

Collective Storytelling and Social Creativity in the Virtual Museum: A Case Study

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The term “virtual” often is associated with the idea of a duplication of reality. As a result, “virtual museum” has become a useful synonym for multimedia products and Websites capable of providing new and fresh experiences of a specific museum heritage, or creating a large system of interconnections among different museum collections.

It is necessary, however, to explore and envision further opportunities. Today’s questions should be: What cultural role and significance can physical artifacts assume in the age of information technologies? In what ways do information and communication technologies enhance the nature and contemporary role of the museum? Can a virtual museum promote the social dimension of creativity, and connect it to the collection and preservation of novel cultural objects?

This paper aims at responding to these questions and promoting a new form of virtuality for the museum, capable of empowering the interaction among the tangibility of a physical artifact, and its current and future interpretations. To sustain this argument, the paper describes and examines in detail the Virtual Museum of the Collective Memory of Lombardia (MUVI).¹ This project provides evidence of how the collective memory of a local community represents a living heritage that—by means of different media and information technologies—can be translated into actual cultural objects and give rise to new forms of creativity and museum construction.

Museums and Virtuality

All museums are virtual, independent of information technologies. Museums extract each piece from an environment that, as the site of origin, is deemed to hold some significance. The piece is then transferred to a new site, the museum, in which the relationships with its original environment and time are recreated. In this sense, museums are virtual because they collect pieces that work as a switch to “something else”; they represent, as André Malraux² suggested at the middle of the twentieth century, a *meta-place*.

Cultural objects—that is, the pieces placed and arranged within a museum—also should be conceived as virtual. They present the ambiguity of being physically tangible as a museum piece, but also being subject to change according to the different perspectives

1 See www.muviolo.it.

2 A. Malraux, “Le Musée Imaginaire” in *Les voix du silence* (Paris: Nouvelle Revue Française, Gallimard, 1951) (English version: A. Malraux, *Museum without Walls*, translation by S. Gilbert and F. Price (London: Secker & Warburg, 1967).

in which they can be interpreted and displayed. In fact, as argued by Benedetto Benedetti, cultural objects represent “a complex and multifaceted reality in which physical, cultural, and virtual reality interact and may acquire different functions and different degrees of importance.”³

By means of information and communication technologies, we can empower the creative interaction among the tangibility of a museum piece (the “physical”), its current interpretation (the “cultural”), and its future meaning (the “virtual,” in the sense of not yet being actualized), and we can attribute to these components different functions and degrees of importance according to the characteristics of what needs to be (re)presented. Yet, many people believe that we finally can have museums that no longer need to be “physical.”

As a result of this misconception, the first applications of the idea of virtuality to the museum did not take into account the complex reality of cultural objects described by Benedetti. Rather, they enhanced the virtual component that is inherent in the museum by making physical artifacts digitally accessible (on disk or through the Internet). These applications have significantly contributed to the development of new forms of learning and knowledge construction by allowing more personal explorations of the museum contents, but they have failed to address the challenges and opportunities opened up by the encounter between the complex reality of the museum and information technologies.

This encounter is not only an opportunity but also a need. As Manfred Eisenbeis⁴ has pointed out, we are increasingly stimulated by information and communication technologies, and we are witnessing an accelerating process of cultural change for which we need to develop principles of design capable of successfully integrating both the tangible and intangible resources of the museum. The need for the museum as a “place of cultural negotiation” arises not just by reason of the emergence of new methods and forms of artistic creation and cultural production,⁵ but also as a matter of preservation and renewal of the existing cultural heritage in that: “Objects, collections, buildings, etc. become recognized as heritage when they express the value of *society* and so the tangible can only be understood and interpreted through the intangible.”⁶

Established Forms of Virtuality for the Museum

As introduced earlier, the term “virtual” commonly is associated with the idea of an extension of reality. This section identifies the forms of virtuality most frequently applied in the design of a virtual museum, which usually influence the general understanding of what a virtual museum is.

3 B. Benedetti, “Virtuality and Reality in Enterprise’s Museum, Art Museum, Archeological Sites,” *Quaderni della Fondazione Piaggio, Nuova Serie: Cultura Europea e Musei* 6:1 (April 2002): 56.

4 M. Eisenbeis, “Designing the Museum of the Future: Theses on the Virtual Dimension of Museum Development in the Context of Media Culture.” (Paper presented at “Memoria Futura—Cultural Heritage and Information Technology: A New Perspective?” GMD Institute, St. Augustin, Germany, December 10–12, 1999) Available at: http://maus.gmd.de/imk_web-pre2000/docs/ww/mars/cat/memoria/eisenbeis_en.htm.

5 See R. Ascott, “The Museum of the Third Kind,” *InterCommunication* 15 (Winter 1996): 74–79.

6 D. Munjeri, “Tangible and Intangible Heritage: From Difference to Convergence,” *Museum International* 56: 12 (2004): 13.

Duplication and Extension of Reality

The possibility of reproducing physical artifacts in a digital format is one of the opportunities offered by the information and communication technologies that are most frequently promoted by museums. The associative capabilities of hypertextual structures, combined with the visual power of the multimedia language, ensure that this form of “reality duplication” makes information easily accessible (for example, on a DVD). The visual and interactive features of hypermedia have modified communication and promoted forms of learning and knowledge construction that are immediate and intuitive.⁷ These characteristics have massively contributed to the growth of individual knowledge and the development of new forms of learning.

Recombination and Personalization

The opportunities for interactive access to the physical artifacts of a real museum have dramatically increased through the use of the Internet and this, in turn, has opened up further possibilities for knowledge transfer and learning. Maximizing all the images and information available through the Web has transformed traditional museums into “mobile encyclopedias.”⁸ Compared to the obligatory path that direct visitors are compelled to follow in a real museum, remote visitors of a virtual museum are free to search, combine, and recontextualize the information they need according to their own interests.

Interconnection

This opportunity leads to the horizontal recombination of contents, that is, the museum pieces themselves. The museum becomes not only a place that does not look like any other real museum, but a place where one can find things that cannot be found in any real museum. It becomes possible, therefore, to virtually rebuild collections scattered around the world, organize exhibitions that last forever, produce virtual restorations and reconstructions, and have access to specialized information. The virtual museum becomes a system of interconnections, allowing individuals to identify and locate resources over the Internet.⁹

Summary

These three, well-established forms of virtuality can be summarized as follows:

- 1 *Duplication and Extension of Reality* is the opportunity to extend reality through the digital duplication of the museum pieces. It entails new forms of accessibility and new ways of communication.
- 2 *Recombination and Personalization* is the opportunity to maximize and recombine information by constructing and

7 F. Antinucci, “Beni Artistici e Nuove Tecnologie” in *I Formati della Memoria: Beni Culturali e Nuove Tecnologie alle Soglie del Terzo Millennio* (in Italian), P. Galluzzi and P.A. Valentino, eds. (Florence: Giunti, 1997), 120–131.

8 C.S. Bertuglia, F. Bertuglia, and A. Magnaghi, eds. *Il Museo tra Reale e Virtuale* (in Italian) (Rome: Editori Riuniti, 1999).

9 Ibid.

following personal paths in the exploration of the museum pieces. It entails new forms of learning and knowledge construction.

- 3 *Interconnection* is the opportunity to interconnect museum pieces and expertise over the Internet, beyond the limits of a specific museum. It entails new places for display and collection.

These forms of virtuality contribute to the development of new forms of learning and knowledge construction, but they are not sufficient to cope with the complex and multifaceted reality of the museum. They enhance the virtual component inherent to the museum and thus open the process of cultural interpretation that curators and visitors exercise on a museum piece, but they fail to empower the creative interaction among the different levels of reality that engender such an object.

A New Form of Virtuality for the Museum

The opportunities given to the museum by information and communication technologies require an investigation of the contemporary role of the museum, and then a challenge to this role through the production of innovative visions and experimentations. Paraphrasing Cristoforo Bertuglia,¹⁰ the important questions should be: How can conservation and production, information and creativity, representation and real-life coexist in a virtual museum? To what society, and to which communities, does a virtual museum relate?

As Eilean Hooper-Greenhill¹¹ has pointed out, museums are creatures of the Enlightenment, an enlightenment aimed at a model of knowledge reliable at any time and any place. The modernist museum had to be encyclopedic, and had to work as a kind of universal archive. The interconnected form of the virtual museum as described in the previous section can be considered the globalized version of this model. The modernist museum conceives knowledge transmission as a linear communication process in which information is transferred from an authoritative source to an uninformed receiver. This communication model is, at the same time, jeopardized and strengthened by information and communication technologies.

A few have tried to innovate the role of the museum, leaving the modernist model behind. One attempt is represented by the development of the idea of the “relational museum.”¹² This museum model, pursuing constructivist learning theories and a communication strategy that gives status to the role of the audience’s interpretation, has produced new professional museum roles, enabled recognition of the existence of different audiences, and acknowledged the need for multiple and differentiated narratives to replace the earlier modernist narrative.

10 Ibid.

11 E. Hooper-Greenhill, “Nuovi Valori, Nuove Voci, Nuove Narrative: L’Evoluzione dei Modelli Comunicativi nei Musei D’Arte” in S. Bodo, ed. *Il Museo Relazionale* (in Italian) (Turin: Edizioni Fondazione Giovanni Agnelli, 2000), 1–39.

12 See S. Bodo, ed. *Il Museo Relazionale* (in Italian) (Turin: Edizioni Fondazione Giovanni Agnelli, 2000).

The main results produced by the “relational model” are a new approach to museum management and a new communicative competence toward the audience. The complexity of a museum, however, which is made of relationships both inside and outside the “walls” of the museum itself, creates an environment that can be exploited not only for communicative intents, but also to make the reality of the museum more open and dynamic.

As mentioned earlier, museums and cultural objects represent a complex and multifaceted reality in which the physical, cultural, and virtual interact and may acquire different functions and different degrees of importance. According to Benedetti’s inspired metaphor, museums and cultural objects are “iridescent.” The idea of iridescence, in contemporary museology, refers to the fact that the perception of cultural objects (how we “see” them) is subject to change according to the different perspectives in which they can be interpreted and presented. Normally, this perception is the result of the cultural and historical interplay among the physical tangibility of the artifact (the “physical” component), its actual interpretation (the “cultural” component), and its future interpretations and meanings (the “virtual” component). Today, by means of information and communication technologies, we can make these components interact more dynamically. In MUVI, for instance, as described later in this paper, stories and images (as cultural objects) are a by-product of the continuous process of interaction and interpretation occurring within the local community. Images are retrieved and stories produced as a result of the interplay between memory (as a cultural resource), multimedia presentation (as actual interpretation), and storytelling (as a resource for further potential interpretations).

If the optical phenomenon of iridescence is a quality of the interaction of light and surfaces, then the metaphor of iridescence expresses the interaction among the social interpretation and the actual “construction” of a cultural object. *Iridescence*, therefore, is the form of virtuality that—rather than focusing on duplicating pieces of reality, recombining digital contents, or interconnecting different museums—empowers creative interaction among the physical, cultural, and virtual components of cultural objects. It attributes different functions and degrees of importance to these components and, in this way, keeps the structure of the museum open and dynamic. This form of virtuality entails new forms of social creativity and museum construction, and produces cultural objects that were previously unimaginable.¹³

13 E. Giaccardi, “Memory and Territory: New Forms of Virtuality for the Museum” in *Proceedings of Museums and the Web 2004*, Arlington, Virginia, March 31–April 3, 2004. Available at: www.archimuse.com/mw2004/papers/giaccardi/giaccardi.html.

The MUVI Project

Local museums are particularly interesting in this regard. Some of them have been able to successfully collect, preserve, and activate both the tangible and intangible resources of their territory, to tie these resources together, to trigger new forms of participation and

social creativity in the museum construction, and to find ways to actualize new cultural objects.¹⁴

The Virtual Museum of the Collective Memory of Lombardia is an exemplary case that provides evidence of how a living heritage can be translated into actual cultural objects. MUVI shows how the collection and preservation of physical artifacts can be connected to expressions of social creativity by means of processes of participation and collective storytelling that are sustained and empowered by the convergence of different media and information technologies. MUVI investigates the complexity of the museum, and shows how the cluster of relationships that a museum generates can be explored in order to make the reality of the museum effectively more open and dynamic. In this sense, MUVI is a “relational museum,” that is, a museum that promotes knowledge not as a body of facts reliable at any time and any place, but as a more complex reality in which multiple narratives play an important role. Still, MUVI is a full-fledged museum because its mission is to collect and preserve cultural objects, and make them available to the public.¹⁵

MUVI is a nonprofit project started in 1999 by the Italian publishing house Sonar/TiConUno in Milan with the aim of preserving the collective memory of the Lombardia region in Italy. MUVI’s activity is based in a Website and, in the first phase of the project from 1999 to 2003, a radio program. This first stage of the project combined MUVI with a weekly radio program broadcast by Radio Popolare in Milan, an independent radio station sustained by popular shareholding. During this stage, the initiative was completely self-funded by the publishing house. The project received various international acknowledgments,¹⁶ but it never collected funding from any outside organizations. The second phase, currently under development, will combine MUVI with a broader range of media (from the Internet to television, and from documentary to theatre) and with popular events and initiatives physically taking place in Lombardia.

To preserve the collective memory of Lombardia, MUVI’s goal is to collect and make publicly accessible the repertoire of photographic pictures and correlated memories scattered through different family archives on the regional territory. These archives often are unknown and constantly disappearing. The collection and preservation by digitization of images and stories connected to these archives has not only a cultural goal, but also a social purpose. The cultural goal is the difficult preservation of cultural objects that fall between the categories of “tangible” (the collection of family pictures) and “intangible” (the memory of the local community).¹⁷ The correlated educational and social mission of MUVI lies in the work of cultural dissemination originating from the participation of the community in contributing, sharing, and comparing such artifacts and memories.

14 See, for instance, the projects “Moving Here” (www.movinghere.org.uk/), “Puke Ariki” (www.pukeariki.com), and “Land of Silence” (www.thesilence.org). See also: G. Geser and H. Wood, “Moving Here—Migration Records and Experiences” in *DigiCULT: Virtual Communities and Collaboration in the Heritage Sector*, Thematic Issue 5 (January 2004): 25–35.

15 See the International Council of Museums (ICOM) definition of a museum: “A museum is a non-profit, permanent institution in the service of society and its development, and open to the public, which acquires, conserves, researches, communicates, and exhibits, for purposes of study, education, and enjoyment, material evidence of people and their environment.” Available at: <http://icom.museum/definition.html>.

16 MUVI was included in the list “Millennium Guide to Cultural Resources on the Web” of the UNESCO World Culture Report on Cultural Diversity, Conflict, and Pluralism (Paris: UNESCO Publishing, 2000), and was included by the World Wide Web Virtual Library in the list “The Best Web Sites on the History of Italy.”

17 For a definition of tangible and intangible cultural heritage, see the UNESCO definition at: <http://portal.unesco.org/culture/en/>.

The Lever of Personal and Legendary Accounts

Through the lever of personal accounts, MUVI collects images and stories related to historical events and the everyday life of people in Lombardia. However, the actual cultural heritage MUVI aims to preserve comprises not only the pictures and documents collected on the Website, but also the memory that these documents embody, and the storytelling that brings this memory alive. MUVI transforms its audience—the local community—into an active heritage, and makes it the main actor in the construction of the museum. To this end, MUVI provides a forum to encourage and stimulate people to tell their own stories, listen to other people's stories, and connect these tales together. The only intervention in this process is the procedure of editorial selection to which people participate in collaboration with the staff of the publishing house. The narrative freedom granted to participants allows previously unknown facts to come to light.

In a commentary by Federico Pedrocchi,¹⁸ two anecdotes exemplify the role that the “fantastic” can play in relation to the emergence of truth. The first anecdote involves one man talking about an event that happened on the River Seveso during World War II. As Pedrocchi noted, there is much confusion about the names of rivers and canals in Lombardia; many of these canals were covered and hidden, which has led to many different names being used for the same waterways. As a result, even though the man gave a detailed account of the event, corroborating with the memories of another member of the community, no such event took place on the River Seveso, according to historians. Still, his account was extremely valuable. As Pedrocchi commented, if that man had been questioned and asked if he knew what happened on the River Lambro (the official name of the river the man called Seveso), he would have denied all knowledge of such an event. Thus, a piece of history has emerged through an error.

In the second case reported by Pedrocchi, a worker employed for fifty years in one of the major paper mills in Lombardia was able to describe, with almost photographic precision, the industrial objects that were present in the paper mill at the time of his employment. The paper mill is now empty, dismantled, and ready to be destroyed. However, the mill was still alive to that worker, and all the objects were still there for him. Only by telling someone else his story was he able to bring those objects back to life and transform his private memories into a cultural resource for the community.

Word of mouth and a continual presence in the territory are very important in the MUVI project. Many instances, as Pedrocchi stressed, have proven to the editorial team that the act of recalling “minor” stories and events raises the value of these memories in a way that achieves both weight and dignity. When people bring their family pictures to the MUVI headquarters and choose the most significant photographs together with the editorial team, they

18 F. Pedrocchi, “MUVI—Museo Virtuale della Memoria Collettiva di una Regione: la Lombardia. Intervista di Elisa Giaccardi a Federico Pedrocchi” (in Italian), *Musei-it* (June 2004). Available at: www.musei-it.net.

frequently express surprise and pleasure: "Well, I did not expect that my dad, playing in that village band...that this thing could be interesting, have a value as a document."¹⁹

This is why MUVI very rarely has resorted to experts. If experts are consulted to articulate their own opinions, community members often cease to express themselves: "I believed things were in that way, but if he says they are different, then...what I have to say does not count."²⁰ Experts' interventions would put a stopper on people's imaginations, when it is often just from the most fantastic stories that truth can emerge and contribute to the inscription of history. Therefore, experts may be consulted by the editorial team in the future, but at a later and distinctly different stage. At the moment, discordant versions are not a problem; rather, they are richness and a source of social creativity. What MUVI is looking for is the multiplicity of what has been experienced by the people in the community. The process of "transfer" that often is created by individuals during their storytelling—taking things related in one context and "attaching" them to another—produces legendary accounts and, ultimately, a grand narrative that allows the actual production of cultural objects. It also substantiates the construction of the museum by the local community. The process of collective storytelling and social creativity, as sustained by MUVI, enables the discovery of "pieces" of history and truth that are extremely interesting and that otherwise would be lost.

The Web as a Public Journal

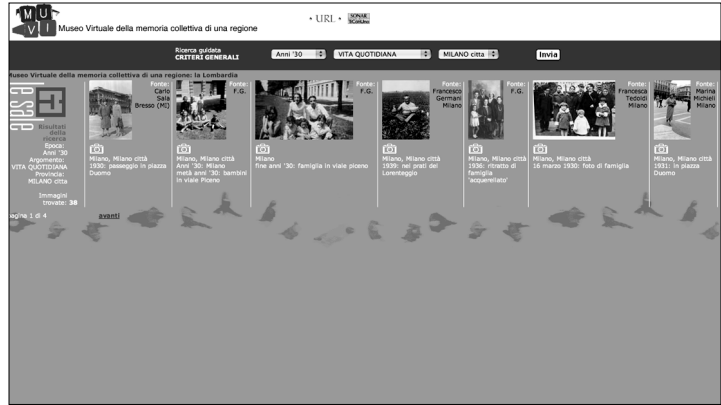
Access to the pictures and stories collected on the Web is provided via an online database. This database has been purposely designed for people with varying degrees of familiarity with the Web. MUVI is a museum for a large cross section of the community audience, so it is particularly important that the Website can be explored without the emotional flow of browsing and reminiscing becoming crushed by technical factors. The Website is organized into three main sections: "Halls," "Exhibitions," and "Stories." In the "Halls" section, all the images collected by MUVI are accessible through the database. The database can be queried by place, theme, and time. Once the query has been performed and pictures retrieved and displayed, captions describe their content and some icons mark the ability to zoom in on the object and whether there is a story (written or recorded) associated with the picture. In the "Exhibitions" section, the material is periodically reorganized by themes. Finally, the "Stories" section publishes the whole collection of stories sent by e-mail or told during the radio program by members of the community. Language is plain and the layout is traditional, expressing a regular narrative structure that people can recognize and read as they would read a journal.

19 Ibid.

20 Ibid.

Figure 1

The database interface of the MUVI Website



The Affective Power of Photographs

On the Website, photographic pictures are the main visual tool to preserve and stimulate the collective memory of the community. This choice rises from the understanding that photography has been the most efficient way, for more than a century, to pin down the memory of facts and lives. Personal archives are very rich and belong to the hundred thousand families that currently live in or have historically been living in Lombardia. MUVI aims to preserve this heritage by making it public and accessible: by photographs, old postcards, posters, book covers, and details from a page of a local newspaper, among other means. To this conservative purpose, digitization is essential.

But digitization also is critical because the photographic material collected could not be exhibited successfully in a real museum. Thousands of images, often very small, are not very readable if put in showcases or on vertical panels in a real building. In addition, they could not be easily updated and reorganized. Moreover, the graphic structure of the Website and the way in which the pages can be browsed are perfect for promoting the private and affective dimension of looking at pictures; even though on a public album, those photographic pictures are felt as personal and evocative for any member of the community.

Currently, about five-thousand pictures are displayed on the Website, but more than thirty-thousand have been examined for selection. People normally propose numerous photographs to MUVI, and it is the role of the editorial team to involve these people in a discussion about which ones they believe are the most significant, and to pick them for publication on the Website. It is a process of shared understanding in which people come to learn that, even though all the pictures they are proposing are beautiful, the database is something that needs to be queried and consulted. Therefore, if pictures are not preliminarily screened, people will see images too similar to each other, and the fresco the database is trying to paint

Figure 2

An exhibition on the Second World War on the MUVI Website



Figure 3

Transcription of a phone call to *Radio Popolare* in Milan



will get spoiled. The database needs emblematic images with a story behind each, and participating in their selection helps people understand this requirement.

The Warm Voice of Radio

The radio was an essential part of the project in its first stage because it stimulated in the people the willingness to take part in the construction of a collective memory. Radio Popolare in Milan, where the programs originated, is a local station that always has maintained a close and warm relationship to a broad audience. It broadcast weekly programs to pick up contributions from those who, in sending their pictures, wanted to tell the story behind them, as well as from those who, seeing the pictures on the Web, wanted to add further details and, in turn, tell their own stories.²¹

Through the medium of the radio, memory became tangible not only with images, but also with "voices." The loop produced by the integration between the Web and the radio created the sense of community necessary for the collecting operation and, at the same time, contributed to spreading the idea that it is possible to live together despite any differences. This integration was key not only to reaching audiences not reachable via the Web and supporting the collecting operation,²² but it also was critical in promoting a social

21 Until 2003, 150 radio programs were broadcast, with an average of about ten telephone calls received at each program.

22 See G. Gaia, S. Boiano, and F. Pasquali, "Cross Media: When the Web Doesn't Go Alone" in *Proceedings of Museums and the Web 2005*, Arlington, Virginia, April 13-17, 2005. Available at: www.archimuse.com/mw2005/papers/gaia/gaia.html.

Figure 4
Pictures from the MUVI database



process that invited people to look at each other and exchange their own values by sharing the pleasure of telling their own stories and listening to those of others. The safekeeping of the collective memory begins in MUVI with the sharing of a personal memory, and it ends up with interweaving family memories and history.

As a medium, the radio program was very important. Together with the images, and often distinct from them, were the stories and personal accounts of people who, following the most unpredictable paths, decide to tell a story (even though they will never provide one single picture). The exposure to a warm medium such as the radio, capable of making people talk and express themselves, provoked the participation of the entire community in the reconstruction of many memories and stories. As Pedrocchi noted, an individual telling a story provides a large variety of elements in each story, but the same person, asked to write the same things down and order them, often would fail to be so incisive: "Those things are like the odds and ends found when one empties out one's pockets."²³ The important factor is the mechanism that MUVI is able to activate, and the sensitivity in regulating it. This is why tools for direct expression, such as content management systems, are not currently applied. These systems can be valid and beneficial, and they may be applied in the future, but to access people's capability for memory and expression—according to Pedrocchi's experience—they are not enough. They need to be complemented with sensitivity in stimulating and regulating people's memories and emotions.

Social Synergies

Indirectly, MUVI also creates forms of collaboration between the young "digitally expert" generations and elderly members of the community who are attracted to the possibility of publishing their memories on a computer screen. Because images are evocative of memories for any component of the family, this collaboration happens naturally—as the editorial team had the chance to verify. Collaboration among different generations is an interesting conse-

23 Ibid.

quence of the processes that MUVI was able to initiate. Few people simply mail their original pictures; most send images already digitized by e-mail or bring them to the publishing house on a CD. Even though MUVI provides a network of scanners and volunteers to support MUVI contributors, elderly or inexpert people often prefer to rely on the help of their young and more computer-proficient family members and neighbors. This creates an interesting “social synergy,” and involves members of a younger generation, such as teenagers, in issues that would not otherwise be of interest to them.

Innovative Elements

The convergence of the properties of different media (such as the Web, radio, and photography) is the design strategy adopted by MUVI in the construction of the museum. The combination of the warm medium of radio combined with the affective power of photography is the key to encouraging people to get actively involved. Collective storytelling generates the museum, and information and communication technologies “materialize” it. By exploiting both the tangible and intangible resources of the community (in that emotions play a fundamental role in the emergence, collection, and preservation of actual images and stories), MUVI inspires spontaneous participation from the local community, and strengthens its cultural identity and sense of belonging to an identifiable territory. Moreover, by activating emotional and social mechanisms, MUVI renovates and supports processes of mutual learning and social creativity within the community itself.

In summary, MUVI innovates the idea of the virtual museum by crosscutting and combining different “interaction spaces.” These different interaction spaces integrate into the design process both tangible and intangible resources by using collective storytelling as a “seeding mechanism” for the collection operation and transforming the photos of regional events and local people into objects capable of acting as “pieces of conversation” among different individuals. In doing so, MUVI integrates both “design time” and “use time” in the actualization of the museum and its cultural objects.²⁴ This integration, which entails the exhibition and reorganization of a continuously growing body of images and stories, allows MUVI to support not only the current interpretation of the cultural objects placed in the museum, but also their future interpretations, thus sustaining the coevolution of the museum and the local community over a sustained period of time.

The Design Way to Cultural Development

Establishing virtuality for the museum is a vast and complex challenge that perhaps is greater than was originally perceived, but it also provides an extraordinary opportunity. To explore this opportunity, the role of technology and the way of design must be imaginative. As designers and museum professionals, we must avoid

24 See E. Giaccardi and G. Fischer, “Creativity and Evolution: A Metadesign Perspective” in *Proceeding of the Sixth International Conference of the European Academy of Design (EAD06) on Design-System-Evolution* University of the Arts, Bremen, Germany, March 29–31, 2005. Available at: <http://ead06.hfk-bremen.de/>.

approaching technology merely as something to be added onto existing practices.²⁵ Instead, we need to invent new museum models and interaction spaces that act as catalysts for innovation.

Virtuality does not mean merely to reproduce preexisting objects, but also to actualize new ones. Virtuality can be used to invent new methods of producing meaning, and hence technologies capable of activating and sustaining emotional mechanisms, triggering new relationships, and engendering new knowledge. In particular, when dealing with forms of intangible heritage, "The task is to sustain the whole system as a living entity and not just to collect 'intangible artifacts.'" ²⁶ As Kirshenblatt-Gimblett has advocated, the focus cannot be merely the archive, but the whole "repertoire," embodying the knowledge and social relations responsible for its own creation, transmission, and reproduction.

Ultimately, designers have crucial roles to play in the development of new interaction spaces. Designers and museum professionals need to recognize that information and communication technologies can strengthen the tie between cultural resources and territory by supporting innovative models for social creativity that empower and nurture the active and constructive role of local communities. Designers and museum professionals need to recognize that information and communication technologies are not merely tools for processing data and making it available, but can be a force and stimulus for cultural development.

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- 25 G. Fischer, "Making Learning a Part of Life: Beyond the 'Gift-Wrapping' Approach of Technology" in P. Alheit and E. Kammler, eds., *Lifelong Learning and Its Impact on Social and Regional Development* (Bremen, Germany: Donat Verlag, 1998), 435–462.
- 26 B. Kirshenblatt-Gimblett, "Intangible Heritage as Metacultural Production," *Museum International* 56:1-2 (2004): 53.

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