as iconographic language can be difficult to understand, not only for non-Christian or non-Catholic people, but also for contemporary Italians with a religious background. Because of this interpretive challenge associated with the paintings, they have become associated with a much wider range of themes belonging to the everyday cultural sphere: pilgrimage, disease, faith, pain, safety, intercession, etc. To make it easier for the public to access, the content presented has been divided in the final prototype into groupings of artistic and historical info, and based on the elements represented in the painting (divided into characters, gestures and objects). With each of these groupings possible related intercultural issues and links to other works of art of the museum are also presented alongside the primary material.

It is necessary here to underline that the curators as well as the director of Museo Diocesano could not be directly involved in the design activities, but were available to act as dialoguing partners in the evaluation of the project and its results. The process of the curation of the project is reported in Chapter 3 of this book.

2. The second aspect considered in developing the project was how best to exploit the visitor experience as a real occasion for active engagement in a multi-cultural environment, that goes beyond mere entertainment. This engagement was therefore conceived as an interactive participation and contribution, ideally distributed throughout the entire design and implementation process. Many dynamics of interaction mediated by technologies (listen & watch, explore, contribute, share…) have been envisioned in order to strengthen the project's content and increase the potential multi-vocality of the interpretation. This multi-vocality is aided by including user generated content (UGC) and by continually adding to this content, allowing the visitors' contributions to interact with each other in a discursive and dialogic exhibition design strategy, in a seemingly endless multi-layering process intertwining museological and museographical aspects.

Operatively, this work led to two different co-design phases (called tests), in which users of different experience levels (experts and generic public) and backgrounds (religious) have been involved both for testing and evaluating the content curated by the researchers (a video-narration and, in the next stage of development, an app) and for providing relevant cultural references—according to their perspective and cultural and religious background—associated to the content narration and architecture designed by the research team. The two tests are described in detail in Chapter 4 of this book, which further describes both the added value of involving the users in a research-by-design project and also the difficulties and risks involved, including the danger of over-simplification and the potential to offend and disrespect.

The activation of a user engagement strategy, such as this one involving a highly open and multi-vocal co-curatorial design process raises many critical dimensions. Historical and artistic knowledge are aesthetic, intuitive, and subjective (Huizinga 1971), and due to this subjectivity, the interaction dynamics may vary depending on the target. If the experience is intended for use by experts (scholars in museum studies, experts of religious issues), it should assist the process of interpretation. If it addresses the general public it should offer a consistent and comprehensible representations for educational purposes. The first test was dedicated to experts and was used to gather and structure the multicultural content through a formal questionnaire, following the initial video-narration (contemplative, interpretative and contributive interaction). The second test (for the general public) was conceived as a means to experiment with performative and socially-oriented intercultural experiences, and to capture visitors' interests, empathy and imagination (Schell 2003). The app and the content architecture have been designed to show cohesion and coherence between institutional knowledge and relevant user generated multi-cultural content. It also provides a narrative-based multi-sensorial and expanded experience, enabling the three-tiered interaction model of Pares and Pares (2001): explorative (content navigation), manipulative (gestures required for the content's activation, like pointing at the paintings or at specific details) and contributive interaction (user comments and reference additions).

→ Concerning content authorship and authoritativeness, comments and contributions can vary drastically depending on the competence of who is curating, or rather "producing" new content: this asks for a careful consideration whether these new contents can be considered relevant or not. Crucial factors in this work are the creation of trust in UGC, and also dealing with negative feedback and managing Intellectual Property Right (IPR). Authoritativeness can be developed by avoiding "random voices from an undifferentiated mass of users" and instead selecting well-profiled users. Another method is to clearly differentiate content, via labelling or by a moderation model, thus delineating the museum-authored content from the UGC. Therefore in the co-curation process and in the two tests of the experimental action we deliberately searched out the UGC of a group of experts in the field (called super-users). Further, in the final content architecture of the mobile application the UGC can be clearly distinguished from the museum authored content. Comments and content produced by the super-users during the test phase of the project are included in the curation process illustrated in Chapter 3, while the questions raised around shared authorship are analysed in Chapter 4. Of course more open models of end-user collaboration and co-creation are already used in the digital environment and a similar approach has been tested in the second field test, but with a controlled panel of museum visitors. Hopefully in a further stage of development of this experimental action, we will be able to manage and design for the participation of the general public in real time.

→ It has been challenging, during the two tests, to stimulate and enable visitors confrontation and intercultural exchange in real time during the visit by the use of the technologies and devices. Digital and mobile technologies provide variable opportunities for interactivity, but not necessarily for social interaction, co-participation and collaboration, because they are mostly concerned with providing individual users with the ability to operate or manipulate the cultural content (Heath and Von Lehn 2003). To activate a real connective dynamic among visitors requires a shift from content juxtaposition to dialogue, through the establishment of social relations. But while the adoption of a discursive interpretation strategy (Affleck 2008) is possible through the use of digital devices supporting a dialogic process (Kester 2004; Kuo Wei Tchen 2011, 83), the social exchange is relatively unpredictable and not always well suited to topics that for instance ask for intimacy and reflection. In addition, even if peoples' interaction and collaboration can be initiated via ICT, this does not necessarily imply a mutual understanding being established among cultures. During the second test for this project (with the general public), sensitive topics have been selected and proposed in the app as subjects for knowledge and "virtual" conversation, with the aim of establishing, through the content interlinking process, at least indirect relations between the authors of the comments. This process could not be implemented in real time because the comments were not im-

mediately published by the app due to limitations put in place at the museum's request. Instead a collective face-to-face discussion was organized to address this gap, which ultimately revealed that a discussion of the topics at a general level was more possible and inspiring for the visitors than the feasibility of adding relevant and significant comments in the already so-detailed content structure of the app. The participation of an intercultural mediator also showed that providing good stimuli is important for opening up intercultural potentialities. The categories of objects and gestures for instance, proved to be very effective in stimulating and eliciting parallelism among diverse religions. At the stage of final prototyping, the system should be open to the users comments at the more general thematic level, and well-focused questions should be added to the app to simulate the important role of intercultural mediation and eventually enable, via technological mediation, intercultural dialogue on the proposed content.

→ With this project, it has been particularly difficult to join the narrative model with spatial narratives, i.e. integrating gestures and performances in the space in order to activate the cultural content with culturally consistent actions by the visitors. Active visitor experiences (such as performing and practicing the heritage itself) seems to be the most suitable to support the understanding of a heritage made of rituals, liturgies and living behaviours. Digital technologies could be designed to make such intangible concepts more approachable through a performative mode. In addition, according to Schechner (1984), the concept of performance belongs to the intercultural tradition, through a process of continuous re-interpretation where rites are events that can be actualised and restored from the past to the present time, capable of an intercultural purpose. In this project, the possibility of testing the performative heritage model has been affected by the specific topic of the experimental action. Due to the religious nature of the chosen work there was a high risk of showing disrespect. Even if the topics of the paintings have a strong ritual content associated with peculiar religious gestures (elevation of the Eucharist, kneeling), which could have been offered as an activity to the visitors, according to the museum curators, their performances could have been perceived as a spectacularisation or misunderstood as blasphemy and couldn't be ensured to have followed a proper process of knowledge and educative learning. Thus the project's initial interest in visitors' behaviours and performances has been re-focused to instead ask visitors about meaningful gestures and actions that impact his or her consciousness and reinforce memory. This is surely one of the main aspects where the final prototyping differs from the open-ended meta-design.

3. The last aspect to discuss here is related to the selection of effective technologies and media formats that, fulfilling all the hypotheses and requirements of the experimentation, would have better augmented the contents, initiated the dialogue and connected the visitors. Through a more

ideal choice and mix of technologies, visitors should have been able to: access and explore parallel interpretative paths along the same work of art and details linked to different cultures or religions; browse content and media related to other religious heritage, such as objects and works of art within the Museo Diocesano or other religious museums; enjoy additional virtual content like 3D models; activate this content by performing and simulating gestures and actions that may be consistent with the religious content to better understand rituals and beliefs (e.g. using ritual or liturgical objects, etc); and finally, to share opinions and connections in real time with other visitors.

At the conceptual stage, different possibilities such as portable tablets, interactive tables, mixed reality environments, projections and kinect sensors were considered and synergistically combined to address each one of the different project requirements and briefs. For instance, projections, screens and VR were considered as means to augment and amplify the museum's existing content. Meanwhile interactive screens or tables and personal devices would be well suited for users to contribute and share content. Due to budget and time constraints, and above all, with the intention to intervene in such a way to make the lowest physical impact to the museum exhibition setting, the final choice were portable tablets. This further aligned with the ongoing trend of using personalizable portable devices in museum visits. The tablets were offered to visitors for the tests, but if the app would have been available for download, visitors could have also used their own devices.

Because of this technological necessity not all the aspects envisioned in the project's framework had the chance to be explored through the experimental action. In particular, the performative heritage model was the area most affected, as visitors were more or less restricted to the use of standard gestures when using the interface device. Nevertheless, even not culturally connoted gestures can serve for reinforcing experience and memory. Therefore, taking into account the risks of oversimplification or disrespect, more common gestures like pointing at the painting and zooming in on details have been included in the interaction dynamics to mark the user's active role in the process of discovery.

The other planned design aspects have been pursued (fully or partially) simply by the use of tablets thanks to an approach mixing interactivity with engagement and learning (Roussou 2004). The cultural experience has been augmented through the use of video narrations that actively involve the visitors physically, intellectually and emotionally. The narrative has been made multi-vocal by the multilayered interpretation and multicultural User Generated Content (UGC) provided in the app, and it has been made social by allowing visitors to connect with one another via the comments sharing system within the same app.

According to Roussou, designing experience is about creating a psychological space (Roussou 2008, 232). During the experimental action, through the use of quite simple digital and mobile technologies, an "ecology" of cultural contents (according to Dziekan, "a dynamic and interconnected system of forms, spaces and relationship") has been designed, that worked as a virtual

"exhibition complex" creating an expanded sense of spatialisation, temporality, and sequencing of interactions.

The technological development and mock-up of the two apps is described in Chapter 5, while the aspect of user sociability and its relationship to technology is discussed in Chapter 6.

### → FINAL CONSIDERATIONS

This experimental action has originated from the wider research framework of the MeLa project. Alongside a critical reflection on the use of design and digital technologies for envisioning the future of museums, this framework aims to address many considerations on multicultural issues that stem from the fields of museum studies, cultural studies, curatorial and artistic research, and cultural policies. It seems therefore useful to dedicate some space to zoom-out from the experimental action scale to the one of critical observation and insights drawn from the overall research process. This wider view allows us to frame this single experimental action with broader recommendations and implications, especially in relation to interpretation, representation, and technology within the realm of museography, while also allowing us to better examine the cyclical relationship between research and practice.

One of the main concerns of the museum in an age of mobility and migration of people and ideas, is how to discuss and dismantle the politics of display. Heritage itself is migrating, magnifying dislocations, exchanges, and contact points among cultures. Museum and archival strategies should address this complexity: envisioning new and multidimensional modalities for cultural heritage preservation, interpretation, representation, and exhibition. Among the insights developed in the museography theme, the entwining layers approach (see MeLa Critical Archive on line, http://www.mela-archive.polimi.it) allows for the possibility of upgrading the museum content on a temporary basis, with exhibition, installation, performances, and programming that are overlapping within a permanent space setting. The experimental action at Museo Diocesano di Milano consisted of a prototype layer of digital content added to the works of art: this content changed the visitor's approach to the collection without making any changes to the exhibit itself. The narrative museum approach is a content-oriented approach of narrative construction that transforms the museum to a stage where the visitor can physically and emotionally interact with the exhibit in an engaging experience. The experimental action, even though it wasn't realized as its own physical exhibit, tried to develop a narrative approach: using story telling as the methodology for the video-narration and to stimulate visitors to perform actions to activate content.

The outreach museum approach is concerned with museum practices and programming developed outside the museum walls to potentiate the social role of contemporary museums and involve the local communities in participatory processes fostering a bi-vocal relationship. The experimen-

tal action has produced an app for museum content that at this time is only accessible within the museum space. However, the experience can be extended outside and after the museum visit by consulting the app, adding new references and comments, and sharing them within one's social networks. In addition the user contribution to the app content succeeded in fostering a participatory process for engaging the community outside the museum. Finally the new (im)material approach deals with exhibition and archival strategies allowing the re-enactment and actualisation of the intangible dimension of the heritage as a living asset. Through the experimental action and the app produced, we have been explored opportunities to update and actualise the understanding of religious heritage and its evolution in meaning for contemporary society.

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# Religious assets and cultural heritage as tools for intercultural practices in museums and exhibitions

→ **RITA CAPURRO, ELEONORA LUPO**

→ **RELIGION: A DIFFICULT TOPIC**

Within the context of a European society that is moving towards a multi-ethnic and multi-religious horizon, different and apparently dichotomous reactions are emerging within the realm of religion. On the one hand, we see a trend towards fundamentalism, and, on the other, a widespread search for the sacred (Marchisio 2010) and a renewed interest in the knowledge of religions.

Religion seems to be the most difficult element in the dialogue between different cultures. Indeed, religious conviction is often identified as the main source responsible for frictions and conflicts among different cultures. The abused term "religious war" emphasizes the risks and dangers connected with the interaction of different religions. The cultural friction generated by religious issues, within a situation of dissemination and rooting of different cultures, reveals a societal fear of losing one's cultural identity. In fact every religion has initiation rites and rules, which encompass the whole existence of the individual or of the social group (Habermas 2008) – these sacred activities are not divorced from the other aspects of lived experience.

The reasons for inter-religious difficulties are complex and cannot be exhaustively treated in this essay. However, it is interesting to underline that in the European context, instances of protectionism carried out by socio-political movements—which often cause the negation of the rights

**PREVOUS PAGE, IMG. 05** — *Museo Diocesano di Milano. The Diocesan Collection. Photo by Raffaella Trocchianesi.*

of religious minorities—are ever increasing both in strength and geographical breadth.

The cultural difficulties in Europe, which are currently fiercely emerging in the field of religion, reveal a new perception of differences. On the one hand, these contrasts are perceived as something to deny, something to be considered as somehow separate, contingent, or on the border of concern. In contrast, they can be viewed as something to welcome and an opportunity for fostering a pacific coexistence. In this context, inter-religious dialogue can be considered a main tool for undoing prejudices and facilitating mutual understanding of such differences. Moreover, this interaction can assume the form of intercultural dialogue as the cultural elements generated by religions form a common field of reference for people living in a community or country, regardless of their devotion to the religion itself.

Thanks to both their aesthetic value and their mode of communication—which does not present the challenges of spoken language—the realms of art and religious cultural heritage are certainly relevant as elements that can contribute to building dialogue among religions and multicultural societies. In this sense, it is not a surprise then that the first important event for interfaith dialogue, the World Parliament of Religions held in Chicago in 1893, included exchange via the arts among its main topics.

### → RELIGION AND MUSEUMS

Critical and comparative museology is the theoretical base that allows for a reconsideration of the museum's role and voice. Taking into account cultural similarities and differences in order to reshape exhibits and narrations is critical from a cross-cultural point of view (Kreps 2003).

Indeed, one of first specific studies on this topic reflects on the interaction of Western tourists experiencing non-Western cultural heritage within museums with religious collections or within religious sites (Kreps 2011). Today Western museums are reflecting on the need to extend their tools of interpretation, in order to include elements for a better comprehension and examination of Western cultural heritage in all its meanings, including its religious aspects.

In their effort to present religion and religious objects, national and traditional European museums are still deeply influenced by the Enlightenment idea that considered museums as cultural sites where collections and objects should be interpreted in relation to their aesthetic, historical, and cultural meanings, and thus exclude all potential religious significance (Poulot 1994). One can then argue that this has caused a void in the representation of religious cultural assets (Paine 2010). The modernist idea of the neutrality of museums is the fundamental cause for the loss of meaningfulness for religious objects in museum collections. A substantial part of cultural heritage throughout history has some connection with religion (Ries 2007) but often in their presentation, the spirituality, rites, and worship related to these objects is

generally omitted, creating a metaphorical loss of keys for understanding.

Moreover, the negation of the religion values can cause a dangerous neutrality, When the border between the profane and the sacred is not accounted for, the museum can become a "battleground" (Dubin 2011), as in the case of the incident that occurred at the St. Mungo Museum of Religious Life and Art in Glasgow in 1993. On that occasion, a man caused severe damage to a statue of Shiva for reasons connected to religious fanaticism. At the time, the museum in Glasgow was a rare example of museums dedicated to religions and their display. Despite its intent to provide a neutral display of such objects for the public, in the perception of its visitors the museum's activities could be interpreted as desacralizing syncretism. After years of collaboration between the museum, the community, and representatives of different religions, the museum is now generally accepted by the public as a place for mutual knowledge. In fact the discussion on religions in museums rarely leads to problematic issues when the representatives of religions are involved in the process of the representation of the religion itself (Reeve 2012).

The radical rethinking of Western collections of other cultures can be considered as a Pandora's box that in turn has generated a new consciousness regarding the need to rethink the museums of art. Further, the religious aspects of collections are increasingly being considered as a pivotal element for redesigning interpretation in museums (Capurro 2013). Within historical national museums this shift has also begun to occur. Among others, an emblematic case of how religion is considered in an unusual way to museums is represented by the exhibition *Seeing Salvation*, on view at the National Gallery of London in 2000. The exhibition was dedicated to the representation of Jesus Christ and it put in evidence the strong link between representation and Incarnation, characteristic of Christianity. The exhibition was an extraordinary success, and within the museological community it generated a reflection on the potentiality of new methods for highlighting the religious aspects of art. Additionally the popularity of the exhibition, proved that the religious aspects of art were of interest to various Christian communities of worshippers, but also equally of interest to non-Christian visitors who, through the exhibition, could better understand Christianity's relationship to European cultural heritage.

Another example of this type of museological activity is represented by the Victoria & Albert Museum, where specific educational activities are tested to understand the best ways to facilitate dialogue in the museum through knowledge, sharing elements considered elementary within European culture but not necessarily well known for people from different cultures (Nightingale 2010).

The introduction of religious aspects in the interpretation of collections of Western art is slowly spreading in many museums in the world, though this approach  is not universally considered the best method because religion is often still considered as a "fear topic" (Benoit 2010).

A specific note should be added here for confessional and other religious

museums. Specifically in Europe, in the last ten years, the foundation and the spread of Christian confessional museums has been of particular relevance (Santi 2013). These museums have varied collections, and are often very active in the representation of history, values, elements of faith, and educational activities. As museums, these institutions are social places of education, not tied to religious practices[1]. Consequently, for religious representatives, they are ideal places to develop cultural mediation, especially for those who are culturally far from the religion represented. One such confessional museum is the *Museo Interreligioso di Bertinoro*, located near Forlì (Italy), which is considered a space for discussion and dialogue for the believers of the three monotheistic religions of the Mediterranean area. It is important to underline that even if some confessional museums are in fact focused on explaining the characteristics of a religion, the theme of intercultural and interreligious dialogue remains crucial.

In contrast to this, the majority of ecclesiastical museums use the keys of religion in art and cultural heritage primarily for a pastoral function, targeted to Catholic worshippers.

Nevertheless, among ecclesiastical museums there are also meaningful examples whose activities could become models for others. An interesting example in terms of the possible dialogue among religions can be found in the missionary museums that have developed a deep reflection on the contact between different cultures, due to the fact that these mis-

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1   Excluding the Creation Museum (Petersburg, KY, U.S.A.) and few other examples, the museums made by religious communities are not sites of doctrine and preaching but sites of presentation, encounter and discover of collections very various. I used "confessional" to underline the foundation and property made by a religious community and to distinguish them from the museums of religions (the ones that want to represent various religions in the World e.g. Taipei Museum of Religions).

IMG. 07 — *Museo Popoli e Culture, Milan. The experience of the project "Tam Tam – Tutti al Museo" for the creation of an intercultural program in the museum. Project by Museo Popoli e Culture, Milan, and Fondazione Ismu - Settore Educazione - Patrimonio e Intercultura, Milan. Photo courtesy Museo Popoli e Culture.*

sions were based on specific approaches of inculturation. This model of working is seen in the *Museo Popoli e Culture* in Milan, which engages in many educational activities and action-based research in the field of intercultural dialogue.

→ **EXHIBITIONS AND ARTWORKS**

Alongside the permanent collection of museums, temporary exhibitions, artist commissions, and performances can also be designed to challenge religious issues in an intercultural way. These activities can then facilitate different modes of experiencing and transmitting religious issues and heritage, taking advantage of its intercultural potential and its role as a privileged place for the possible encounters of displaced communities and dissonant stories.

The representations of religious "otherness", and its strong relationship to personal and group identity, can be used to develop intercultural understanding, also with a range of "frictionary" possibilities, including: opportunities for contesting identities, confronting or questioning diversity, and dialoguing among potential these identities and diversities.

In some instances the exhibition experience simply attempts to challenge the representations of religions and the sacred in order to stimulate a reflection on it, while in others, religious issues are placed within an explicit political discourse with a more extensive socio-cultural aim.

In the work of curators and artists, this focus on representations of religion is used principally to elicit or subvert religious identities, and the concomitant contingency and fluidity of these convictions. Whether the

visitor is part of the same belief system or from a different one, this approach stimulates a discussion on religion and opens discussion *among* religions. A focus on the politic of religions instead is when religious issues are intertwined with issues such as identity, ethic, gender and socio-political events, in order to use a debate on religion or *among* religion to pursue a reflection about mankind's values *through* religions.

In particular, many contemporary artists explore the political boundaries of religion in their work. The artistic mode of working allows them to both propose questions around religious identity in a provocative way, de-contextualising the symbols of religion and exposing them to contamination via a secular and possibly insolent interpretation, and in a dialogic one, using a work of art as a *dispositif* for social conversations. As discussed in the social sciences, and also within the ambit of design for social innovation[2], these works have the capacity to create debate of untapped or problematic social issues and possibly to facilitate their understanding and negotiate potential solutions or agreement.

The following section describes some examples of both temporary exhibitions and individual artists' works that give evidence of these two potential impacts.

*Challenging the representations of religions and the sacred*

Many of the case studies using this approach relate religion with elements of the socio-technical systems and how these can affect the perception and understanding of religious values. For example, these project generate via new media or through new technologies aspects of mass communication that transform the reproduction of religious rituals in media objects.

The first case study is the temporary exhibition, *Medium Religion*, held at ZKM in 2008-2009. The exhibition aimed to demonstrate a wide "return to religion" due to its media aspects that moved religions "from the private sphere of personal belief out into the public sphere of visual communication." In this sense, religions function as machines for the repetition and mass distribution of mechanically produced images. [...] The included artists placed religious symbolism in an unconventional context, provoking a different mode of perception in the audience. This then enabled a critical analysis of the respective religious iconography, as well as its transfer to a cultural modernit[3].

One work in the exhibition was the installation *bios [bible]* (2007) by Rotolab[4] that raises the question of the reproducibility of religion by new digital technologies (Groys 2011). The work performs the religious ritual of Bible handwriting by mechanical reproduction in order to deliberately provoke reflection.

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2   Jégou, François. 2006. "Service Notation Tools to Support Strategic Conversation for Sustainability." *In Perspectives on Radical Changes to Sustainable Consumption and Production (SCP)*, Sustainable Consumption Research Exchange (SCORE!) proceedings. Copenhagen: Network.

3   http://www02.zkm.de/mediumreligion/ accessed December 21, 2012.

4   Group composed by Matthias Gommel, Martina Haitz, Jan Zappe, they live and work in Karlsruhe (D).
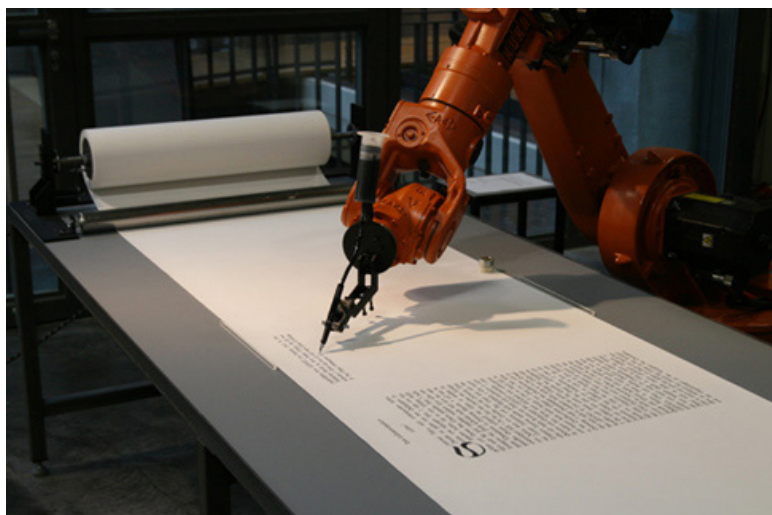
In contrast to this, there are also examples where the attempt at representing religion is not provocative per se. Instead the juxtaposition of symbols and beliefs of different religions aims to stimulate their parallel confrontation and dialogue as a means of reciprocal knowledge and encounter, in order to open discussion *among* religions. These examples are valuable also for their ability to: address the rhetoric of power and representation; make visible under-represented intangible aspects of cultures or cultural minorities; and to transmit them to the audience to create new understanding around religion. Some projects that exemplify this aim are: the exhibition *Sacred Words and Images: Five World Religions*, at Phoenix Art Museum (curated by Janet Baker), and the work *Juxtaposing religions*, a book shelf designed by Mike Simonian and Maaike Evers[5] and produced by Blankblank, where, thanks to a grooved seat, the world's more influential religious texts are brought together and symbolically presented at the same level to celebrate their coexistence and suggest equality.

*Inserting religious issues into the political discourse*

In this approach, the artistic or curatorial activity focuses on the political aspect of religions, thus offering a means for presenting dissonant stories and heterotypic experiences in an assertive or contesting way, and possibly addressing intra-cultural and inter-cultural frictions.

The first example of this approach is the exhibition A*rte religione e politica. Incontri ravvicinati dai 5 continenti*, curated by Jean-Hubert Martin, at Contemporary Art Pavillon PAC, Milano, from 8 July-18 September 2005. According to the curator, the exhibition aimed to use art as a means to stimulate confrontation among various spiritual beliefs and their connection with forms of power within very different cultures, giving visibility to the high political engagement of religion.

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5    www.mikeandmaaike.com accessed December 21, 2012.

Another example that uses religious practices in order to question political issues like gender, is the installation by Helen Gorrill, *Benedict XVI Confession Chambers*[6]. The installation is composed of interactive screens and, according to the artist, "viewers are invited to make their own confessions and leave them hidden or revealed within the chamber (…)." Gorrill further explains that her "wish is to inspire people to look more closely at feminist issues inherent within the Bible and Christianity itself"[7].

Two additional artists that address intercultural frictions within their work are Paul Chan and Oreet Ashery, both of whom were included in *Medium religion* at ZKM. Paul Chan (born in Hong Kong and based in the USA) is well-known for his political activism since 9/11 and the war in Iraq. His computer-animated video *1st Light* (2005, part of the series *The 7 Lights*), describes a vision of Biblical elation, the ascending of the believers to Heaven, while eluding at the same time to 9/11. The floor projection shows shadowy silhouettes of bodies and everyday objects both falling to the ground and equally rising towards the sky.

Oreet Ashery, an Israeli artist based in London, creates performances to examine cultural, religious, and sexual identity. Her video *Oh Jerusalem* (2005) shows the artist alternating between the stereotypical dress of an Arab male and an orthodox Jew.

Meanwhile, performance-based works are equally effective means to represent and possibly bridge religious divisions. One example is the art performance and installation *Birdprayers* by Indonesian and Belgian visual artists Arya Pandjalu and Sara Nuytemans. In this work, the artists ask visitors to station themselves in various locations across the city or town, masking themselves with custom-made birdcages on their heads. The birdhouses are constructed in the shapes of religious worship houses to symbolize the four dominant religions in the world: Islam, Catholicism, Judaism, and Hinduism. Such creations illustrate how in many ways such structures and walls delimit the boundaries of the human mind.

### → CONCLUSIONS

With this chapter we wanted to give some evidence to one of the main assumptions that guided the experimental action described in the book, i.e. the selection of a religious asset as a thematic field of experimentation aimed at investigating its potential for intercultural dialogue.

In considering the representation of religious matters, in relation to the choice of works from a collection, the creation of exhibits, and the development of educational programs, it is critical that museums develop a narration that reflects the contemporary society or a part of it. Every museum, regardless of its collection or mission, is a place for contemporaneity, "in the service of society and its development" (ICOM definition of museums, 2007). Consequently, it is the mandate of museums to attempt to improve society, including: pursuing strategies and goals to facilitate

6    http://www.modernreligiousart.com/#/helen-gorrill/4553075938 accessed December 21, 2012.

7    http://www.modernreligiousart.com/#/helen-gorrill/4553075938 accessed December 21, 2012.

IMG. 09 — *Birdprayers, Arya Pandjalu and Sara Nuytemans (source: http://www.saranuytemans.net/birdprayers/).*

dialogue among different cultures, resolving issues related to cultural dissonance, and preserving the immaterial heritage linked to its collections. Among museological subject matter, religious heritage is the one that seems to provide a true challenge to museums due to the multiplicity of levels of its interpretation.

The contemporary production of art and independently-produced exhibitions don't have an explicit educational responsibility and are instead characterised by their relative autonomy and freedom. Because of this freedom to deviate from any institutional mission, they can undermine religious values, presenting elements that could offend the members of these faiths, and therefore exacerbate cultural frictions or deter interreligious dialogue. Nevertheless, many artist— often through their position of critique—engage in productive political work related to religious issues, ranging from challenging religious identity, giving voice to underrepresented groups or ideas, and stimulating confrontation and dialogue among polyphonic voices. In these activities they are oriented to themes analogous to the ones developed in museums. This is particularly the case in the representation of religion, wherein artists examine the interaction of religions as an instrument for intercultural dialogue and the creation of new narratives of contemporary spirituality.

This is because religious issues are representative of contemporaneity and the complexity of the mutual relations between religion, society, and individuals.

Museums can improve their educational activities and methods of interpretation through engaging with the field of religion as a means for triggering social conversation. Religious museums especially should explore these boundaries of intercultural and interreligious dialogue, developing and exploring new forms of education, interpretation, and narrations of religious heritage through more performative and participative approaches, such as the ones seen within contemporary art.

Though it was developed through design and digital technologies, rather than artist-led, our concept for the *Museo Diocesano di Milano*, has the same inclusive attitude and methods – overlapping narration of existing historical and artistic artworks with new layers of intercultural interpretations through user contribution and social exchange.

*This essay is the result of a joint work of the two authors. In particular, Rita Capurro wrote sections 1 and 2, and Eleonora Lupo wrote sections 3 and 4.*

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# Appendix:

Museo Diocesano di Milano: Mission and Challanges

**IMG. 10** — *The Diocesan Museum of Milan. Photo by Eleonora Lupo.*

# Interview with Paolo Biscottini

*The Diocesan Museum of Milan is a very interesting example of a museum, because it is a young institution, with a rich collection, and a meaningful program of exhibitions and other activities. However, the mission of the museum is also strongly oriented to a social mission, in connection with the cultural project of the Church of Milan. Considering this context, what are the challenges for this institution in our contemporary multi-ethnic and multi-religious society? What strategies, objectives, and projects should the museum take up to address the new requirements of the society?*

The Diocesan Museum of Milan was founded in 2001 with the basic purpose of preserving and enhancing the immense historical and artistic heritage of the Diocese Ambrosiana. At the same time, the museum has taken a keen interest in establishing a meaningful relationship with the large metropolitan city. This decision arose from the belief that the Diocesan Museum must first be a museum of social relations and that only within this context can it then endeavor to implement real socially-minded initiatives.

This has meant rethinking, in daring terms, the concept of communication. No longer understood simply as transmission of information, but instead as an interpretation of the often unspoken terms and questions surrounding citizenship. The issue has led to a precise analysis of the interlocutors, which has made clear the truly heterogeneous nature of our community.

Milan is a city in which different communities live together, intersect, and overlap from multiple angles of society: social, religious, cultural, racial, and generational. Thus, there is not only one communication channel for the museum, but a variety of initiatives aimed at conveying its mission, its history, its identity, and its desire to make a positive contribution to improving the lives of everyone. The issue of multi-religiosity and the multi-ethnic character of the city's population has led to a special commitment for the musuem. The Diocesan Museum is a museum of the Catholic Church, but it is not an ideological museum. Therefore the museum's desire to develop dialogue with diverse faiths and ethnic communities suggested first of all the adoption in the museum's educational activities, mainly, of different languages which take into account the specificity of the interlocutor. None of this can only be stated, but must become the program of work, because this is the challenge that the museum considers indispensable.

The main objective taken up by the museum is that the sacred character of the works of art in the museum is not considered as a discriminating factor, but instead as a unifying one, as it expresses the fundamental questions of every human, whatever her or his origin. In determining the educational trajectories of the museum, the theme of inter-cultural dialogue is central and touches every aspect and every initiative of the museum. From the permanent collections to temporary exhibitions, the museum has to be aware of the dialogue that is established with a variety of people. This can impact for example, how a visitor interprets a wall label or caption, but more broadly, how the sense of the museum is felt and communicated to the public.

Perhaps here, an example could offer clarification. The Annunciation to Mary is for Catholics a topic that leads us directly and easily to the Gospel story and the mysterious announcement of the incarnation of Christ in a virgin woman. If, in other words, the mystery contained in the iconography of Annunciation is easily communicated to Catholics because of this understanding, in contrast, the same could not

be expected of a visitor belonging to a different religion. Similarly, if the interpretive materials also began with the Gospel story as source, it would be critical to put more emphasis on the significance of the announcement and of the calling for every man. Another theme which may be disclosed is the waiting, because it is evident that the Annunciation can not simply be recounted as a story from a literary source, but must be interpreted as an unveiling of what is perceptible, even for those who do not belong to the Catholic faith.

Announcement, vocation, and waiting are themes that can easily reach different cultural communities. We believe, however, that is not enough to talk about this, but instead make use of new technologies and tools to assist the manifestation of these ideas. The use of the tablet in this sense becomes essential, as it provides a common platform on which to display the difficult transition from the iconography to iconology. This is of course somewhat dependent on the visitor's age and comfort with technology. Methodologically, we believe that playing and drawing are a constructive way for children to develop an easy and immediate understanding of complex subjects. At various age levels it is important to take account of the culture of the interlocutor; from a linguistic point of view, the transition to abstract concepts has to be mediated by the use of a language understandable to every cultural level with exemplifications. In all cases the aim is to arouse curiosity and a the desire for knowledge in the visitor.

**by Paolo Biscottini**
**Director of the Museo Diocesano di Milano**

# Interview with Maria Elena Colombo

*The Diocesan Museum of Milan seems to be very interested in the use of technologies since its opening in 2001. Which is the role of technologies in the current program for the enhancement of the visitor's experience of the museum's collections and for the involvement of new audiences in intercultural ways? What are the main challenges, projects, and objectives in this direction?*

Since its opening in 2001, the Diocesan Museum has, focused substantial attention on the use of appropriate technologies to support the narrative of the museum, its history, and its territory. For example, a projection welcomes visitors at the entrance, followed by two interactive videos available to discover the history of late Antique Milan and the birth of Christianity in the city.

The museum is committed to approaching the new possibilities that technology offers to make contact with different audiences, and above all, to the great opportunities of Web 2.0 to create a listening channel. The museum is active on most popular social networks (Facebook, Twitter, Pinterest, Instagram, Foursquare) and creates daily content and strategies according to the type of social network and the knowledge and interests of the various overlapping digital communities active in these networks. Also, the musuem is equipped with wifi on the ground floor to facilitate visitor sharing via social networks.

We recently have taken up partnerships with the Google Cultural Institute and the lesser known Art Guru, with whom we have developed an application / audio guide for the exhibition "Chagall and the Bible" on show from September 17th 2014 to February 1st 2015. Each collaboration is a learning process and brings new expertise to our staff. The same

result has occurred through our collaboration with the Mela Project, which led us to expand our horizons to think through our heritage in an intercultural perspective, a different register from the traditional one of art historical interpretation.

The interweaving of multi-cultural content with more traditional art historical interpretation, as well as the medium used (a digital application for tablets) and the participatory approach of the project proved to be one of the most fertile and interesting approaches we've experienced while working with our heritage. In this sense, this project felt very much in line with the theme of International Museum Day 2014 organized by ICOM-Italia: Make connections with collections. The project designed new roads of interpretation and communication, tracked these potentialities of dialogue and engagement with new audiences, and created an opening for interreligious dialogue, thus proposing a new type of museum mediation and creating a cultural ecumenism that we think of great value and importance in this complex historical moment.

**by Maria Elena Colombo**

**Digital media curator of the Museo Diocesano di Milano and person in charge for museum communication**

# From intercultural narratives to interpretation and co-curation: topics from the experimental action

→ RITA CAPURRO, SARA CHIESA

→ T HE SALA DELL'ARCICONFRATERNITA AT THE MUSEO DIOCESANO

The *Museo Diocesano di Milano*, owned by the Church of Milan, was inaugurated in 2001. It is located in the cloisters of *Sant'Eustorgio*, an integral part of one of the most historical monumental complexes of Milan. It is located at the southern limit of the central area of Milan (delimited in the so-called *cerchia dei bastioni*), not far from the district called *Darsena e Navigli*, popular among young people for its liveliness.

The diocese of Milan is one of the most important in the Roman Catholic Church; the significant number of inhabitants in Milan makes it the largest diocese in the world. Moreover, Museo Diocesano is one of the most important ecclesiastical museums in Italy: due on the one hand to its collection of over seven hundred works of art from the 4th to the 21st century, and on the other hand, to its museum activities. It is considered one of the better-known museums in Milan because of its active involvement in the cultural life of the city.

The museum represents a strong identity, indeed:

> As a *museum*, it is committed to improving society, pursuing strategies to facilitate dialogue between different cultures and resolving issues arising from cultural diversity (Fyfe 2011). As a *diocesan museum*, it also aims to deal with the life of the local Catholic Church in terms of its history and territory, working consciously in the current social context (Santi 2012). This makes the Museo Diocesano an appropriate setting for religious nar-

PREVIOUS PAGE, IMG. 11
— *Museo Diocesano di Milano. The Grand Staircase with the collection Erba Odescalchi. Photo courtesy Museo Diocesano.*

ratives portraying religion as a controversial component of culture, stimulating debate and fostering equality and dialogue among diverse communities (Capurro 2014, 27).

The museum's interpretation of its role within the community is well defined in its mission:

> The Diocesan Museum is a place dedicated to the hopes and needs of our society, a place where art meets Christian wisdom. Open to everybody, it invites visitors searching for the meaning of life to take an active part in its initiatives. With its cloister, an area increasingly available for public use, its library and bookshop, it is not only an historical site but one which is both lively and livable. Closely linked to the museum's underlying mission is its aim to be seen as a space which is accessible, dynamic and enjoyable. (http://www.museodiocesano.it/museo/mission/ accessed December 5 2014)

The *Sala dell'Arciconfraternita* is a large hall on the ground floor of the Museo Diocesano di Milano. The spaciousness of its double-height interior allows for a wide range of uses. Besides its use as an exhibition space, it also hosts conferences, concerts, and other activities characteristic of an auditorium hall.

However, since the opening of the museum, it is considered a very problematic space as a museum setting. Antonio Piva, the architect who spearheaded the historical building's redevelopment into a museum, wrote: "The great space of the hall represented and still represents a point of big concern. […] From a museographical point of view, it remains questionable if the paintings of the *Confraternita del SS. Sacramento* are well served by their location along the longitudinal walls" (Belgiojoso et al. 2001, pp. 56-57) indeed, from his point of view, the walls on which the paintings hang are full of marks, evidences of successive reconstructions, and are therefore not a place that facilitates concentration and attention.

The architect Alberico B. Belgiojoso, who had earlier restored the building, also encountered many difficulties: "In the third grouping [of works], in the western section of the second cloister, it was difficult to interpret the historical sequence that determined the shape of the spaces. The double-height hall is an alien structure, or at least different, than the other parts of the cloister" (Belgiojoso et al. cit., 63).

The collection hung in the hall forms a nucleus in its own – composed of a series of paintings realized for the *Duomo di Milano*, and commissioned by the religious brotherhoods.

In preparation for the opening of the museum in 2001, all of the paintings were restored and studied. The importance of the collection for the mission of the museum was underlined by the words of its director, Paolo Biscottini: "The recovery of these valuable paintings—until now confined in the deposits of the *Duomo* and not accessible for a long time—isn't only of exclusive interest to the history of art. These objects introduce the visitors of the museum to the historical development of the widespread participation in the Catholic ritual of the Cult of Eucharist" (Belgiojoso et al. cit., 49).

The director further determined for this collection a specific role of deep-
ening the knowledge of the Milanese religious brotherhoods: "[the collec-
tion] will allow us to consider systematically the topic of the brotherhoods,
which within the Ambrosian diocese had both an important religious and
social role" (Belgiojoso et al. cit., p. 49).

Within the collection of the *Sala dell'Arciconfraternita* there are sixteen
paintings; fifteen of these hang in the large hall, while one remains in the
museum's depot due to conservation issues. This pictorial cycle was formed
mostly during the eighteenth century; at its completion it included fifty
paintings. Many of the works were lost during the bombings of Milan dur-
ing World War II, and so the subsequent relocation of the extant works to
the museum has played an important role in their conservation.

Through the writings of G. Nicodemi in 1935—the only known historical
source referencing the works—it is possible to glean their original function.
In *I quadri dell'arciconfraternita del SS. Sacramento del Duomo di Milano*,
Nicodemi (1935; Biscottini 2012) writes that the paintings were used in
the cathedral as an apparatus for the feast of Corpus Christi. For that oc-
casion they were mounted on the pillars of the Duomo encircling the prin-
cipal nave. Because of this, their dimensions are identical (220 x 162 cm),
with the exception of the large oval painting *Gloria del Santissimo Sacra-
mento* that was placed outside the cathedral.

The cycle presents two subjects: events linked to the figure of St. Cath-
erine, and miracles or episodes affecting the Eucharist. These two thematic
strands have been generated through a specific historical condition: all of
the paintings were commissioned by the *Confraternita del Santissimo Sac-*



IMG. 12 — *Museo
Diocesano di Milano, Sala
dell'Arciconfraternita.
Photo courtesy Museo
Diocesano.*

*ramento* (Confraternity of the Blessed Sacrament), which in 1583 was combined with the Confraternity of St Catherine by the archbishop Carlo Borromeo.

In the Catholic Church the confraternities are associations of worshippers who pursue common goals of charity and spreading of the faith. In particular, the brotherhoods of the Blessed Sacrament—such as the aforementioned Milanese brotherhood—are dedicated to the dissemination and preservation of the Eucharistic worship.

The painters of these works are mainly from the region of Lombardy; among them we can find the most famous Lombard artists of the eighteenth century.

From an iconographical standpoint, the paintings are situated in the mainstream of religious representations, developed according to the aesthetic canons established between the seventeenth and eighteenth centuries.

The artistic language evident in these paintings responds to the need for a clear narrative and consolidated symbolism – accessible and understandable to all of the faithful, even those who were illiterate and uneducated. Indeed, as in the case of the well-known *Quadroni di San Carlo*, these pictorial cycles had a clear liturgical function (Battistini 2007), and were used as visual support by the preachers during a specific time in the liturgical calendar: the *Quadroni* for the celebrations in honor of St. Carlo Borromeo, and the works related to the Blessed Sacrament for the Feast of Corpus Christi. This connection between the sermons and visual material is very characteristic of the Catholic pastoral methods of the sixteenth and/seventeenth centuries (Fumaroli 2002). Groups such as the Council of Trent created teachings specifically related to these images, solidifying this method of spreading Catholicism during this period (Cattoi and Primerano 2014). With the loss of this practice, it is today often difficult to understand the symbolic meanings of the religious paintings of that period.

The paintings of the collections are mainly dedicated to Eucharistic themes; only two of them represent episodes related exclusively to the figure of St. Catherine: *Santa Caterina salva miracolosamente una donna dalle rovine di una fabbrica* (St. Catherine Miraculously Saves a Woman from the Collapse of a Building, painted by Federico Bianchi in the beginning of the eighteenth century) and *Santa Caterina incoronata di spine da Gesù* (St. Catherine Crowned by Jesus with Thorns, painted by Stefano Maria Legnani–Legnanino in the end of seventeenth century). Eight paintings represent the Eucharist through the life or spirituality of a saint: St. Mary of Egypt, St. Eudossia, St. Catherine, St. Mary Magdalene with St. Maximin, St. Bernard, St. Anthony of Padua, Saint Peter Martyr, and St. Stanislaus Kostka. Two paintings address miracles connected with the Eucharist: *Il miracolo del fanciullo restituito illeso dalla fornace per aver ricevuto la Comunione* (Child rescued from a burning furnace, painted by Carlo Preda in the beginning of eighteen century), and *L'Eucarestia trafitta dagli Ebrei manda Sangue* (Blood from the Eucharist transfixed during a Sacrilegious Theft by Jews, painted by Giacomo Pallavicino–Gianolo at the end seventeenth century/ beginning eighteenth century). Two additional paintings portray

the communion for sick persons: *La Comunione all'appestato* (The Communion to a Plagued Person, painted by Antonio Maria Ruggeri in the end seventeenth century/ beginning eighteenth century), and *La Vergine fa giungere il viatico a una devota* (The Communion to a Sick Devote of the Virgin Mary, by Pietro Antonio Magatti in the first half of Eighteen century). The last painting in the cycle is the oval work, *Gloria dell'Eucarestia* (Glory of the Eucharist painted by Giuseppe Rasnesi in 1843). Finally, the painting not currently on display due to conservation issues is called, *Messa di Bolsena* (Mass at Bolsena, painted by Francesco Robbio at the end of the seventeenth century/ beginning eighteenth century), and represents the episode of the Eucharistic miracle.

As part of its interpretation program for the collections, the museum has created a display consistent with the original ordering of works in the cathedral. In tandem with this, research has been done to deepen the knowledge related to each of the paintings – specifically their artistic and iconographic meanings. This information is clearly explained in the general catalogue of the museum, a specialist text used by scholars and people who wish to deepen the knowledge of the collections but not accessible to all visitors. Instead in the hall where the works are presented there are only basic labels with essential information and a wall chat that describes the historical and devotional meanings of the collection. As far as the educational programs of the museum, there is currently only one forthcoming project specifically related to the collection – a program aimed at providing an introduction to the Mass and the Eucharist, targeted to children.

In 2005, the museum devoted energy to the development of specialist studies dedicated to the representation of the Eucharist in art including insights from important historians of art, including: Rosanna Bossaglia, Mina Gregori, and Antonio Paolucci. To date, the pictorial cycle hasn't been the subject of any other specific programs. It is within this context that the MeLa group started its work.

### → THE DIFFERENT INTERPRETATION OF THE SELECTED PAINTINGS

The institution of the public museum has a social role and responsibility, as ICOM affirms in 2004: "[the museum is a] permanent institution in the service of society and its development." This project has exactly this goal, but integrated with the specific focus of MeLa to examine the European museum in an age of migration, and thus the project aims to be at the service of an intercultural and interreligious society.

Our intention was to encourage cultural and religion contamination among people coming from different backgrounds with the aim to build a shared cultural heritage. A "pure", uncontaminated, closed culture can't exist, because a closed culture is destined to die (as James Clifford so clearly expresses in his famous book, *The Pure Products Go Crazy*). What keeps a culture alive is the contact with the other, even if only to redefine itself in relation to this (Bodo et al. 2007).

Beginning with the classical artistic and historical interpretation of the works of art we decided to add additional levels of analysis, trying to involve an intercultural public in a new way of reading the objects. Among the *Arciconfraternita del Santissimo Sacramento* paintings we made a selection of five canvases based on the particular themes in these works. The selected works were chosen because they address important themes in Christianity, while also providing an opportunity for intercultural and interreligious dialogue with other cultures and religions. Simultaneously, another challenge was to find ways to address the themes in the works through a lens relevant to contemporary society.

Our aspiration was to reexamine the traditional relationship between the public and the museum wherein content is transferred from curators to visitors authoritatively and unilaterally. Instead the project aimed to be open to new interpretations and different points of view, involving the public actively in a dialogic and circular process (Bodo and Mascheroni 2012).

To this end, we produced a video for each selected artwork, reproducing the painting's image and underlining selected aspects of the narration. From this general overview, the video moved to focus on details such as a character's gestures, a liturgical or symbolic object (such as the hat of the pilgrimage on St. Stanislaus's shoulders characterized by the shells of St. James and the stick of the pilgrimage), or the architecture of the sacred place. In one such example in the San Bernardo *Libera un'ossessa con l'Eucarestia*, a possessed woman occupies the center and foreground. Her convulsive and disordered movements are in sharp contrast with those of the other people present. The surrounding crowd gazes at Saint Bernard, whose poise and calm disposition equally sets him apart from the others. His gestures are confident and motivated by faith, revealing no unease about the situation, while the disharmony of the possessed woman and the fear displayed by the crowd represent error and doubt. In another example, *Santa Caterina da Siena vede uscire una fiamma dall'ostia consacrata* by Battista Costa, the viewer can see a clever delineation in the composition of the painting. If the viewer were to draw an straight line
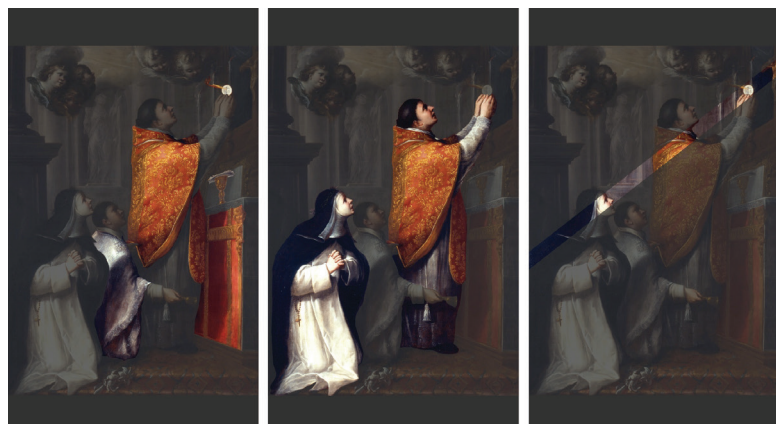


**IMG. 13** — *Screenshot of the video animation: highlighting some details in the artwork.*

between the gaze of the saint and the Host, she can see that the content of the painting is diagonally divided in two parts. On the one side the viewer sees the people, the altar, and the floor. On the other, one sees the sculptures, the ceiling of the church and the cherubs that guarantee the transcendental value of the event. The color of the dress worn by the main characters also reveals important symbolism. For instance the white vest worn by the child in *Il miracolo del fanciullo restituito illeso dalla fornace per aver ricevuto la Comunione*, represents purity, and is the typical color for the First Communion ceremony. In the same painting, the garments of the Holy Virgin represent the union between the Church and the passion of Christ: her light blue veils indicate fidelity, justice and spirituality, while the red color of the dress of what? refers to the sacrifice and death of Jesus.

## → THE CONTENT DEVELOPMENT PROCESS FOR THE EXPERIMENTAL ACTION
## AND RESULTING OUTCOMES

Beginning from the general narration of the miracles represented in the artworks, we attempted to develop new artistic or cultural interpretations from a range of positions – in an effort to activate the audience's reflection, confrontation, and interreligious participation. Starting from a Catholic perspective, the aim of these interpretations was to underline similarities and analogies among religions.

The analysis of the works of art developed on different levels. The first level focused on the work's artistic and historical information and its religious meaning. The second level involved developing new research that highlighted themes that could address subjects more relevant to a broader audience, including concepts such as pilgrimage, profanation, sin, sacrifice, and the conflict between good and evil. After the video was produced, visitors were then invited to use it, and were asked a series of questions in an effort to trigger his or her reflection on intercultural themes. Through guided inquiry, these questions—originating from topics present in the selected paintings—aimed to elicit the visitor's contemplation on his or her own values and beliefs. The main objective of the action was to activate a visitor experience that addressed the potential fluidity of religious identity and highlighted similarities and differences between religions. This action therefore added to the museum's curatorial interpretation, and allowed for the audience to participate in and co-produce new meanings tied to the works.

From this work, we then analyzed other interpretative aspects connected with elements present in the works of art: objects, gestures and rituality, holy places, and liturgical references. We then attempted to connect these themes to others works of art exhibited at Museo Diocesano. Additionally, visitors were invited to contribute suggested references, such as iconographic notes, a literary footnote or a personal insight. Our primary goal for the project was to generate broader reflection on religion and to utilize religious objects (and their interpretation) as tools for intercultural dialogue.

**IMG. 14** — *Expert interpreting the contents of the painting. Photo by Davide Spallazzo.*



One of the themes we examined that we can confirm is widely recognized by different religious believers is that of the pilgrimage. The work, *La Comunione di San Stanislao Kostka* by Gaetano Dardanone provided the occasion to address this topic within the project. A pilgrimage is a journey made for devotion, penance, or spiritual search to a place considered sacred. The term comes from the La in *peregrinus,* from per + ager (fields), which originally indicated someone who is a stranger or who is forced to live in poor social conditions. Later this term shifted meaning to imply a choice from the person: the pilgrim puts him or herself in the condition of foreignness and assumes the hardships and risks associated with this. As perhaps could be anticipated, this came to our mind as a perfect theme for intercultural dialogue, not only due to the etymology of the word pilgrimage and its associated condition of foreignness, but also because of the relevance of this topic to all of the world's major religions. For example there is the pilgrimage to Mecca that every Muslim should make at least one time in his or her life, as well as the pilgrimage to the Ganges River made by the Hindu faithful, particularly during the Kumbh Mela.

This painting also gave us the opportunity to address another interesting intercultural topic, the matter of the figure of the saint. If it is true that only in Christian religion this term is used to define important persons that have a special relationship with god or the divine. However within all religions there are people whom are considered spiritually elevated.

As we have already specified, the *Arciconfraternita del Santissimo Sacramento* paintings were realized during the period of Catholic-Reformation and for

this reason they are strongly connected to the themes of orthodoxy and heresy. In the planning process for the project—with the above-mentioned limitations in mind—we carefully selected five paintings that we hoped addressed subjects and topics familiar and relevant to contemporary society.

The painting *San Pietro martire smaschera la falsa Madonna* by Filippo Abbiati relates directly to the topic of heresy because Saint Peter the martyr (the main character in the picture) is known primarily for his challenges to those deemed heretical. This could be considered a difficult topic to approach, but we felt that in fact it was an interesting work of art to consider in relationship to interreligious dialogue. For instance, Saint Peter can—thanks to his true faith—find evil even in the most unexpected hosts, such as the Holy Virgin. This example can then open a discussion on right and wrong and the difficulty sometimes in distinguishing the one from the other. Further the painting can elicit discussion regarding the representation of evil and the liturgical gesture or the presence of the sacred place for facilitating prayer. The dualism of faith and doubt was also of interest to us. Indeed this ambivalence is already noted in classical examples, such as the archetype of Janus Bifrons in the mythological world. Another painting, *San Bernardo libera un'ossessa con l'Eucarestia* by Federico Ferrari, also addresses these themes. As in the previous painting, the Saint's gesture and the presence of the Eucharist uncover the trickery of the devil. These two paintings then allow us to consider the subject of the presence of evil in the world, a recurring question in many of the world's religions. Why is there evil? Why does evil persist despite the presence of god? Who can destroy evil? These are common questions that the faithful all over the world across time have asked themselves. Similarly, many participants in the experimental action asked us, as well as themselves, if it is possible to identify the

presence of a true force of good in the world. This being said, the topic of evil is not the only subject emerging from these paintings that is useful for encouraging dialogue on themes common in different religions. Other themes we explored are the concepts of miracles and the healing intervention of god.

The last painting we considered was *Il miracolo del fanciullo restituito illeso dalla fornace per aver ricevuto la comunione* by Carlo Preda. This painting allowed us to consider another remarkable issue: the rite of passage from childhood into adulthood. This is a critical passage that occurs in many cultures, often signified by a specific rite or ceremony. In Catholic ceremonies related to this and other rites of passage, liturgical elements such as poems, songs, bell ringing (as in *ghanta* for Tibetan Buddhism), frankincense, and candles are used as symbolic tools. We can find these very same symbols in different forms in many cultures, i.e., a special outfit worn specifically during a ceremony or an object used as a presentation of a gift. These similarities appear not only in the objects used, but also in the gestures and attitudes tied with prayer. These gestures and objects appear in the representation of characters in both this painting, as well as the one featuring Saint Catherine, and provided us the opportunity to also explore these concepts in the context of this project.

The aforementioned content, elaborated through video narrations, was the object of our first test in the museum (description in chapter 1). Through a process that included the re-reading of the themes, the collection of intercultural suggestions, and the elaboration of answers and comments to the questionnaire, the critical analysis of the contributors of this first test was then incorporated into the curatorial content included in the second test. The result was an enrichment of the co-curatorial contents for the second test.

Therefore, after the first phase of the experimental action, the content was adjusted and edited not only in light of the critical contribution of the participants, but also through the feedback of the MeLa and the museum curatorial staff. For the final presentation of content it was crucial that the included intercultural references related to the main theme of the painting, but also suggested linked to additionally topics, content and elements represented in the painting's composition.

Every painting was analyzed based on the above parameters. After a careful assessment of the feedback from the first test, we decided to focus the second test and the resulting development of the mobile phone application on the elements of proximity for fostering the inter-cultural dialogue. At this point we reconsidered all of the possible available content and its capacity for potentially engendering challenges for the viewer and opportunity for intercultural dialogue. Among the five paintings, we selected one that was perhaps less interesting from an artistic point of view, but that was very rich in visual cues – as revealed during the first test. The selected painting was *Santa Caterina da Siena vede uscire una fiamma dall'ostia consacrata*. We then developed three areas of work for developing the mobile application: (1) refining the intercultural content produced through the first test and addi-

tional related pathways for enriching this topic, (2) identifying the selected elements in the painting that would be highlighted as visual aids for interpretation, and (3) developing possible connections between the highlighted elements in the painting and other objects in the museum. This third part of our activities was particularly interesting for the museum staff. Therefore the content was then divided based on these three areas: intercultural references, objects, characters and gestures to highlight in the painting, and connections with other objects on display in the museum.

The development of content for this project at the Museo Diocesano shows that intercultural dialogue is not the goal of a cultural heritage educational program, but is generated by the process itself (Bodo and Mascheroni 2012). Indeed in this project, the involvement of people of different religions activated awareness and built new knowledge essential for both the public and museum. This methodology of content development creates a circular relationship fundamental for an inclusive museum, wherein a polyphony of interpretations brings the museum collection closer to new visitors and the museum's collection becomes more understandable and meaningful to a broader public, even if different from their religious beliefs.

*This essay is the result of a joint work of the two authors. In particular, Rita Capurro wrote sections 1 and 2, and Sara Chiesa wrote sections 3 and 4.*

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**Appendix:**

Themes and issues of the paintings: from the video animation to the contributions to the questionnaire

# Il Miracolo del Fanciullo
## Faith and Life



**IMG. 16** — *Carlo Preda (Milan 1651/52- 1729), Il miracolo del fanciullo restituito illeso dalla fornace per aver ricevuto la comunione (The miracle of the child returned unharmed from the furnace for receiving the Communion).*

→ **SUBJECT**

The miracle of the child rescued from a burning furnace, for the grace of the First Communion.

→ **COMPOSITION**

The painting includes two different scenes: in the foreground, the child who was rescued from a burning furnace is tenderly welcomed into his mother's arms, under the protective gaze of the Virgin Mary. The upper right section of the painting illustrates the interior space of a church where the boy is receiving his First Communion; the Virgin Mary is represented here in the form of a statue situated in the niche.

### → THEMES

**Sacraments and rites of passage:**

The First Communion is the moment when a Christian receives the Eucharist for the first time. Usually the observant is trained to follow precise gestures in order to be prepared to the sacred moment. In the occidental tradition the First Communion Mass is characterized by specific symbolic elements, such as the white dress and the lily.

**Virgin Mary as operator of intercessions:**

The Holy Lady is represented according to the classic iconography related to the Virgin of Mercy. Indeed she is holding the cloak as to protect the saved child. The classic dress of the Virgin Mary, characterized by red and light blue colours, is a devotional symbol. The intercession of the saints or of the Holy Virgin is considered by Eastern Orthodox, as well as Oriental Orthodox, Roman Catholic and some Anglican churches. These figures acting as intercessors are constant guides to every single moment of a believers' life.

**Typology of the Eucharistic miracle:**

The Eucharist represents the resurrection of the body of Christ to a new life, and announces the possibility of the believers to reach the Eternal life; the miracle illustrated in the painting refers to the child saved from the flame of the furnace and led to a new life.

### → ELEMENTS

**Liturgical objects and dresses:**

The priest is represented with a gold Roman chasuble, a liturgical vestment which was worn during the celebration of the Mass. He holds a big cup, the chalice, which is made in precious metal (gold or silver). Before the celebration starts, the chalice and the paten (a small consecrated plate) are carefully prepared. During the Mass, the chalice and the paten are used with some sacred veils, which include a purificator (a small linen cloth used by the priest to dry his fingers and the chalice while washing and purifying them after the Communion) and a pall (a small squared stiffened linen or a cardboard covered with linen, that is used to cover the chalice).

**Gestures:**

The painting illustrates the distribution of the Holy Communion, which the priest delivers to the believers. In the Catholic rite, the Eucharist passes from the hands of the priest to the mouths of the worshipper or to his/her hands.

**Sacred place:**

In the upper right section of the painting it is possible to see the statue of the Virgin in a niche. The presence of a sculptural heritage characterized by clear religious references denotes the space behind the main scene as a religious space. The importance and the historical value of the icons is referred to the crucial role of images in the Christian culture.

**Stereotype and elements related to the characters:**

The miracle refers to the rescue of the child who spent three days in the furnace: three days correspond to the same period which passed between the death and the resurrection of Christ.

### Intercession:

Participants are asked if their own religion includes the conception of intercession from one or some specific figures, and if it is possible to identify some objects through which it is possible to communicate with God.

### Rites of passage:

Participants are invited to express their own idea about the rite of passage as a personal and public/social event.

### Childhood and innocence:

Visitors are invited to answer to questions related to the theme of childhood, about the innate innocence which characterize children, who are not yet contaminated by the evil of the world, and about the responsibility which their education entails.

### Rite:

"In Africa the rite is part of the daily life: in the black Africa all the events, from natural calamities to historical circumstances, are related to the divinity that gives power to the different elements."

### Reality:

"The structure and composition of the painting are realistic and similar to a popular scene, similar to an ex voto."

### Death and life:

"There is an overlapping idea between faith and superstition, similar to perspectives of Buddhists from Sri Lanka where, when a child is born, people hang up a wooden mask to expel Devil."

### Virgin Mary as operator of intercessions:

"In my religious (Muslim) the Lady, Jesus's mother, is symbol of nobility and she is respected as a prophet's mother. Miracles exist in all religions, the difference is in the way people relate with the entity that produce them: for example in the Animism statues, masks or totems contain straight and vigour."

### Virgin of mercy:

"The subject could be compared with the theme of the mother earth, typical of different religions."

### Rebirth:

"The theme of the rebirth could be connected with the theme of the rite of passage, which usually includes a proof that lets a new life begin in a new social-cultural status."

# San Bernardo libera un'ossessa con l'eucarestia
## Faith and health
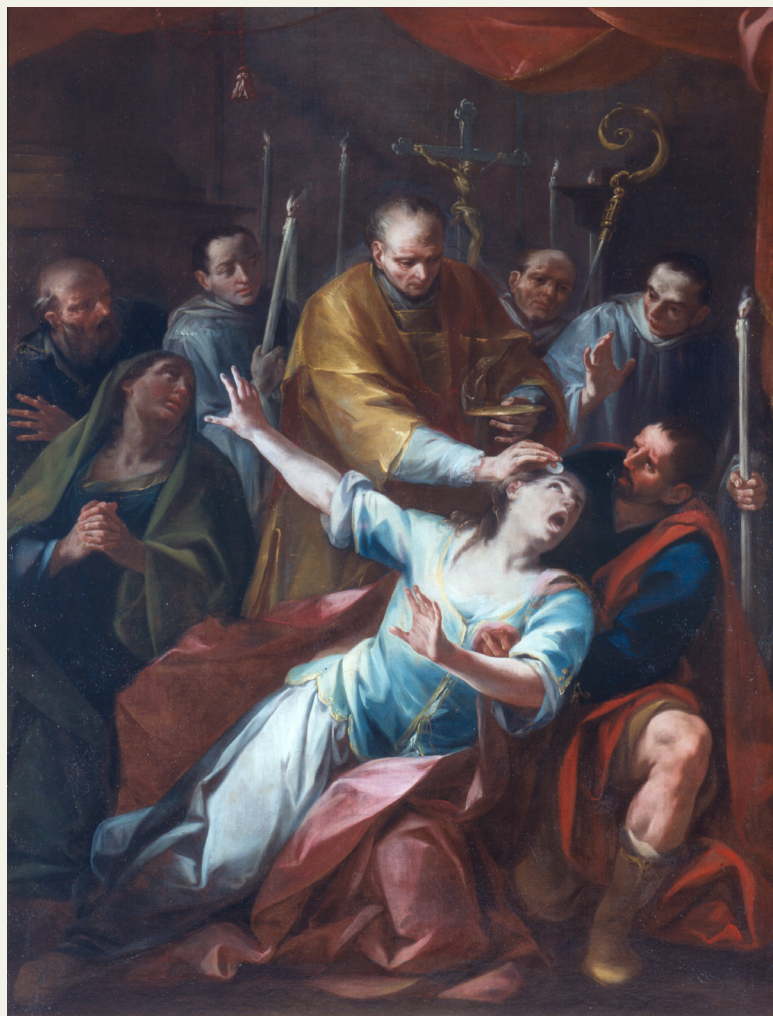


IMG. 17 — *Federico Ferrari (Milan 1714 - 1803), San Bernardo libera un'ossessa con l'eucarestia (Saint Bernard sets a possessed woman free with the Eucharist).*

→ **SUBJECT**

The endeavour of Saint Bernard healing a possessed woman in the Basilica of Sant'Ambrogio in Milan.

→ **COMPOSITION**

In the centre of the painting a possessed woman in sharp contrast with the stillness of the other figures who are observing Saint Bernard casting out the evil spirit using the Eucharist. This healing rite is taking place during a church service indeed Saint Bernard is wearing the typical robes used for pontifical Masses, and the deacons are holding lighted candles and a processional cross.

→ **THEMES**

### Exorcism:

The painting illustrates an exorcism, a rite that is to be found not only in Christianity, the purpose of which is to drive out evil, whether visible or hidden. It also forms part of the Catholic rite of Baptism. Nevertheless not all Christian churches approve of exorcism, accepting it or rejecting it on specific theological grounds. During the Reformation, Martin Luther defined such practices as sacrilegious, and John Calvin condemned them as pagan and satanic.

### The procession:

It is a religious practice included in many religions. Catholic processions follow specific rituals. In this case, the element that distinguishes and represents it is the processional cross.

### Fire and light:

Christians consider fire and light as symbols of nature and of the divine presence. In every liturgical service, two lighted candles are lit on the altar; they represent a sign of the presence of God in the mass. The same symbolism can be found in the lit candles that must accompany the consecrated host whenever it is carried in procession. Also in the synagogue, a light is always on above the aron: it is the ner Tamid, reminiscent of the menorah, the seven-branched candelabrum of the Temple of Jerusalem.

### Typology of the Eucharistic miracle:

The miracle concerns a healing action.

→ **ELEMENTS**

### Liturgical objects and dresses:

Saint Bernard is wearing the robes that are typically used for pontifical Masses: a dalmatic and chasuble. Also the deacons, holding lighted candles and a processional cross, wear particular vestments (which allow the viewer to recognize them). One of the deacons is holding the crosier, or pastoral staff, insignia of bishops and abbots. Saint Bernard is holding the Eucharist and a paten, which is a small consecrated plate used with the chalice for containing the consecrated Bread.

### Gestures:

Saint Bernard is holding the Eucharist and a paten. His gestures are confident, motivated by faith and show no unease about the situation; they contrast with the disharmony of the figures of the possessed woman and of the surrounding men, who exhibit fear and doubt. The female figure to the left of Saint Bernard is the only other person whose body language conveys fortitude (due to her faith in the prayer).

### Sacred place:

The only element in the painting illustrating the impressive architecture is a basement characterized by a column. The biographies of Saint Bernard report that the event took place in the Basilica of Sant'Ambrogio in Milan.

→ **THEMES FOR QUESTIONNARIE**

### The influence of the Evil in the world:

Participants are asked to illustrate their opinion about religion, and to provide their interpretation of illness and other negative phenomena in the world.

### Disease-faith relation:

Participants are invited to reflect and provide an opinion about the faith in presence of negative circumstances such as diseases.

### Relativism:

Users are invited to answer to questions related to the moral laws and their importance in everyday life.

→ **USER GENERATED CONTENTS**

### The exorcism. The rite:

*"It is very strange that the exorcism is done with a host. In the Christian rite it is usually done with prayer and the cross, that in this painting is at the top of the compositional triangle. That representation looks 'forced', today it would be considered a rite of magic and superstition... probably at that time it was a way to assert a truth of faith."*

### The exorcism. The healing rites:

*"Thinking of my religion and culture of origin, I would say that I do not feel at all out of place having a confrontation with the theme of this painting. Indeed, the therapeutic action of the exorcist on the possessed person is present in my culture."*

### The prayer for healing:

*"In the book Il libro di preghiere dell'Africa nera (1996), ed. Acquarello, it is possible to find interesting cues related to the theme of the painting."*

# San Pietro martire smaschera una falsa Madonna
## The hidden evil



IMG. 18 — *Filippo Abbiati (Milan 1643 - 1715), San Pietro martire smaschera una falsa Madonna (Saint Peter Martyr unveils the false Holy Mary).*

→ **SUBJECT**

Saint Peter is holding up a glowing Eucharist in order to chase away Evil, disguised as the Virgin Mary holding Child Jesus in the house of heretics.

→ **COMPOSITION**

Saint Peter is holding up a consecrated bread emanating light, while the Evil, disguised as the Virgin Mary, is escaping towards the darkness. Among the characters, the old man wearing a yellow mantel and holding a stick, could be identified as the black magician who carried out the rite to conjure up the false Virgin Mary. The two figures on the foreground, with their twisted bodies, contribute to "expand" the scene.

→ THEMES

### Truth and deception:

In the Gospels the devil is called the "father of lies" (John 8, 44); in the description of the lives of the saints it is possible to find numerous stories about their encounters with the disguised deceiver devil. The aim of these narrations is to warn the faithful from every temptation, even when it appears in innocent forms.

### Orthodoxy and heresy:

When two contrasting ideas regarding specific faith issues are identified, the Church establishes dogmas in order to define the orthodoxy against the heresy. Saint Peter fought against the Cathar heresy, which fostered a dualistic idea of the reality, based on the juxtaposition between the positive connotation of the spiritual and the negative connotation of the material; that vision also caused the refusal of the Eucharist.

### Iconography of the evil:

The false Virgin Mary and the Child can be recognizable because of the horns and claws, which are typically attributed to the devil together with goat legs and tail. In Christian iconography, horns represent a positive feature only when there are attributed to Moises. In this painting also the light is used to highlight particular meanings: the false Virgin Mary seeks refuge in the shade, and the dark at the left side is symbol of the evil.

### Typology of the Eucharistic miracle:

Eucharistic miracle linked to the figure of a saint. Miracles are not made for a special magical power of the saints but through the saints for the work of God; in this case, the deception is revealed through the power of Christ that is present in the Eucharist.

→ ELEMENTS

### Liturgical objects and dresses:

In order to transport the Eucharist outside the church it is necessary to use special containers, such as the small case that is carried by Saint Peter in the painting. In the churches the Eucharist is preserved in a tabernacle, inside a ciborium, and its presence is indicated by a light which is perpetually burning. The tabernacle remains empty only in the period between the mass in cena Domini of Maundy and the Easter Vigil on Holy Saturday.

Saint Peter the Martyr is wearing the typical vestments of Dominican monks, a robe and a white cowl, and a "scapular" hanging down the front and back, representing the protection of the Virgin Mary in life and death. Also the use of colours can be interpreted symbolically: white stands for purity and life in God, while black stands for penitence. The Saint is barefoot, in order to highlight his saintliness and to describe the simple life he leads.

### Gestures:

The Saint holds the consecrated host with the right hand in the gesture of ostention.

### Sacred place:

The sign of the presence of God is pointed out and emphasized by the light.

### Stereotypes and elements related to the characters:

The Holy Virgin wears the characteristic blue and red dress.

The Saint has a slight halo on his head; his gestures are firm and sure, they contrast with the agitated persons around him, and indicate that he represents the truth.

### → THEMES FOR QUESTIONNARIE

**Deception:**

Participants are interrogated about the idea of evil and of deception, and are invited to consider whether in their everyday life these ideas are related with religious issues.

**The search of the good:**

Participants are asked to express their idea about the research of the good.

**Heresy:**

Users are invited to answer to questions related to the theme of religious heresy and the evil.

### → USER GENERATED CONTENTS

**Ambivalence between good and evil:**

*"Is there a universal good?" "Can we consider the dogma as a past issue and the ambivalence as a result of the postmodern culture?"*

**Iconography:**

*"In art, the whole world of the trompe l'oeil plays on the concepts of deception, perception and truth." "The same subject is used in the paintings of Vincenzo Foppa in the Cappella Portinari in the church of St. Eustorgio, that is situated next to the Museo Diocesano. The hagiography of Saint Peter reports that the episode took place in Piazza S. Eustorgio".*

**Heresy:**

*"To reflect on the concept of heresy it is interesting to read Memoirs of the Convent which was written by José Saramago in 1982." "The story of this Saint was considered very relevant during the fight against the Protestants, especially in the border lands (such as Lombardy). This is exemplified in several artworks, such as a painting by Palma Vecchio illustrating the martyrdom of Saint Peter of Verona, portraying two men wearing clothes that were typical of the sixteenth century."*

# La comunione di San Stanislao Kostka
## The pilgrimage



IMG. 19 — *Gaetano Dardanone (Milan 1688 - 1760), La comunione di San Stanislao Kostka (St. Stanilaus Kostka receives the Holy Communion).*

→ **SUBJECT**

Sick and in need of rest, the Saint enters an unknown church where he receives the Holy Communion from an angel.

→ **COMPOSITION**

The subject of the painting is young Stanislaus, who ran away from his house to join the Society of Jesus, in spite of his father's opposition. The image represents the Saint during his travel on foot from Vienna to Rome; looking for rest and a chance for meditation, Stanislaus entered the church without knowing it had been "reformed". Here, he is enraptured by the mystical vision of angels coming to his aid and offering him the Eucharist.

→ **THEMES**

### Pilgrimage:

The pilgrimage is a practice that is included in many religions. It consists in a journey undertaken by the faithful in order to detach from worldly things, and thus to move closer to the sacred and achieve a conversion.

### Angels:

These spiritual beings, created by God, are mentioned in both the Old and the New Testament. For artists, the problem of representing immaterial beings was solved by adjusting the figure of the pagan winged victory. In this painting there are three types of angels (which are not categorised according to their hierarchies but to three different iconographic traditions): two young ephebic figures, three winged children ("putti"), and some winged baby heads (commonly defined as cherubs).

### Typology of the Eucharistic miracle:

Miraculous communion.

→ **ELEMENTS**

### Liturgical objects and dresses:

Some of the elements represented around Stanislaus indicate that he is making a pilgrimage: the pilgrim's cape over his shoulders, decorated with the shells of St. James, and a pilgrimage stick.

The saint is wearing traditional Jesuit clothing (a black cassock) and he holds a book, which is a symbol of the mission for cultural renewal promoted by the Jesuits and a metaphor for his future role as patron saint of young students.

### Gestures:

Stanislaus kneels down, ready to receive this miraculous Communion.

The gestures of the other characters in the painting complement and complete the moment of meditation: the angel putting the hands at his mouth proffering the Eucharist, the expression of the saint lost in religious ecstasy, the altar created by draping a white cloth across his arms. Several cherubim surrounding the central scene, clasping their hands and conveying their involvement.

### Sacred place:

Some architectural details (such as the altar step at the bottom of the picture, the capitals and arches at the top) reveal that the scene takes place inside of a church. The mystical aspect of the contact between heaven and earth is represented by the light, wispy clouds; the immaterial quality of hovering cherubim and angels define a stark contrast with the physical, material quality of the setting where the episode, a tangible place transformed into a transcendental one, through the presence of the saint.

→ **THEMES FOR QUESTIONNARIE**

### Pilgrimage:

Participants are invited to express an opinion on the role that an experience of pilgrimage or of spiritual journey can have.

### Sainthood:

Participants are asked to reflect on the concept of holiness as model for life.

### Iconography:

Users are invited to answer to questions related to the theme of ancient religious art and the difficulties related to its interpretation.

→ **USER GENERATED CONTENTS**

### Pilgrimage and hermitage:

*"The spiritual journey and the temporary enclosure are very significant religious experiences in different cultures"; "For this painting the immediate reference that comes to mind is the theme of pilgrimage for other religions / philosophies. I think in particular the Hindu pilgrimages, among all the Kumbh Mela, but there are also other examples."*

### Mystical communion:

*"In the Western art there are many examples of mystical communion as in the case of St. Catherine of Siena"; "It is a very mystical vision of the Eucharist, corresponding to the spirituality of the eighteenth century, we do not identify ourselves in a similar situation."*

### Nourishment:

*"Elijah fed by the raven is an interesting biblical reference"; "The bread is a symbol of nourishment in a great part of the world. The theme of the nourishment (physical and spiritual) is a good starting point for the intercultural dialogue."*

# Miracolo di Santa Caterina
## The strenght of the faith



IMG. 20 — *Giovan Battista Costa (Milan, active in the second half of the Seventeenth and early Eighteenth Century), Santa Caterina da Siena vede uscire una fiamma dall'ostia consacrata (Saint Catherine of Siena sees out a Flame from the Consecrated Bread).*

→ SUBJECT

The miracle of the consecrated bread catching fire during the celebration of the Mass in front of Saint Catherine.

→ COMPOSITION

The priest is facing the altar table celebrating the Mass; the other figures are St. Catherine, the altar boy and a number of cherubim observing from above the miracle of the Host bursting into flame, brought about by the saint's ardent faith. The painting can be divided diagonally into two parts; the line is traced by the intense and decisive gaze of St Catherine directed at the Eucharist Bread.

## → THEMES

### Faith:

Faith is a fundamental element of religion since it implies a passage from rational knowledge to belief, not based on proof. For Christians, Faith is one of the three Theological Virtues (along with Hope and Charity) and enables them to trust in "God and in everything He said and revealed, and in everything the Holy Church proposes to trust" (CCC 1814).

### Liturgy:

The painting represents a precise moment of the liturgy of the Mass: the consecration of the bread and the wine. This part of the liturgy is particularly solemn.

### Typology of the Eucharistic miracle:

This episode belongs to the category of miracles providing evidence of the constant presence of God throughout the history of the Church. It has similarities with the Eucharistic miracle par excellence: namely, when the Host begins to bleed or turns into flesh due to lack of faith. In this case, however, the miracle has been caused not by doubt but by faith itself.

## → ELEMENTS

### Liturgical objects and dresses:

A number of liturgical objects can be seen in the painting: the golden goblet placed exactly below the Host, the chasuble worn by the priest, and the red altar frontal all represent the Holy Spirit's gift to spread and defend the faith. Another ceremonial item is the surplice worn by the altar boy. St. Catherine is wearing the typical Dominican clothes.

### Gestures:

The gestures and postures of the figures highlight the liturgical intensity of the event. The scene represents the exact moment of the consecration of the Host: this is apparently represented from the priest's position, facing the altar (in accordance with the Tridentine form of Mass) while the worshippers are kneeling during the celebration of Communion. The altar boy is holding a small bell as though to direct attention to the consecrated bread. The fact that St. Catherine is intent on prayer and worship is shown by her clasped hands, aligned with those of the priest.

### Sacred place:

The scene is set inside a church, with its recesses and sculptures, and, in particular, in the apse of the church with its altar laid out and the classic elements of the Tridentine liturgy: the communion table, a red and gold frontal, the altar cloth, candle holders with lighted candles, a crucifix and altar cards.

→ **THEMES FOR QUESTIONNARIE**

*Faith:*

Participants are asked to comment on the role of faith for the personal and social life.

*Consecrated life:*

Participants are invited to express their idea about the choice to live a consecrated life.

*Liturgy:*

Visitors are invited to answer to questions related to the theme of religious rituals.

→ **USER GENERATED CONTENTS**

*Rite:*

*"Looking at this painting, my attention was attracted by the magnificence of the detailed clothes of the persons. For me it is important to note that during religious rites, in my country the spiritual leaders, priests, sorcerers, healers, griots and the others people who are present, usually wear their best clothes to honor the event and the circumstance."*

*Faith:*

*"The painting for me is obscure in its specific iconography, but shows an item that anyone can read, that is the great faith that animates the character called Santa Caterina. From her kneeling position to her rapt we understand that prayer and faith have changed something in a precise moment of reality."*

*Objects:*

*"In the Museum Popoli e Culture there are many objects related to the rites of some Eastern philosophies: saucers for offerings, candles (also present in Catholic rites), incense"; "in this museum there is a section specifically dedicated to the liturgical goldsmithing, in which there are information panels that explain the function, and the evolution of the various objects, some of which are indeed present in the paintings examined here"; "An object in this picture reminds me of my culture: the bell. In Tibet bells are widely used; their sound is part of the prayer, but it is also true that in prayer the bell (Ghanta) is accompanied by the Vajra, another object that does not sound. This draws the essence of human life; it must be based on a balance of two principles (that we can call male and female principles) which correspond to the practice and wisdom."*

**Appendix:**

A sample of co-curated multicultural contents designed for the app

IMG. 21 — *Visual simulation of the first application area and navigation system (visual design by Ece Özdil).*

**Actors**

**Santa Caterina**

→ ITEM

Priest

Altar Boy

Angels

(Siena 1347- Rome 1380) Nun, theologian, mystic but also active on the social and political fields. She is recognizable thanks to two iconographic attributes: the crown of thorns (symbol of the gift of the stigmata) and the lily (symbol of purity). In 1970, Pope Paul VI proclaimed her Doctor of the Church, recognition given only to three women.

**Objects**

Altar

**Chalice**

→ ITEM

Crosses

Statue

Rosary

Bell

Vestments

The cup-shaped goblet used at Mass to contain the wine. For centuries it was made of precious material; if it was not of gold, the interior of the cup was gold-plated. A chalice is consecrated with holy chrism by a bishop. Regilding the inside does not destroy the consecration.

**Gestures**

The Elevation

**To pray**

→ ITEM

To play the bell

The kneel and the clasped hands of the Saint indicate a precise solemn moment of the Mass: the Consecration. This is also the most common attitude of the body during the prayer present in many iconic representations where a person meets the sanctity.

→ IINTERCULTURAL REFERENCES

→ MUSEUM OBJECT REFERENCES



→ INTERCULTURAL REFERENCES

→ MUSEUM OBJECT REFERENCES



→ INTERCULTURAL REFERENCES

→ MUSEUM OBJECT REFERENCES

# Researching by design and co-designing with the users an intercultural museum experience

→ ELEONORA LUPO, RAFFAELLA TROCCHIANESI

→ RESEARCH BY DESIGN AS A HUMANISTIC CRITICAL PRACTICE

FOR DEVELOPING INCLUSIVE MUSEUMS STRATEGIES

Museum studies and cultural studies are not "exact disciplines". They don't rely on the scientific methods of the hard sciences, but on the aesthetic experience. Therefore, developing innovative knowledge for museums requires a different methodology from the practice of scientific inquiry that looks for explanatory models on "how things are" (i.e. the observation of facts and the testing of hypotheses to produce an objective, verifiable and universal scientific theory, Popper 1959; De Groot 1972). To explore new possibilities for museums, research should focus on "how things could be" in a more experimental and hands-on inquiry model, such as is exemplified in "research by design". "Research by design" (Foqué 2010) is a heuristic activity based on "multiple hypotheses in action." It aims to conceive of multiple possible realities, investigate their desirability, attempt to change the existing structure, and evaluate the resultant reality.  In the MeLa Project, research by design has been one of the methods used to envision new museum practices and strategies.

Sevaldson defines research by design as such: "A special research mode where the explorative, generative and innovative aspects of design are engaged and aligned in a systematic research inquiry" (2010, 11). It is similar to the "research through design" of the widely used three-fold model (into-for-though) advanced by Archer and Frayling (Archer 1995; Frayling 1993; Rust et al. 2007). This method can be seen in any re-

search in which the design practice is central to generating knowledge, or "where the practice serves as research purpose" (Rust, Mottram, and Till 2007, 11).

Concerning the MeLa project, what characterizes its research by design method is the emphasis on the nature of design as a group of explorative and generative actions, producing knowledge in the act of designing (Sevaldson 2010). Consequently the emphasis is on practice: "Research by design is essentially practice based, and is the key for the development of a theory that can be applied in a practical situation (...). This theory is essentially pragmatic, necessarily dynamic and relative to the practice situation" (Foqué 2010, 153). Further, a practice-based theory "is typically not about explanations and justification (knowing why), but rather about establishing facts (knowing what) and instructions for actions (knowing how)" (Grand 2008, 401).

Because of their interdisciplinary and cultural intensive nature, museums and institutions of cultural heritage can engage critically with a design process. Thanks to the "virtuous circle" between experimenting and reflecting[1] these organizations can investigate the still open question on how to improve the space for intercultural, multivocal, and social experiences in future museums. The MeLa activities within the Museo Diocesano have focused on an open-ended approach. Multiple hypotheses have been connected in specific "knowledge tactics"[2] by articulating interventions and implications in a whole innovation strategy. In this case, these strategies have focused on the representation of excluded, unrepresented, or invisible communities of citizenship (Sandercock 1998), such as the potential museum visitor from diverse or minority religious background. Our efforts have also focused on designing social interactions, emphasizing the experience of otherness and permeating boundaries among cultures through the use of technologies.

These inclusive tactics (or "thousands of tiny empowerment", Sandercock 1998) once prototyped and tested in the field, can give replicable directions on how to act innovatively in the museum environment to promote intercultural inclusion.

These issues need to be approached through a humanistic vision of design practice, nurtured by anthropology, sociology, ethnography, pedagogy, linguistics, cognitive sciences and the human sciences in general. The humanistic design approach (Colombi and Lupo 2014) is relevant for museums because the circular nurturing between culturally informed needs and solutions can envision more coherent models to approach and experience cultural content. This critical practice could disclose new symbolic and experiential relationships between heritage and users, through a myriad of activities including: interpretation, participation, the imaginary, and co-creation of inclusive value.

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1   The virtuous circle. Design Culture and Experimentation is the title of the 2015 Cumulus Conference (Cumulus is the International Association of Universities and College of Art, Design and Media).

2   According to Mazé and Llorens, a tactical approach analyzes and orients design practice always focusing on how practice operates (Mazé and Llorens 2011).

→ **THE RELATIONSHIP BETWEEN DESIGN AND HUMANITIES**

**IN THE EXPERIMENTAL ACTION FRAMEWORK**

In this experimental action the humanistic disciplines were represented by the historical and critical competences of the curators of the museum and the experts in religious art involved in the project. Meanwhile, the design discipline brought its own tools and methods aimed at making complex content visible, accessible and usable. Through this collaboration some topics emerged:

→ information and knowledge visualization practices help address the complexity of the relationships among forms, symbols and meanings in the iconological field;

→ art history and criticism can take advantage of the methodological design approach and of visualization methods and techniques;

→ an elaboration of possible paradigms of relationships could create more synergy among these competences.

In this age of re-definition of disciplinary boundaries, some disciplines are using design approaches and new technologies in order to explain meanings and to exchange content. While this approach has become common within the natural sciences, it is new for the humanities, despite the fact that the humanities express a specific interest in the "visual practices" that characterize the design process. Meanwhile, the field of design recognizes visualization itself as a "sensory forms of knowledge" (Whyte and Cardellino 2010). This conceptual allegiance between design and the humanities then seems conducive to experimenting with new forms of collaboration that lead to the re-codification of process and content.

In the field of visual cultural studies, the analysis models can be divided into two types: those that focus upon "content" and those that focus upon "form". This distinction is a long-standing but also problematic one because it opens thorny issues involving several theoretical fields (philosophy, art, design...) that offer to explore possible inter-disciplinary relationships. In this essay "form" and "content" are considered as polarities from which possible interesting models can be teased out and discussed.

The chart show here explains some possible constructive synergies between design (in this context: focused on a theoretical and experimental framework created with the support of new technologies) and the humanities (here focused on art historical and critical competences). In the y-axis the poles are "design" and "humanities" and in the x-axis the poles are "content" and "form". If you cross "humanities" and "content" you can form a specialized approach focused on history and criticism in which new cultural proposals can be generated. If you cross "content" and "design" you can develop a scenario-design approach that can create new visions in the cultural field. Putting "design" and "form" in relation to one another, you can find new forms of language, new ways of communication and new visual artifacts. Finally, through the crossing of "form" and "humanities", new poetics, aesthetics and rhetoric can create and communicate culture (Trocchianesi and Ciuccarelli 2012).

**IMG. 23** — *Constructive synergies between Design and Humanities Sciences in the cultural field. (chart by R. Trocchianesi 2014).*
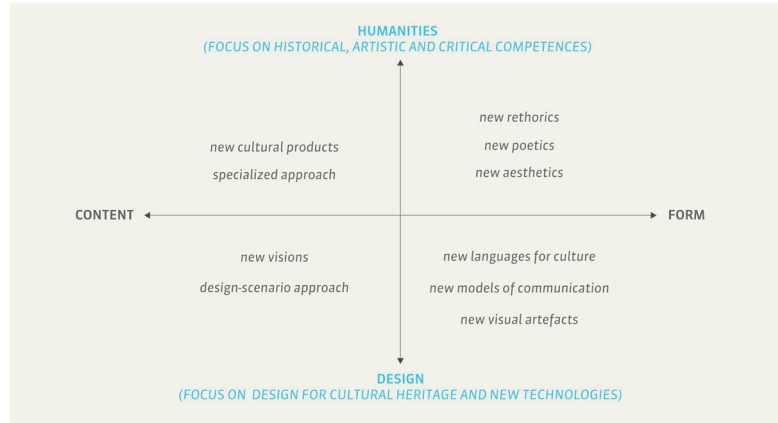


The upper half part of this chart (content, humanities, and form) shows some possible approaches to encourage the interpretation process of works of art (or cultural assets in general). Here the interpretation can be performed by both the critic and the viewer, in a continuous circle of stratified contents. According to Gombrich concept of the "beholder's share" (2001), art is incomplete without the perceptual and emotional involvement of the viewer. This was a crucial subject of study by a contemporary generation of Viennese art historians: In their work, Ernst Kris and Ernst Gombrich both recognized the importance of contemporaneous schools of psychology and incorporated perceptive and emotional response into art criticism. Similarly, the involvement of the viewer is crucial for this MeLa experimental action, in that the action aims to offer a multiplicity of interpretation thanks to the additions and exchanges of content contributed by the visitors.

The use of the word "reading" in relation to images implies that some labor is involved in extracting meaning. Images with "hidden" figures and details are designed to make viewers scrutinize images with more than normal intensity (Walker and Chaplin 1997). There are societies that develop an especially acute sense of the visual, going beyond the controversial meaning of *homo videns*[3] (2007), as used by Sartori[3] (2007). Clearly, there is no aesthetic experience without viewers, but some delicate theoretical questions arise.

Bourdieu (1993) affirms that the field of cultural production is linked to a larger social context that he calls "the field of power". The value of this power then lies in the symbolic realm (including the aesthetic). The field of culture has a relative autonomy, but its boundaries are permeable, and it is in this permeability that creates its compelling role within contemporary society. The challenge of the design approach is to intervene in these boundaries to rethink existing structures and develop new forms of knowledge.

In the art historical-critical field (although it is strongly linked to a "traditional" cultural approach) the use of new technology as a new register of communication is evidently increasingly acquiring importance.

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3   Sartori states that the picture prevails over the word and that this situation has damaged abstract thought and symbolic activities within human societies.
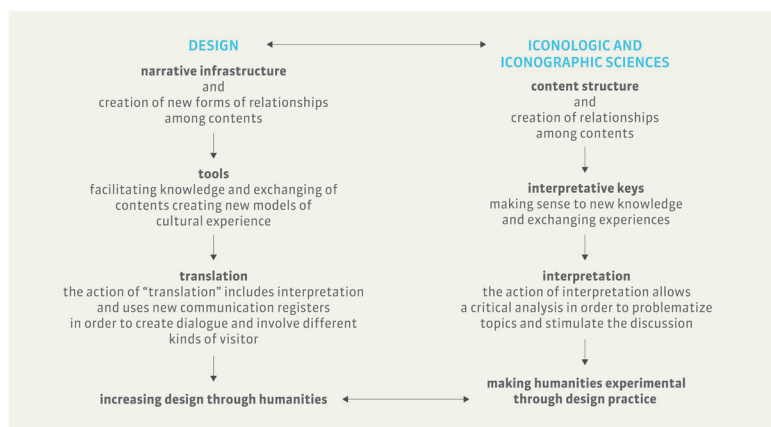
This situation then requires a re-reading—from a critical perspective—of the potentials of knowledge-gaining experiences and their forms of representation. New technologies offer some interesting tools to collect, organize and express data and content in an innovative way; they also support the design practice to define forms and relationships between framework and content. According to Panikkar (2004) we should aim to transform the "invasive" technological model in techni-culture into one in which people are aware of the potential of technologies and they are empowered to be involved in a participative way in the creation of knowledge.

One definition that has been given to the branch of visual cultural studies that examines visual or pictorial rhetoric is visual poetics. Such rhetoric can be found in virtually all figurative imagery. A picture is "of" something, and therefore, the content is the substance contained within a representation. There are two principals sources for content: first, real events, scenes and people (fact), and second, the human imagination (fiction) (Walker and Chaplin 1997). In this experimental action at Museo Diocesano, the works of art were considered "semantic" vehicles, that is, things that "carry" other things—according to Andina's definition[4] (2012)—enhancing the potential relationships among works of arts, and between "manifest" and "latent" content.

Barthes introduced the terms "denotation" and "connotation" to distinguish between first level (literal) and second-level (associational) meanings. These in turn gave rise to a third level of meaning that Barthes (1977) called "myth". Therefore one can see a close parallel between Barthes' thoughts and the art historical/critical means of analysis outlining iconography and iconology. According to Panofsky, iconography is "descriptive and classificatory", while iconology is "interpretative". The Museo Diocesano project has been focused on the iconological link to design, because the design of interpretation was essential to the aim of allowing several levels of cultural

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4   According to Andina (2012, 193) works of art are "semantic vehicles"; they are things that incorporate meanings, namely they are things that "carry" other things. In this case "to carry" means the possibility to consider works of art also as a medium able to link to other works of art and to other crossed paths of meanings.

experience. Panofsky further identifies two levels of object-based study: factual and expressional. By "factual" he meant the recognition that a viewer has that a painted object is indeed an object. "Expressional", on the other hand connotes the way the object is painted (Panofsky 1970).

From the perspective of a constructive collaboration, one can translate the concept of philosophy in action to humanities in action as a new form of activity that involves the human sciences in propositional applications.

This project at Museo Diocesano is an example of the complexity that characterizes any object of study within the humanities. It also makes evident that the natural vocation of design to cope with complexity, sense-making and qualitative information by means of visual tools and methods, can be productive, especially when the target visitor does not require over-simplification (as in the case of scholars and researchers).

In this case, one of the goals was to develop a model of cultural experience that opened up a certain degree of interpretation, conveying the qualitative value of information and clearly declaring its active role in the visitor's cognitive process.

This experimental action is also proof that an effective integration between the two disciplines of design and humanities in the development of a interpretive framework and cognitive visual tools (the audio-video content, a mobile application, etc.) is possible when design is incorporated from the first phase of the process. With this project, the design perspective contributed to the exchange and understanding of knowledge, and in the sharing of content.

This approach is confirmed by humanistic studies in which aesthetics is defined as an inter-cultural category (of knowledge). In this sense, art, anthropology and design are places of discussion, understanding and evaluating of cultural activity (Caoci 2008).

In conclusion, the model of the Museo Diocesano action verifies a mutual relationship between design and iconologic/iconographic work, and this leads to a constructive disciplinary exchange: design is impacted by the humanities and the humanities are pushed towards more experimental approaches via the design practice. In particular, the design approach creates the narrative infrastructure (that influences the model of the cultural experience) and it deals with suggesting new forms of relationships between the visitor/user and content; whereas the iconologic/iconographic approach creates the structure of content and the relationships amongst said content.

Both disciplines offer important elements useful to understanding works of art and a multiplicity of meanings derived from them. In the design discipline these elements are tools that facilitate knowledge and the exchange of content, whereas in the humanities, a "interpretative key" allows for the understanding of new knowledge, new experiences and new exchanges. From this follows the idea of "translation by design": the translation action includes interpretation and uses of new communication registers in order to create dialogue and engage a broader range of visitors. At the same time, the humanities offer interpretation: the interpretation

action allows a critical analysis in order to problematize topics and stimulate discussion among visitors. In this experimental action, this mutual relationship was enriched by the direct involvement of visitors and experts in the process of creation and development of the content. In this way the criteria of curatorial work has been rethought according to a new model for creating inter-cultural experiences.

### → ENGAGING/ INVOLVING/CO-DESIGNING WITH THE USERS

During the two field-based experiments the objective was to prototype site-specific concepts for the visitor experience with real users, incorporating the added value of engaging the user in the process as a resource that assisted in assessing, contributing and improving the practice-based research process. User engagement in museums ranges from simple involvement during the museum visit, such as in immersive exhibition displays that require interaction, to an active participation in the content available to the public within the museum.

The level of visitor involvement relies on policies that put the audience at the center of the museum's activities and the museum's commitment to accessibility as a starting point for more complex strategies of social and cultural inclusion. According to Bodo, a museum that engages its public in processes like acquisition, interpretation and mediation of the collections can be defined as a "relational" museum (Bodo 2000). In this vision, accessibility is not the focus only of educational activities, but to all museum functions, creating a inclusive institution that reflects the social and cultural diversity of the community of reference for the museum.

Contribution can happen both during the museum visit, and more significantly, it can also happen during the design of the exhibition itself, at the very center of the design process, in a so-called co-design approach. Within the museum environment, this co-design can be defined also as a co-interpretation or co-curation process in that it addresses not only the spatial arrangement of the exhibition setting but the content itself. This content however is not simply user generated but instead created in collaboration with the museum's curators. Visitors are not only the audience, but are also "creators, producers, distributors, commentators and deciders" (Matarasso 2006) or an "interpretative community" (Hooper-Greenhill 2003), with the undirected result of community development (Bodo 2009). From this new perspective that balances the relationship between museum visitors and curators, cultural heritage becomes increasingly closer, and more available to the audience. The public can make creative use of it, especially in the contemporary context in which it is becoming increasingly common that this cultural heritage is maintained, curated, and accessed through mediation of technologies[5].

5   "Recalibrating relationships: bringing cultural heritage and people together", is the title of a conference promoted in 2014 by the EU project RICHES-Renewal, Innovation and Change: Heritage and European Society.

The Museo Diocesano experimental action has been especially devoted to the idea of co-curation, enabling the co-creation of content and stimulating users' participation and contribution through the mediation of digital devices (e.g. tablets).

The first test took place in October 2013 and was dedicated to 15 specialists and expert users of various religious faiths. This test focused on gathering verifiable content from these senior users. During the test the digital devices guided the "expert users" through the three steps (listen – interpret – contribute) composing the experimental model. Our goal with this model was to stimulate multifaceted interpretations, enable user comments and contributions, and to possibly encourage confrontation amongst the visitors. Initially, they viewed a video animation narrating the miracles seen in the paintings. The video introduced a specific topic and focused on religious objects, gestures, places or symbols, which were either meaningful to the topic addresses or were conducive as visual cues for creating inter-cultural connections and reflections. Secondly, they were invited to give a personal interpretation of the topic of the painting through a structured question-naire. This questionnaire allowed the test subject to add comments, parallel references or, conflicts he or she felt with his/her own beliefs).

Lastly, the users were invited to provide references to other works of art, literature or iconography. At the end of the test, they were also asked to evaluate the experimental action itself, with an on-line questionnaire (i.e. how to improve it, how to make it more understandable for a multi-cultural and general audience, etc.).

IMG. 25 — *First test session: summarising scheme.*

| 1ST TEST OCTOBER 2013 | Users: experts Objective: authoritative & intercultural contents gathering | | | |
|---|---|---|---|---|
| | Level 1: LISTEN | Level 2: INTERPRET | Level 3: CONTRIBUTE | Level 4: LINK |
| CULTURAL CONTENTS | Artistic and historical info on the painting; "narration" of the miracle | Contents on specific critical topics/issues related to the painting | New interpretative paths on specific proposed topics associated to the painting | Connections with other issues and works of art of the museum |
| DYNAMICS OF INTERACTION | Passive: listen to the audio and watch the video animation | Active: answer to a structured questionnaire on "fiction issues" | Active UGC: serious inter-pretations, tags, refer-ences to other works of art or literature in the personal culture/ religion | Active UGC: link with other cultures |

IMG. 26 —*First test session: users looking at the video animations.Photo by Sara Chiesa.*



IMG. 27 — *First test session: users contributing with personal comments and references. Photo by Sara Radice.*

Obviously, the test didn't aim to gather statistically relevant results, but rather it developed a participative model for content curation and engagement of audiences. Secondly, the test acted as a means to shape and evaluate the concept and structure of the digital content for the visitors (in this case museum professionals), using the so-called "front-end evaluation". Front-end studies intend to consult with visitors on the whole concept, including interface, interaction mode and interpretative concepts (Gottlieb 2012). Front-end methodologies are different from visitor studies, which focus on the evaluation of the museum visit. In contrast, these studies evaluate the qualities of the interface and exhibition (for example: the play-ability of the interaction and its relationship to the user's creation, motivation, and learning). Front-end evaluation doesn't begin at the end of the design process (observing the visitors from a far distance), but instead occurs during the process and asks the visitors to be consciously involved in an exploratory experience – thus combining museum studies with interaction design studies.

The expert users underlined the interesting potential parallels among religions that can be achieved through a balance of narrative, artistic and historical content, but this initial test with them also revealed the complexity of the themes proposed for intercultural reflection and the high standard of language required for the general public to understand the experimental action. The expert users also shared that they felt that the general audience would benefit from a more open discussion with other visitors of the inter-cultural themes (and potential frictions amongst religions). The great majority of the experts felt that the inter-cultural dialogue would be strengthened by adding contributions directly connected with the video-narration and to create educational activities with mediators for the public.

These observations provided direction for the further development of the application for smart mobile devices. The structured questionnaire was considered not appropriate for the general public, even though it functioned to verify with the experts that the selected themes were comprehensible. An important observation from the first test was the necessity to relate the content to people's lives and real experiences, to make it more understandable and contemporary, and especially to make the reflection more social and dialogical to avoid the risks of showing disrespect or appearing insensitive. Even though it's use was still limited in this action, digital technology offered an interesting opportunity to make the paintings more eloquent and engaging, compared to the current situation at the museum that only offers short printed captions.

The second test, developed for the general public, took place in June 2014. It aimed to evaluate the prototype of the application, which focused on only one of the paintings and also included the relevant UGC (User Generated Contents) collected during the first test. It was conceived as an experiment and a socially oriented intercultural experience: 15 people with various religious backgrounds were guided through a richer experience of a particular painting based on a series of activities: "exploration", "contribu-

tion" and "connection". In the first phase, the visitor explored the content (accessible by clicking on active areas and filterable by characters, objects and gestures). The content was enriched through the entwining of polyphonic references generated by the users of the previous test session, and through links to other works of art in the museum. The visitors were invited to add comments at any level of the application, thus allowing for correlations with their own religion and personal experience.

IMG. 28 — *Second test session: summarising scheme.*

| 2ND TEST SPRING 2014 | Users: *generic audience*<br>Objective: *contents performing & intercultural sharing* | | | |
|---|---|---|---|---|
| | Level 1:<br>LISTEN & LEARN | Level 2:<br>INTERPRET &<br>EXPERIENCE/<br>PERFORM | Level 3:<br>CONTRIBUTE | Level 4:<br>LINK & SHARE |
| CULTURAL CONTENTS | *Artistic and historical info on the painting; "narration" of the miracle* | *Contents on specific critical topics/issues related to the painting* | *New interpretative paths on specific proposed topics associated to the painting* | *Connections with other issues and works of art of the museum* |
| DYNAMICS OF INTERACTION | *Passive: listen to the audio and watch the video animation* | *Active: "perform" specific contents* | *Active: add your comments on similar experiences, tags, rating and reference to your culture/ religion* | *Active: share and link with other people for confrontation* |

The second phase consisted of a roundtable discussion. Through the help of a moderator, the visitors were stimulated to deepen the discussion on some topics or objects. In particular, the debate focused on the themes or artworks that received a higher number of comments or stimulated widely differing opinions. This phase was also meant to evaluate the application's efficacy, in terms of enhancing the experience and augmenting the content in the paintings, revealing layers of meanings and also its general usability.

In parallel with this, the museum team launched a live social event via Twitter that provided the museum's followers to follow the experimental action online.

The majority of the visitors evaluated the experience very positively: they stated that they would never have had the same understanding of the painting without this application. The application highlighted the elements of the painting—objects or gestures in the painting selected as carriers of

**IMG. 29** — *Second test session: roundtable discussion. Photo by Sara Chiesa.*



"trans-cultural" meaning—and reinforced their relation with the work of art. Furthermore, visitors provided interesting suggestions, i.e. to improve the application narrative and its interactivity, enabling for instance, the possibility of manipulating 3D models of the objects or zooming into the pictures. The parallels with other religions suggested within the application (even if not systematic or exhaustive) were particularly appreciated, as well as the possibility to add a personal perspective. The aspects of sociability and sharing in the application could be further strengthened, by making more visible the more relevant and interesting comments, in order to suggest correlations and encourage dialogue.

The visitor comments were also very useful for the evaluation of the architecture and interface of the content within the application. This could be improved to make its structure more user-friendly in terms of hierarchies of content and offering some short previews of the in-deep analyses, to allow the user to decide if he or she would follow the exploration further or change topics.

### → CONCLUSIONS

While the application prototype wasn't (as of yet) developed into a final version for the market, its value and potential is nonetheless recognizable – especially due to the collaborative design process that allowed users to engage in practice-based research and contribute to the application's development. Concerning the crucial question of the mediation of cultural heritage and intercultural exchange via digital and mobile technologies, we can infer that to experience a work of art, visitors don't need unmediated experiences (meaning direct and without the use of technologies as media) but immediate ones. From this perspective, these technologies succeed

in amplifying the visitor experience and making the work and the content associated with it more immersive.

Intercultural design for museums may be something of a marginal field of design practice. It lacks large-scale applicability and market impact. But in evaluating the overall process, we found the opportunity of sharing knowledge to create collaborations with SME and creative industries in an advanced model of co-development and co-production extremely fruitful.

In spite of its limitations, the MeLa experimental action at the Museo Diocesano and its research by design approach and collaborative process represent an important milestone for creating a humanities driven critical design methodology, creating a common ground for widening the frontiers of design knowledge and practice within museums.

*This paper is the result of a joint work of the two authors. In particular, Eleonora Lupo wrote sections 1 and 3, and Raffaella Trocchianesi wrote section 2. Conclusions were written jointly.*

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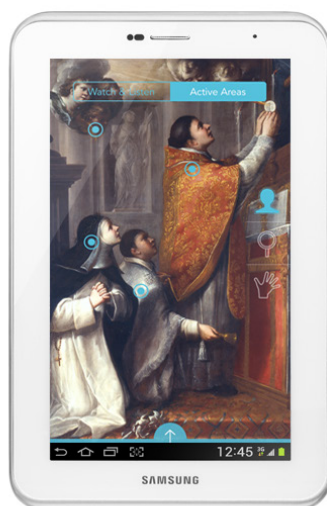
## Watch & Listen

The visitors can use the tablet to watch and listen a narrative video about the painting.
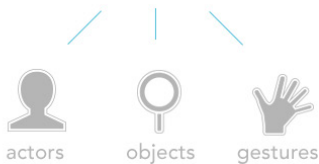
video content

## Active Areas

The visitors have also the possibility to deepen some information through the themes of the painting, related to the subjects in the work, their gestures and the objects they interact with.

actors          objects          gestures

# Shaping technology for intercultural interactions

→ LUCA GRECI, ECE ÖZDİL

### → AR TECHNOLOGIES AND AR CONTENT ENABLING TOOLS

*AR technologies*

Today, Augmented Reality (AR) is a technique that layers digital effects and images on top of real-life spaces in real time using computers and mobile devices such as smartphones, tablets, smart glasses and digital data glasses. This technology has been in development for over a decade now; initial research and prototypes dates back as far as 1997. The early examples of this technology focused primarily on the definition of Augment Reality in order to distinguish it from Virtual Reality (VR) issues and developments.

The initial goal of this technology is to enhance the user's perception of the real world, providing a platform of interaction that combines the real world with 3D virtual objects that coexist within the same space appearing on an additional digital layer.

To achieve this goal in our project, we addressed the following matters through our discussions:

→ In comparison to virtual reality, augmented reality includes the presence of the real environment. Hence, it is a subdivision of mixed reality that combines reality with an artificial environment.

→ The project needed to include real-time interaction; hence the application would display the virtual on the screen at the same time as real interaction with the visitor.

→ Earlier iterations of AR technologies, similarly to VR needed hard-

PREVIOUS PAGE, IMG. 30 — *Visual simulations of the first level of contents. With the division of the tab on the top, the user has either the possibility to follow a narrative video about the painting as a linear fruition, or land to the active area section. Here, he can deepen information depending on his personal interest, related to the subjects in the painting, their gestures and the objects they interact with. Visual design by Ece Özdil.*

ware (such as head mounted displays, HMDs) in order to create a 3D real-like environment. Today, AR systems are registered in 3D, in other words they recognize the space as a 3D environment rather than 3D objects flattened into 2D.

These properties highlight the two main issues that AR technology faces during development: registration and tracking. It has been already analyzed by AR researchers that inaccurate alignment of real and virtual objects is easily recognized by users. In general, registration uses the results from tracking to align the virtual to the real environment, and this alignment should be done with respect to both real objects and the position of the camera. Several techniques have been developed in recent years to provide solutions for this registration process: positioning, marker and mark-less.

What emerges from this short introduction is that augmented reality's strength mainly derives from the ability of the technology to "close the gap" between the digital and the virtual world, thus enabling a potential area of "interaction" in creation of pleasurable, assisted and knowledge-producing experiences.

*AR-enabling technologies*

Recent advances in hardware and software for mobile computing has allowed one of the main problems of usability of the AR technologies to be overcome: the question of portability. For example, the tracking techniques introduced in the previous paragraph require a camera, a GPS system and high power computing in order to generate AR content in real time . Before the rise of this new generation of mobile devices, AR was mainly used in research settings and indoors because of the weight and encumbrance of the necessary hardware (such as the HMDs mentioned earlier). Now that AR is available on virtually any mobile device, many AR platforms have been released that provide tools to add video, 3D models, images and texts over a specific real-world marker. These tools are subdivided in two categories: Graphical User Interface builders (GUI builders) and Integrated Development Environments (IDE).

 The GUI builder is a software development tool that simplifies the creation of GUIs by allowing the designer to arrange graphical control elements using a drag-and-drop editor. With a GUI builder, visual feedback is provided while the program is still in development phase. The most common GUI builders for AR are: Layar[1], Wikitude[2], Metaio[3] creator,

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1   Layar is a mobile browser developed by a Dutch company based in Amsterdam. The browser allows users to find various items based upon augmented reality technology.

2   Wikitude is a mobile augmented reality software that was developed by the Austrian company Wikitude GmbH (formerly Mobilizy GmbH); it was first published in October 2008 as freeware. It displays information about the users' surroundings in a mobile camera view, including image recognition and 3d modeling.

3   The Metaio Creator is augmented reality software that allows users to create a complete AR scenario without specialized programming knowledge through a drag and drop interface.

Aurasma[4] and Unity[5]. In contrast, an IDE is a software application that provides comprehensive capacities to computer programmers for software development. An IDE normally consists of a source code editor, built automation tools and a debugger. In this case, it wasn't possible to review visual feedback before the program was implemented. For this project we worked with Eclipse Java, the IDE that is typically used to develop applications for the Android platform.

→ **THE MELA EXPERIMENTAL ACTION AT MUSEO DIOCESANO DI MILANO**

As already mentioned in the previous chapters of this book, the primary aim of the MeLa experimental action was to investigate and affirm selected theoretical research goals positing the potential of digital and mobile technologies to assist in establishing and supporting an intercultural dialogue in museums. Museo Diocesano's action was focused on designing a visitor experience that enabled new ways of interaction: transforming the linear model of a museum visit into an active activity with multiple avenues for the visitor to experience content and encourage his or her participation.

Through the use of a mobile platform, we hoped to open a dialogue, enabling contributions from visitors from different cultural backgrounds. On the one hand, the focus of these actions were, to test the feasibility of several concepts related to the application of various digital technologies. We were especially interested to investigate the technological capacity for video narrations and performative interaction by the user, and the efficacy of these tools for opening up different interpretations to the museum collection. On the other hand, this work also aimed to test user interfaces (UIs), gather information about possible software enabling AR technologies, and bring them into use in prototype applications in the museum setting. Therefore the action at MuDi was designed with both of these goals in mind.

These steps in this process included tests for evaluating concepts, sessions with experts and specialists (e. g. art historians, theologians, museum curators, etc.) to receive feedback, and prototyping of the final application with general visitors attuned to multicultural exchange (e. g. immigrants, second generation immigrants and foreigners living in Milan).

The Diocesan Museum was initially chosen because of the location and its collection. These specific experimental actions were then developed focusing on the collection in the hall of SS. Sacramento, a large atrium-like space with large paintings depicting various miracles related to the sacrament of the Eucharist. As described in detail in chapter three, the team chose this room for the experimental action because the dimensions of the room enabled interaction with the artworks on an accurate scale and the interesting themes of the paintings were conducive to multi-religious interpretations.

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4   Aurasma is HP Autonomy's augmented reality platform. It is available as an SDK or as a free app for iOS and Android mobile devices.

5   Unity is a cross-platform game creation system developed by Unity Technologies, including a game engine and integrated development environment (IDE).

From the twelve paintings exhibited in the hall, the team chose to select five to work with for the experimental action:

1. San Bernardo libera un'ossessa con l'Eucarestia

2. Il miracolo del fanciullo restituito illeso dalla fornace per aver ricevuto la Comunione

3. San Pietro martire smaschera la falsa Madonna

4. La comunione di San Stanislao Kostka

5. Santa Caterina da Siena vede uscire una fiamma dall'ostia consacrata

### → THE DESIGN OF THE EXPERIMENTAL ACTION

In order to verify the intercultural potential of digital and mobile technologies in a religious context an experimental action was performed within the MeLa project framework. The aim was to provide a new paradigm for the museum's interpretation strategies, moving the visitor experience from a contemplative visit to an interactive and participatory one focused on enabling and stimulating intercultural dialogue. Through the use of digital technologies such as video, interactive platforms and 3D visualizations, the MeLa project has tried to stimulate different interpretations on cultural topics present in the paintings.

A design-driven methodology has been used for the development of the AR mobile application used in the experimental action. Our activities in the context of the action were conducted in two different steps, and designed and developed for two distinct groups of visitors: targeted expert users and the general audience.

Due to the structure of the project, several organizational actors collaborated to realize the action, and therefore a range of people with different backgrounds and skills were involved in the development of the mobile application. The process of design, testing and evaluation was iterative, which disrupted the traditionally linear route of application development. Generally this work is divided into divergent sections and teams, such as a tech team and a content team. Instead in our case, we had an integrated team where all members of the project collaborated together during the research phase, testing phase, content management phase and prototyping phase. This approach was used because we could foresee that the needs of the content would directly effect the navigation, as well as the structure of the User interface (UI). At the same time, participation of the museum team also helped to ensure that additional content from the other rooms of the museum was integrated into the application.

These concerns and desires formed the approach to how the action was designed. Our goal was to move towards a human-centered and participatory design methodology, wherein insights, ideas and needs of users, the MeLa team and the museum staff shaped the project's development, and every member was active in all of the project's phases: discovery, ideation, implementation and delivery.

*First test session: technologies for viewing and commenting the paintings*

The aim of the first experimental action was to examine if and how digital technologies support and enhance the visitor's museum experience. Moreover, in the context of the initial test with experts we also gathered data and suggestions in order to re-design the contents of the application for the general user. Initially fifteen specialists (such as museum curators, theologians, priests and clergy of various religions and cultural mediators) coming from diverse geographic backgrounds and religions, as well as different age groups were recruited, and three groups of five participants were allocated to different test sessions. The mobile application was designed with two purposes in mind: to describe each of the five paintings to the users and to retrieve data and suggestions from the users. For these reasons, the application has been structured in five sections: registration, listen and watch, interpret, contribute and interact. The Registration section was a GUI (graphical user interface), where the users provide personal data (e.g. country, age, religion, etc...). This phase was necessary in order to create a unique account on the MySQL Data Base for each user that could be tied to the data received in the other sections. At the end of registration, a screen containing the instructions to activate the augmented contents was shown.

In the *Watch and Listen* section users selected one of the five paintings included in the experimental action, which then activated the augmented content. The user would then see a video with an explanation about the selected painting wherein some specific elements were highlighted and further interpreted. In the *Interpret section* the users were invited to answer twelve questions about the theme(s) discussed in the video. Users selected answers via a Likert scale. In the *Contribute* section the users were invited to suggest some literary, historical, philosophical, or iconographic-artistic references. They could also add links related to the painting's topics and objects, or share a comment deriving from his or her own culture, religion, or experience.
In the *Interact* section selected 3D models of the religious instruments inside the paintings appeared, giving the user a chance to explore them (zooming, moving, or rotating) by touching the screen of the device.

The test was divided in two phases: one using the AR mobile application and the other using a PC. In the second phase the user used the PC so that he or she could leave personal suggestions regarding the application and share opinions regarding links between what was presented in the application and her or his own culture, experience and religion. A member of the MeLa staff supported each user in both phases. Participants were informed that they were taking part in a study and a brief explanation on how the application worked was provided.

*Technical Information*

The logical functionalities and the GUI of the mobile application were developed for the Android platform, using IDE Eclipse and Android SDK. The development and implementation of the augmented reality content, as well as the 3D models and textures, has required the integration inside the IDE environment of external libraries. The "listen and watch" section of the application uses Vuforia SDK for marker recognition and to load and play video. The "interact" section uses Vuforia SDK for marker recognition and JPCT-AE SDK to load and draw the 3D models and textures of the featured sacred objects. The data storage of the personal data, visitor answers and user contributions is obtained through the use of a MySQL database located on a web server. The software module for the data exchange between the application and the database has been developed using the scripting language PHP. The mobile devices used with the AR mobile application were Android-based, three with a 7-inch screen and three with a 10-inch screen. The 7-inch devices had a resolution of 1024x600 pixels while the 10-inch had 1280x800. Both sizes of the devices were running the OS Android 4.0.3 Ice Cream Sandwich and had a rear camera with a resolution of 3.2MPx.

*Second test session: technologies for exploring the paintings contents*

The evaluation of the results and the suggestions coming from the first experimental action provided the outline and expectations for the second experimental action. The aim of the second iteration of the AR mobile application, addressed to the general user, was three-fold: to improve the connection between the topics and the miracles presented in the paintings, to offer intercultural points of view on the religious content and topics, and to provide an active, social and participative experience.

The mobile application was designed to provide three layers of content: *Watch and Listen* section offered the possibility to watch and listen to a video narration that explained and presented the rituals represented in the painting, Curated by the museum curator, the *In-depth sections* contained illustrated artistic and historical information, the details of the elements represented in the painting, and intercultural links with the museum's other artworks. Each in-depth section included a tool for sharing personal comments and experiences. *Active Area* of the application was dedicated to the details and elements represented in each of the paintings. The elements and details were divided into characters, gestures and objects and each were further explored as sources of content and triggers for potential interreligious reflection.

The application required the user to register in order to give access to its content. This structure had a dual function: it created a new user in the MySQL database and it attempted to dissuade the user from leaving inappropriate or undesirable comments by generating in the user a sense of being traceable (a valid email address was mandatory). These interactions
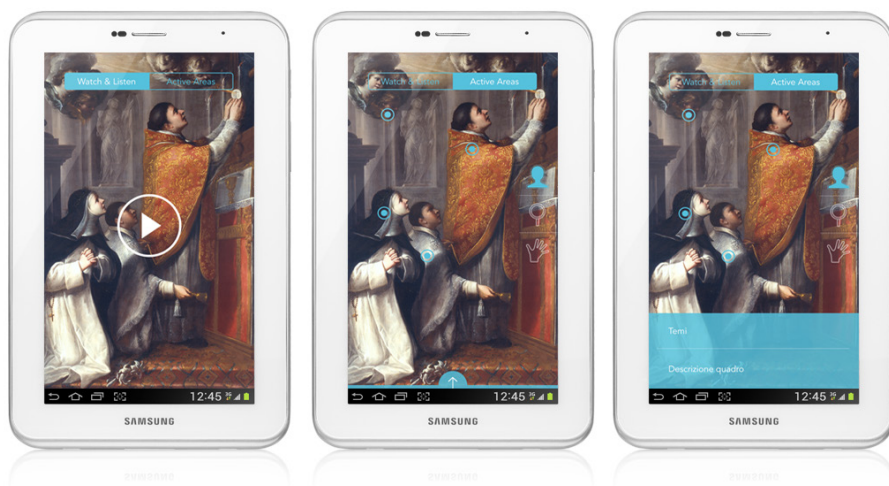
between the application and the user occurred via a touchscreen. The test was divided in two phases: an individual experience of the digital content through the use of the AR application and a collective participatory session facilitated with the support of a mediator. In the first phase the users viewed the short video explaining the features of the Santa Caterina painting and explored the in-depth sections, and through this activity were encouraged was to add personal comments and experiences. In the second phase, the visitors were invited to contribute to a collective discussion. Through the use of a physical mood board, a mediator initiated a conversation on the more commented or controversial topics addressed in the application.

### User Interface

From a visual design perspective, the goal of the project was to mirror the brand image of both Museo Diocesano and the MeLa project. In order to create a visually coherent design, the decisions on color and typeface followed the two organizations' existing identities. However, there were several aspects of the application's usability that affected both the visual design and the interaction design (IxD).

Although some users knew of the application's development, it was important that could understand and use the application without assistance or guidance. In order to make this phase easy to follow, two introductory screens were used before the AR technology would be activated. This phase corresponded to a native application FTU (first time use), in which the user is informed and instructed via a sequence of informational screens before running the application. In this specific case, there was one screen with information about the experimental action, followed by another screen with information on how to use the application. Additionally, while

using the application several options as hints for the navigation were also available to the user.

One important decision related to the UI design was also strategic. The team wanted the user experience to start with the Watch and Listen area. Hence, the screen with the information on how to use the application was designed to lead the user directly to and watch the video content before having access to the free discovery area called Active Areas. Under the section of Active Areas the content in the navigation were divided into 3 categories: *Intercultural references* were related references of the same object in different religions, *Museum objects* were related objects in the museum, and *In-depth contents* were related text and images supporting further interpreting the object selected.
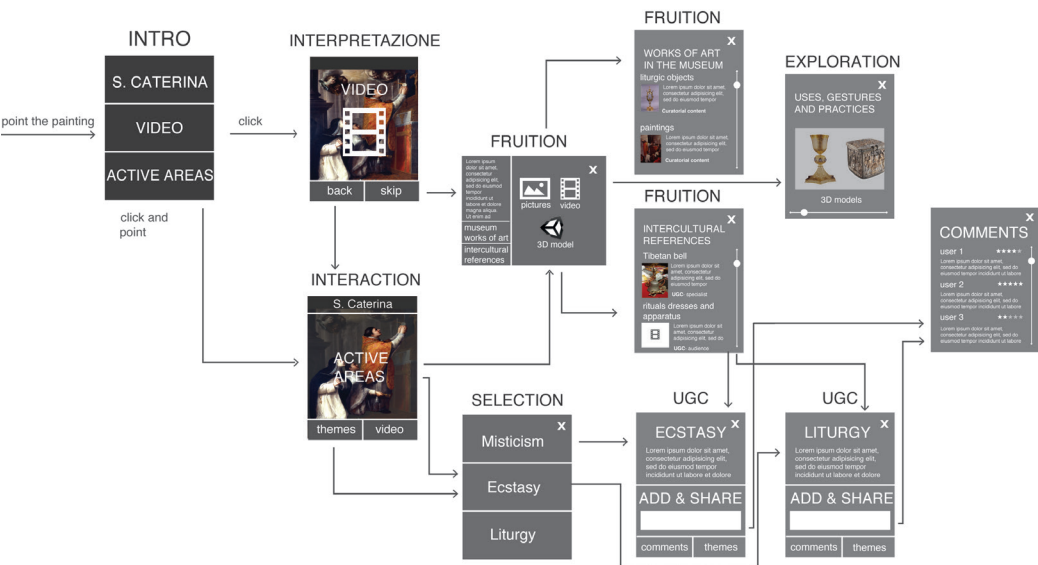
Another aspect of the IxD was the navigation in the application. Because it was important dedicate the entire screen to the painting, a hidden menu was designed. The menu then led the user to sections where she or he could find additional information related to the whole painting, or via the Active Areas section, to, information specifically related to the objects, gestures and actors in the painting.
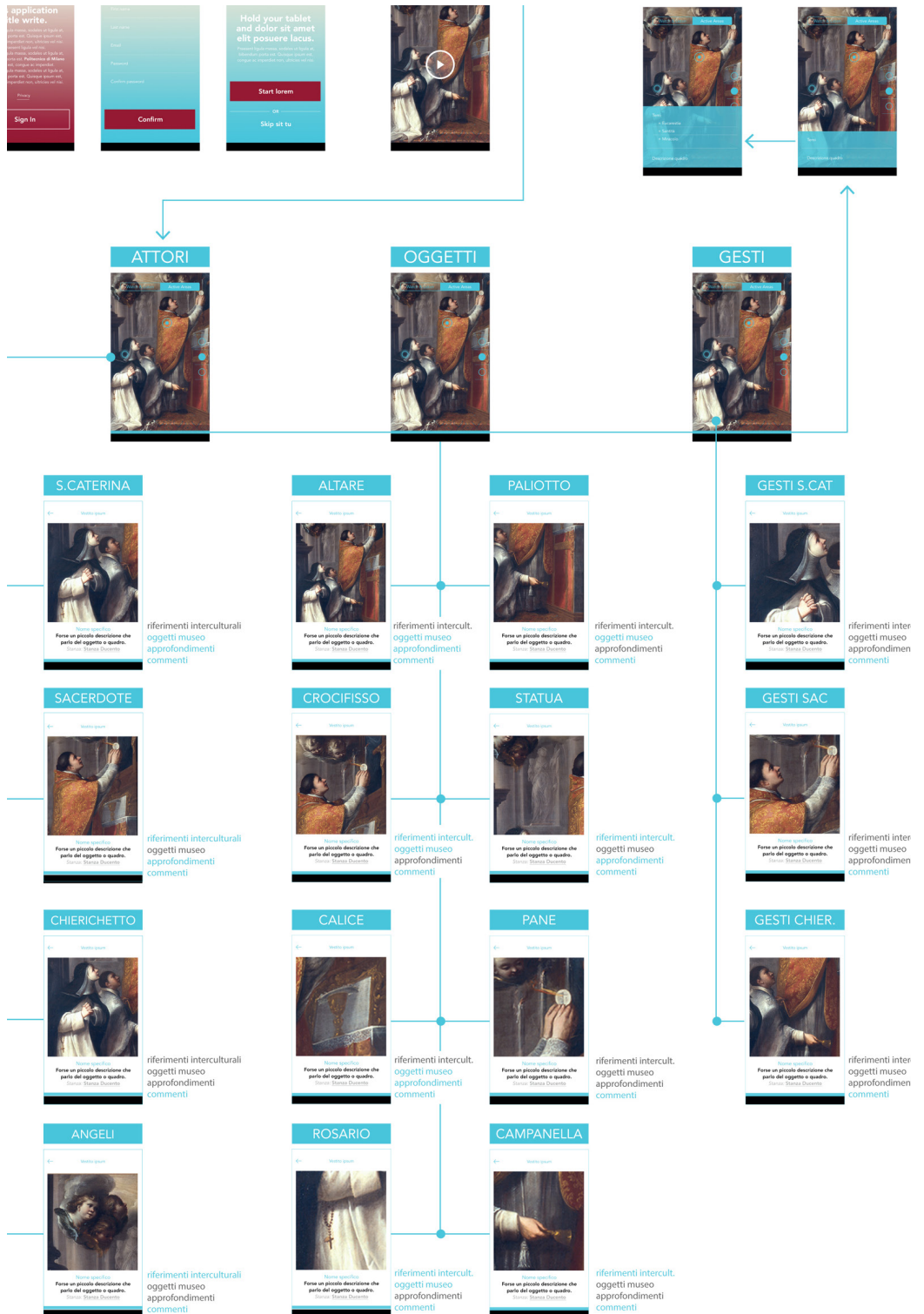
*Technical Information*

The first test with experts in the field led to a review of both the application's content and the way users interact with it. The quick reaction time necessary due to the
iterative design process, as well as the increase in data necessary in order to manage the user interactions and system architecture led us to move from

**NEXT PAGE, IMG. 32** — *Initial user experience flow chart. This visualisation aims to path the users' actions through the interface from the first level; pointing the tablet to the painting, to the following tasks; such as fruition of information, exploring intercultural references and comments. Visualisation by Davide Spallazzo.*

**NEXT PAGE, IMG. 33** — *Final user experience flow chart with a detailed view of the user's possible actions in the active area section. This visualisation also maps possible additional information such as: related objects from the museum's collection, intercultural references and themes. Visualisation by Davide Spallazzo and Ece Özdil.*

an IDE to a GUI Builder development environment for the application's development. From the various solutions available on the market, the design team chose to use Unity 3D as the development environment. The choice was driven by the tools embedded in the software such as loadable 3D models and textures of different formats, programming languages and the availability of Vuforia SDK as a plugin. The logical functionalities of the application were written in C#, while for the GUI development used the libraries and methods developed by Unity. As with the first iteration of the application, both the marker recognition and video loading and playing were created through the classes provided by Vuforia SDK. All the data (texts, images, menu options, etc.) that needed to be generated dynamically via the user's choices was stored in XML files. To retrieve this data the Microsoft foundation class was used for the XML's methods and functionality.

For the second stage of the experimental action we used six Android devices: three tablets and three smartphones. The tablets were the same 10-inch models used in the first experimental action. The smartphones used had a screen of 5.5-inch with a resolution of 1440x2560 pixels, and the operating system was Android 4.4 (KitKat). The camera had a resolution of 13MPx with an optical stabilizer. A dedicated MySQL database, running on a web server, was created for the project. In order to manage the social networking aspect of the application, the scripting language PHP was used as a software module for data storage and exchange between the application and the database.

→ **DECISION MAKING: WHY AR TECHNOLOGIES WERE USED IN THE PROJECT?**

It was crucial to the effectiveness of the project to investigate and determine the best technology to use for the application, while at the same time taking into consideration the needs and desires of the museum. This was one of
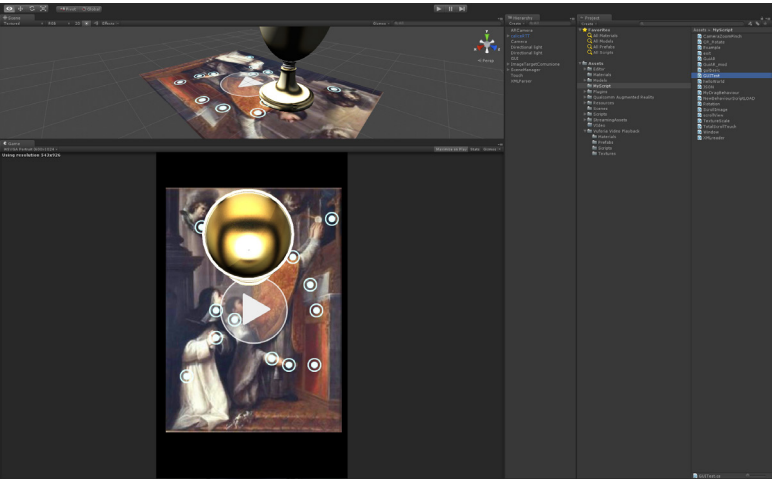


**MG. 34** — *One of the screenshots from the Unity, documenting the development phase. Prepared by Luca Greci.*

initial tasks of the design team of Politecnico di Milano and the techno-logical partner CNR. Initially, several mobile technologies including AR technologies were investigated. After this research phase, it was determined that AR technologies were the best means to create interactive experience with the paintings. After the team determined the main goals for the ap-plication, it became clear that eye contact and physical connection with the related painting was crucial to the application's functionality.

AR technologies have been confirmed to be used as they offer an interest-ing opportunity to respond to this need of direct and on-going connection with the paintings. AR technologies also were a good fit for the project in relationship to MeLa's research objectives of effectiveness of Informantion and Communication Technologies (ICT) as the technologies could also support multi-user activities, thus enabling a social interaction between a diverse group of users.

We also found that users would use the tablets to look at the painting to-gether with other people in a social and active manner and to generate a strong personal relationship with a single painting. One confirmation of this hypothesis can be seen in Img 13, from a previous chapter, which shows visitors sharing a single tablet to explore content together. These last aspects will be discussed in more detail in the following paragraphs.

### → CONCLUSIONS

An important hypothesis confirmed during the project is the notion that vis-itors are interested in using ICT and digital technologies within a museum environment. The mobile application we developed was not only helpful as a new means to view the paintings, it also enhanced the visitor's experi-ence both in providing additional background material for the painting and expanding the reading of the paintings from a multi-cultural perspective.

Our view is that mobile devices such as tablets and smartphones should not be used as a simple one-size-fits-all solution in the museum environment, but rather an aid to lead visitors to information and experience that other-wise they wouldn't have experienced.

With the use of AR technologies information can be provided without interfering with the physical reality of museum. In this test case, this helped both the museum staff and the MeLa project team to test and integrate ideas without needing to make any physical changes in the Hall of the Arch of SS. It also allowed for a much more diverse profusion of learning content than the physical space could offer, which in this case was especially condu-cive to our objective of multi-religious content and exchange.

In addition, through the multi-user functions we developed in the appli-cation, we also confirmed our hypothesis related to the social potential of AR technologies. Along with these successes, we did find that technical issues affected the user experience. For example, in the comments section of the application it wasn't yet developed sufficiently to be able to support multi-user posts. However, our human centered and participatory approach

helped us to have several phases of feedback, and had we continued, this approach would have allowed us to respond to these issues and further hone and polish the application.

We believe that the future potential of AR technologies to combine physical and digital environments provides a fruitful ground for creating new opportunities for multi-cultural and multi-religious learning experiences in the museum setting.

*"This paper is the result of a joint work of the two authors. In particular, Ece Özdil wrote sections 1, 2 and 3 and 5. Section 4 and conclusions were written jointly with Luca Greci."*

# Strategies to engage visitors through mobile technologies: considerations from the experimental action

→ **DAVIDE SPALLAZZO**

The need of sociality and engagement aroused by social networks, whether we consider it positive or not, is rapidly changing what we expect from a museum experience and the role we play as visitors of museums.

Museum-goers are increasingly expecting to play an active rather than passive role in their visit, to enter a constructive dialogue with content and the institution, (Tallon and Walker 2008) and to be engaged in discussing and, eventually, in creating content (Simon 2010).

The one-size-fits-all model that is still dominant in most cultural institutions is giving way to an emerging trend that implies meeting visitors halfway, attempting to customise offerings based on visitor interests and desires in an effort to engage audiences and bring museums back to a relevant social role.

This so-called audience engagement encourages active participation in the museum experience and considers visitors not only as passive receivers of unidirectional communications, but as cultural producers that can be enriched by and, in turn, enrich the cultural experience.

Museums put increasing emphasis on people and their stories, presenting the exhibited objects not only for their artistic, historical or social significance but also for their ability to "unfold narratives and suggest inferences" (Delgado 2009, 8) and to "spark conversation" (Simon 2010, 127), thus allowing them to act as social objects.

**PREVIOUS PAGE, IMG. 35**
*— An expert user during the first session of test at Museo Diocesano di Milano. Photo by Davide Spallazzo.*

According to Elena Delgado the meaning itself of a museum relies on the stories it is able to create around objects: "The significance of a museum lies not only in its collection, but also in the reflections and insights it is able to trigger around the objects, the knowledge it provides and the multiple visions and interpretations it offers on the heritage in its care" (Delgado 2009, 8).

Following this line, the museum is responsible for providing tools that visitors can freely use to build their own stories around the cultural assets, or at the very least, to provide them with a multi-faceted and layered view of the objects it has on exhibit.

Museums that shift towards this active style of audience engagement bring into question their established role as suggested by Wyman and colleagues: "What was once primarily a voice of authority speaking to the public through exhibition display and publications has dramatical-ly turned, in many places, into a multi-faceted experience that invites conversations and interactions with visitors" (Wyman et al. 2011, 462).

Visitors' active engagement seems then to be a way to create a new relationship between cultural institutions and their audience. At the same time it stimulates reflection on the exhibited objects and, in so doing, it complicates the very construction of meaning, as that operation becomes partly delegated to visitors themselves.

It's no surprise then that Hooper-Greenhill describes museum-based learning as a performance to which museum-goers participate actively (Hooper-Greenhill, 2007), hands-on and minds-on. In her interpretation, the construction of meaning in museums is something physical, bodily engaged, whose styles are influenced by the nature, pace, and range of this bodily movement (Hooper-Greenhill, 2007).

Active engagement with audiences can also manifest through the social side of a museum experience, as underlined by Nina Simon, who describes five possible levels of social engagement for the participatory museum, ranging from the passive consumption of contents to direct social relations with strangers (Simon 2010).

The visit is indeed basically a social activity and even the museum-goers that prefer to see an exhibition alone share the museum spaces and its resources with other visitors and, eventually, compete for them.

Engaging audiences requires the undertaking of a range of different actions aimed at empowering visitors, thus deeply modifying the established relationship between cultural institutions and their audiences.

→ **MOBILE TECHNOLOGIES FOR AUDIENCE ENGAGEMENT**

The experimental action discussed in this book moves in the direction of active visitor engagement. This effort aims to put visitors in the role of cultural producers, stimulating reflection about religious issues that emerge from the exhibited paintings, and cultivating an environment

for dialogue and confrontation. This action is pursued with the support of digital technologies. In particular, mobile devices are employed as a trigger for social engagement, not only creating a participatory space for a multifaceted and layered interpretation of the artwork, but also as a means to spur social questions and discuss broader and sometimes difficult topics.

How best to achieve this goal is a central question of this project. In other words, we wanted to query how to make use of this tool in an unusual, or better still, unconventional way to pursue these stated aims, as generally speaking, the employment of mobile technologies in museums and cultural institutions is strongly related to personal interpretation and to passive consumption of audio and, more recently, video content.

More broadly, the discussion regarding the employment of mobile technologies to support the museum experience is still open and reflects the inherently contradictory nature of this technology, which was developed primarily as—and still is—a strictly personal technology, and yet allows for real time connection and exchange with other users and facilitates social molecularization.

The internet, which the majority of devices can access anytime and anywhere, is indeed "the bonding glue behind the scenes" (Wyman et al. 2011, 464) that transforms a single portable and personal device into a portal to a social, albeit technologically-mediated, world.

This dichotomy is well-reflected in the most advanced applications of mobile technology in the cultural sector that pursue, on one side, a high level of personalization of content and, on the other, the social engagement of visitors.

Gammon and Burch grasp the positive aspects of both approaches, arguing that "the advantages of digital technology center on its ability to connect users with other learners, to provide opportunities to explore and construct models of real-world systems, and to represent data in different forms" (Gammon and Burch 2008, 36). They also suggest that mobile devices can be employed to build communities of learners and to allow existing social interactions to continue.

Walker focuses on the social/collective role mobile technologies can play in a cultural environment, underlining how these tools can shift from vehicles of content delivery to social construction of meaning, thus bridging private and public interactions (Walker 2008).

The contradiction inherent to mobile technology is actually the source of its success and it's up to cultural institutions to exploit its potentials to create experiences that meet visitors halfway, allowing a satisfactory balance of personalization and participation.

From a theoretical point of view, mobile technology seems to have the capacity to empower visitors and engage them actively in the visit experience. The experimental action conducted at Museo Diocesano di Milano partially demonstrated this, but it's also important to note that creating a mobile experience that works towards this aim is not an easy task and

several aspects must be taken into consideration. Enacting the two approaches described above, i.e. personalization and participation, entails determining the right balance between what is provided to visitors and what they can contribute.

Furthermore the experience itself must be engaging enough to stimulate visitors' participation and encourage them to contribute. As discussed by Simon in her essay (Simon 2010), fostering active engagement in the museum requires a careful design of the experience and a special sensitivity, especially when dealing with topics such as religion and faith.

### → FROM THEORY TO PRACTICE

Working with mobile technologies within museums and cultural institutions requires a flexible approach as each "experience design" begins from unique content, and parameters, thus requiring that each specific experience be built from scratch. Nonetheless some features recur in all mobile projects and several factors should be taken into account while designing them (Spallazzo 2012).

Designers, in tandem with cultural institutions, must make some basic choices such as: the target audience to whom to address the project, where and when the experience should take place, and the types of devices that will be employed. These choices partially derive from the designers' desires and taste, but ultimately play a relevant role in the manifestation of the experience itself.

The choice of the target audience, for example, is crucial for all other decisions, influencing the kind of content that will be provided, the activity, its pacing, and the site, just to name a few.

Similarly the kind of devices that will be employed and the chosen business model—rental or BYOD (Bring Your Own Device)—have a strong influence on the experience itself. Using a smartphone does not allow screen sharing between companions as a tablet does, but it's more common to find visitors with a smartphone in their pocket — in the case that the BYOD business model has been chosen for the project.

These choices could appear minor and negligible but actually are structurally central to the mobile experience, enabling or inhibiting visitor engagement, since they determine whether museum-goers will take part or not in the experience.

Other factors have a marked influence on the quality of the realized visitor activity, namely the content used and the configuration of the relationship activated between the content and the users (Spallazzo 2012).

Regarding the cultural content we must decide what will be said and its level of depth, taking into consideration the target audience, the overall aim of the project, as well as the proposed duration of the experience.

Furthermore the cultural content can be offered to visitors on the basis of homophily or heterophily: providing visitors with content they may like and

appreciate because of its closeness to their supposed interests and previous knowledge, or alternatively, with content far from their interests with the goal of provoking discord or unexpected ideas.

These divergent approaches are matched in the experimental action at Museo Diocesano di Milano, providing users on the one side, with traditional interpretive material and multiple layers of explanation for a single artwork, and, on the other, suggesting references taken from cultures and religions other than the specifically Western Christian Catholic perspective.

It's also important to consider the social configuration of visitors during the activity, i.e. if they will engage with the experience alone or in a group, and if possible, produce a system that will allow or suggest a switch between these two social conditions. This capacity would then allow for both configurations that Debenedetti defines as "separated" and "not alone" experiences (Debenedetti 2003). These types of conditions are rarely taken into account for mobile technology projects within museums, but it is undeniably appropriate to consider them if one of the aims of the project is to foster social engagement.

However, a wise handling of these factors can help designer to create a working and hopefully enjoyable mobile experience, but it does not guarantee that visitors will be really engaged and that the project will achieve its aims.

These variables are indeed uncountable and even subtle differences between the pre-planned experience and the actual one can undermine the final result.

For these reasons the experimental action has been an interesting bench test, useful for understanding which are the main factors to be taken into account to achieve, or at least to pursue, a satisfactory balance between personalization and visitor engagement.

## → ACHIEVING VISITOR ENGAGEMENT

Process, content, and interaction formed the primary components under consideration for the creation of the prototypes and for the test sessions conducted at the museum. Therefore it's useful to analyse critically these three factors in the light of the aims of the project, but also to examine them in terms of design effort to personalize content and engender visitor engagement in order to draw some conclusions regarding the effectiveness of these methods.

## → DESIGN APPROACH: PROCESS AND METHODOLOGY

The iterative process that moves between theory and practice through the work of designing, prototyping, testing (preferably with users) and reflecting, is typical of the design approach. This work proved extremely

useful both for orienting the project and for estimating users' engagement.

Within the co-curation process, the test sessions conducted with expert users and with a significant sample of possible visitors allowed the project team to collect in-progress feedback, essential for steering the project, and to progressively enriching the user experience with new content.

At the moment, the experimental action has not led to the implementation of a complete and working mobile experience in the museum, the tests with users have been essential to further developing our understanding of effective design methods and elements, both in terms of content and interaction.

As visitor engagement was one of the main aims of the project, involving them directly in the design process and adopting a user-centred design approach proved to be extremely beneficial. This approach, even if not novel, is not widely implemented in the field of mobile interpretation. Instead, these projects usually take a one-size-fits-all approach and are therefore designed as a unidirectional communication tool.

At the same time, the design approach for this project aimed to examine the entire experience, not focusing only on single actions. This allowed for a seamless integration of technology, avoiding the pitfall of users experiencing it as an added, but not necessary, activity. Despite the evidence of the effectiveness of this methodology, it's still common to think of mobile experiences within the museum setting as the traditional audio guide that entertains or bores the visitor for a few minutes before he or she moves on to another artwork.

### → CONTENT

The Sala dell'Arciconfraternita del SS. Sacramento at Museo Diocesano di Milano has been employed as a safe space for different views and meaningful discussion, aroused through a "thought-provoking experience" (West 2013, 109) created via the support of mobile technologies.

Moreover, these aims are not dissimilar from those listed by ERICarts in its report discussing intercultural dialogue: "… to develop a deeper understanding of diverse perspectives and practices; to increase participation and the freedom and ability to make choices; to foster equality; and to enhance creative processes" (Wiesand 2008).

As already discussed, the main aim of the experimental project was to exploit the potentiality of digital technologies to provide users with multiple layers of interpretation of a single artwork and to share references to cultures and religions outside the Western Christian Catholic paradigm in an effort to broaden the user's cultural and religious knowledge and stimulate user participation. To achieve this ambitious goal, the content included on the mobile device must be carefully designed to work on three different levels: to allow a personal and customized experience, to stimulate internal reflection and questioning, and to foster participation.

To address the customization of the user experience, the design team created a very structured architecture for the content, which allowed a progressive deepening of the information according to the visitor's interests. Users noted that they enjoyed this feature, and the average duration of single tests suggests that they really engaged with the experience, spending quite a long amount of time investigating the content.

The downside of this approach however, is the difficulty some users may find retrieving information, as demonstrated by some comments of users who complained of lack of references, despite the fact that these same references were in fact included in the system. This difficulty, could be at least partially attributed to the still early development of the user interface.

In addition to the content architecture customization, a wide range of content was presented within the application. This content contained specific reference to other cultures and religions, together with prompts about general topics that might arise from the paintings, and together this material was intended to stimulate the visitor to reflect and possibly question or expand his or her belief systems.

According to the evaluations collected at the end of the testing process, this aim was actually achieved. Unfortunately, this result wasn't made clear through the comment system within the mobile application itself.

The participatory side of the mobile application allowed users to make real time comments on every specific piece of information within the content architecture, and made these comments visible to other users. This feature was determined to be the least useful within the application for several reasons, including: the limited number of characters allowed for a comment (a tweet) and the large number of places within the application where one could leave a comment.

The main difficulty connected with this type of comment system is therefore due, on the one side, to the extreme synthesis of information required and, on the other, to the large amount of information already present in the application.

These results are in line with those of the QRator project (Carnall, Ashby, and Ross 2013), which used a single object or specimen to spur mediated conversations between visitors.

Despite the comment system's inability to facilitate a rich discussion, it's worth noting that a great number of testers took part in the discussion that followed the tests, engaging in lively dialogue in real time about the topics highlighted by the application.

Following the testing process, we concluded that users preferred to have a personal experience with the artwork— described by a tester as "intimate"—and to reflect on it privately and, eventually, to take part actively in a face-to-face discussion, thus avoiding discussing difficult topics such as religion and culture via the overly short tweet-style comment system.

This finding, i.e. that users prefer to engage in discussion face-to-face without technological mediation, aligns with the results of "The thing is…" project (West 2013) that involved visitors in face-to-face discussion about single objects and related topics with the help of a facilitator.

Thus, according to the five steps of social engagement proposed by Simon (2010), the testers preferred to experience step two—interaction with content—via a mobile device experience and step five—direct social engagement—as an opportunity for face-to-face discussing of broader social issues related to the content. This indicates that step four—mediated social engagement—that was chosen for the project, was ultimately an ill-fitting selection.

### → INTERACTION

The choice of what to display on the mobile device and how to organize this content is essential in a mobile application experience. Equally important however is how to display this information and make it accessible.

This issue has been thoroughly discussed in Chapter Five but it's worth focusing here on the aspects that seem to facilitate or, on the contrary, to hinder visitor engagement.

As a prelimary remark, we found that the use of augmented reality as a method to display content and related links was very helpful to keep visitors engaged without loosing contact with the real painting. The majority of users agreed with this opinion, however some users considered the interaction with the mobile device too complex, especially if the time spent in front of the artwork was significant.

The action of pointing several times at the painting with the mobile device and observing it through the screen could seem odd or annoying for the visitor, but this mechanic guaranteed a direct and enduring contact with the canvas. Furthermore, although the testing process interacted with only one artwork, this method could potentially foster the active exploration of several paintings in the room or in an entire museum, using the device as a powered "smart" lens to unfold information and narratives.

One negative aspect of the choice of using augmented reality as the main system for accessing information is that it necessarily limited content to context-specific information, i.e. content directly linked to the painting and its characters, thus forcing the nesting of all additional content in menus. This condition sometimes limited the user's exploration or made it difficult, leaving some content unexplored.

The prototype of the mobile application used during the test session was not fully developed in terms of smooth user interaction, graphic design and robust coding. This condition resulted in difficulties for some visitors in terms of understanding how to access information and in using all the potential of the mobile application. This was especially the case for those users not accustomed to using smart devices and touch screens.

These difficulties emerged more frequently in the comments section of the application, which certainly could have impacted the results of the testing process and the perceived quality and utility of the application. Nonetheless the use of the prototype application in user tests indicates that even if it was not completely functional, the application still performed many of our stated aims.

→ **CONCLUSIONS**

The experimental action described in this book has been very useful for developing better understanding on how to employ mobile technology to foster visitors' engagement in a museum environment.

The first lesson learned in the process was that involving real users during the design process was a great boon to the project itself. From this, we learned that a user-centred design and co-curation approach is a compelling methodology if the aim of the project is visitor engagement.

Furthermore a cultural experience offered via mobile technology must be designed without separating the interaction with technology from the other activities – it must integrate them seamlessly.

In the case of this project, the failure of the comment system as a means to stimulate social interaction clearly showed that an experience based only on technology is a losing choice if sociality is one of the aims.

A simple mobile app in a cultural environment can engage and fully occupy visitors with content but it does not inherently have the capacity to engage people with spaces and other people around them. This limitation is important to note, as "physicality and materiality is usually more conducive to social enjoyment and sharing" (Petrelli et al. 2013).

At the same time we must be very careful in designing for social engagement because not everything needs to be extremely social: dealing with difficult topics such as faith and religion potentially requires personal reflection and an intimate relationship with the artwork.

Forcing socialization when addressing delicate topics could be perceived as intrusive but this wouldn't preclude providing suggestions for participation. Further, a mobile experience could be structured such that different moments offered different levels of social engagement.

Lastly we can point out that the fragmentation of content accessible to users can facilitate the personalization of the experience but, at the same time, hinders participation. Highly differentiated content and detailed information do not stimulate participation and instead set the user in a passive condition.

Because of these many parameters and constraints, finding a balance between personalization, participation and social engagement in a mobile experience is a very challenging task and further research in this field still needs to be done.

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# MeLa* - European Museums in an age of migrations

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fosters theoretical, methodological and operative contributions to the interpretation of diversities and commonalities within European cultural heritage, and proposes enhanced practices for the mission and design of museums in the contemporary multicultural society.

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## DESIGNING MULTIVOCAL MUSEUMS

### INTERCULTURAL PRACTICES AT MUSEO DIOCESANO, MILANO

This book presents the process of designing of a museum experience, included in MeLa Project's research, and accomplished at the Museo Diocesano di Milano.

The museum experience put together many relevant issues for the renewal of museum interpretation, using a design discourse to explore the combination of technological tools and multi-vocal content to enable diverse dynamics of cultural representation.

The volume maps the entire process of a cross-disciplinary research to develop possible scenarios that can be translated not only as test verification of the theoretical investigations but also into the production of various experimental exhibition designs.

*With contributions by: Rita Capurro, Sara Chiesa, Luca Greci, Eleonora Lupo, Ece Özdil, Davide Spallazzo, Raffaella Trocchianesi.*

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