Heritage Communication through New Media in a Museum Context

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Abstract. The paper examines the impact of New Media on museums and describes how traditional media are affected by the use of new ones. Examining some Canadian examples, it discusses the features of exhibitions using new media and the visitors' attitude towards them.

1. Introduction

Allow me to introduce myself. My name is Diane Leboeuf, and I am the Creative Director for Sono design, a firm based in Montreal, Canada. For the past 15 years, we have been creating sound, video and new media productions, primarily for museums and archaeological sites. The main roles played by museums involve collecting, conservation, research, education and outreach. We help them with the last two of these roles, education and outreach, mainly with respect to exhibitions, but we also work with the institutions' communication departments. Our firm is actively involved in the Société des Musées québécois, in addition to being a member of the Canadian Museums Association.

Sono design works in a North American context, which is quite different from the European one. North Americans live in a young setting, one that is just a few hundred years old, and they are not very aware of their history. In fact, remains or artifacts dating to before 1534 are considered prehistoric! Not only are our artifacts relatively recent and fairly scarce, but many of them are small, as well. This is probably why we have had to come up with creative means of showcasing these objects. We have had to develop museography, scenography and sound, video and new media communication, as they apply to museology.

This field of research is quite young, and not very well documented. Our experience is mainly practical, and calls for enormous amounts of planning and follow-up.

More than ever before, museums have to compete with various other educational and entertainment media, from surround sound and 3D images in movies to computer games, wide-screen televisions, DVDs and surround sound at home, cellular phones connected to the Internet and that even take pictures, GPS in cars, webcams and home studios for music and video editing. Visitors are used to DVDs in their cars and good CD sound on their Walkmans or in .mp3 on their Ipods. They download music and movies from the Internet. They are accustomed to good technical quality and to a wide variety of media experiences. Technology is so omnipresent that it tends to be taken for granted, to the point that it has become almost invisible.

In this context, where visitors are so accustomed to technology in their daily lives, how can museums and archaeological sites hope to continue to attract and hold the interest of large numbers of visitors? How can we make their experience unique? How can we reinvent the use of screens, keyboards and other user interfaces? How can we use sound, video and multimedia in a creative way, as a support for the artifacts and remains? And how can we adapt technological innovations to the museum environment? This paper will suggest some solutions based on our New Media experience in museums and archaeological sites.

2. The Evolution of Communications

History tells us that communication started with sound. Songs, legends and poems were a way of transmitting information about all aspects of life. This was true everywhere before writing appeared, for Native people in the Americas, and remains true even today for some peoples in Africa. People listened to the information. In 1988, UNESCO recognized this intangible heritage as being part of the cultural heritage of humanity. When written communication started, thousands of years ago, it was a great revolution. Certain aspects of communication became silent: writing was done in silence, and so was reading. When printing began, in the 14th century, it revolutionized communication and made information accessible to a larger segment of the population. This was the origin of mass media. Until the 19th century, communication was mainly achieved through words, either spoken or written. Another very important step in the revolution in communication was the invention of photography, in the 19th century. Still images added more meaning to written text, although they sometimes distracted from its essence. Moving images, both film and video, followed in the 20th century.

The late 20th century saw the advent of New Media, which brought with it another great revolution in communication. It went from being auditive to visual to visuo-spatial. This had an impact on all existing media, "at all production stages: acquisition, manipulation, storage and distribution, whether it

is text, still and moving images, sound and spatial construction"[1] It had a major impact on content and on form. Think of photography, for a moment: we've gone from glass plates and silver powder to digital cameras, processing pictures in Photoshop, and importing them to make Quicktime VRs. This is what Jay David Bolter and Richard Grusin call *Remediation*, the title of a great book that I recommend to anyone interested in understanding New Media.

3. But what is New Media?

New Media is sometimes seen as media that is disseminated by means of computers. But it is more complex than that. You can show a "traditional" film on a computer, but that doesn't make it a New Media production.

In his book *The Language of New Media*, Lev Manovich outlines five principles that apply to New Media.

1. **Digital representation**
   The media must have been created on and must be disseminated by means of a computer. He refers to the computerization of media, where the media is turned into computer data.
2. **Modularity**
   The production must be modular, dealing with different aspects of the main theme, or different periods, and each module must be directly accessible.
3. **Automation**
   Many operations are performed automatically, like sort or search operations in a database, thanks to programming.
4. **Variability**
   The visitor's experience can be different every time, and each visitor can have a personalized experience. Variability is mostly attained by interactivity, where the visitor decides which path he will follow, which page he will see and which button he will press, resulting in a different visit each time. Also, the experience can be different if the visitor is a child, or is interested in archaeology rather than history. The trend is very much towards personalization. For example, in an exhibition looking at the history of the population of Montreal, there is an interactive genealogy terminal that encourages visitors to search for their own ancestors.
5. **Cultural transcoding**
   The computer culture is slowly changing human culture and in so doing is having an impact on society. Media structure now follows established conventions relating to the way that computers organize data, including modularity, automation and variability. But computer structure is influenced by human structure: we still read texts with sentences and see images produced by humans, representing familiar objects and spaces.

More than 80% of Canadians own computers, and 60% of them are connected to the Internet. These numbers are growing every day. People are used to interactivity and to getting the most out of it. People understand the language of movies and video, the conventions behind scriptwriting and editing. But with New Media, "the user can also 'speak' the language"[2], as Lev Manovich tells us.

4. Traditional Media Influenced by the Advent of New Media

4.1 Objects and Sites

A museum exhibition features authentic objects, artifacts and/or archaeological sites. These are its strengths. The objects are presented in display cases created by designers or architects. Every other media used in the exhibition must contribute to the display and to enhancing visitors' experience. Their role is also to interpret the authentic objects and sites. They can be used to add details on the period, the creator or the material.

Another role is to immerse the visitor in a reconstructed setting, whether auditory or visual. Reconstruction can be used to show what a complete object would have looked like when we have only fragments of the object. It can also be used to show the function or the context in which the object was used.

Let's look at the traditional media that have been influenced by the advent of New Media. All these media sometimes "exploit the computer's power to create visually convincing worlds"[3]. They make extensive use of the technical possibilities offered by computers. Sometimes these productions are even displayed on computer screens. And they are not only for professionals: lots of consumers nowadays change the colour and brightness for themselves on the digital photographs they take. This proximity of visitors to technology in their daily lives makes them very receptive to this language. In this respect, technology is attractive – it transmits information and, even more, encourages visitors to reflect on certain global concepts about the world around them.

4.2 Written Text

Written text is used mainly to describe themes and the period and materials of objects, to add factual details. Text ranges from the banners identifying rooms to object labels. In the first case, the text is usually superimposed with graphic design, photographs and illustrations that attract the eye and add to the meaning.

4.3 Sound

We can "listen to history through sound, or listen to sound through history"[4]. Sound can be meaningful to visitors, for it can offer them information on the geographic or temporal context, for instance. And there is more to sound than the sonic or phonic content. It is a very powerful evocative media, and it can provoke strong emotions in the listener. It can be voice, soundscape or music. Sound has been proven to attract visitors' attention, and to help them retain information, as well.

4.4 Images

Still images-illustrations, photographs, graphic design-and moving images-film and video, 2D and 3D animation-can also add a lot of information and a lot of feeling to an

exhibition. It has been said that the "cinema is trying to co-opt our culture's fascination with New Media by using digital graphics to refashion traditional linear films,"[5]. So are photography and graphic design, and 2D and 3D animation.

4.5 Space

The museum is a narrative space in itself. It claims to be an authentic space, although there is a clear trend towards *edutainment*, a combination of education and entertainment, in certain museums. The choice of objects and the way they are laid out in the space transmit a great deal of information. Visiting a museum is a media experience in itself. The arrangement of the display cases and the interpretation panels in the space is an important part of this experience. On the other hand, there is often less interpretation for archaeological sites, which are left more to speak for themselves.

The fact that "traditional media" have been influenced by New Media keeps them close to people, talking to and touching them. But in order to continue to attract visitors to museums, they have to be surprised, to be offered original experiences they cannot find anywhere else. The objects and the site are already unique in themselves, and we have to find ways to make this more apparent by reinventing the way we use media, whether "traditional" or New Media.

5. New Media in the Museum

New Media integrate all these "traditional" media, transcoding them in a new way to use them in a modular and interactive manner. Concretely, visitors become users, they become more active; they make choices as to whether they want access to a certain kind of information., and when. Because they are involved in decision making, their brains retain more information. Users are free to go directly to that segment of information that interests them. In some cases, they can even change the way in which the story unfolds.

They can choose between various levels of detail and understanding: some information may be aimed at students, for instance, or at the general public or experts. It may be displayed from a historic, archaeological or ethnological point of view, or they may be able to choose from various categories of information: objects, sites, periods, functions, and so on.

In concrete terms, New Media in the museum can take the form of interactive terminals, hybrid DVDs, DVD ROMs, computer games, virtual exhibitions on the Internet, immersion shows, virtual reality, and so on.

It can also be the Internet, although it is no longer used in museum exhibitions per se, now that most visitors have Internet access at home, and because it is so difficult to keep visitors on a given track. A good use of the Internet, though, is to offer virtual exhibitions. A virtual exhibition can be an extension of the museum. The McCord Museum of Canadian History has produced some superb virtual exhibitions. Its *Keys to History*, http://www.musee-mccord.qc.ca/ and *Urban Life Through 2 Lenses*, http://www.musee-mccord.qc.ca/scripts/global.php3?Lang=2&PageName=accueil.php are two good examples of this type of exhibition, using still images, text, animation, music and narration to convey Canadian history. People not only see the history, but also experience and feel it.

There is always an interface, an intermediary between the human user and the media. Think of a book when one is reading. The keyboard, the trackball, the mouse and the touch screen are the classical interfaces when one is using New Media. The hands become the link between the brain and the information. But in a museum context, it is often more interesting to create more transparent interfaces, adapted to the content being displayed. Infra-red sensors, capacitance detectors, vocal command or hardware pressbuttons can sometimes be more effective because they are adapted to the message and can feel like magic. A movement can produce music, one word and an image appears, a touch and a 3D animation starts up. The interface has to be reinvented. This sensory aspect generates sensations, feelings and ideas and may lend itself to exchanges, depending on how the program is designed.

One important aspect to consider when choosing an interface is the number of visitors intended to use it at once. A touch screen is designed for an individual or a very small group (2 or 3 at most). The museum can adapt the same information or program for larger groups by displaying it on a large screen, with a remote control allowing the guide to adapt the scenario of the visit to individual groups. All of this makes for a different visitor experience.

Another interesting alternative is to design and build special furniture in which to hide all the computer equipment, and to create a "solid state" interface, such as the interactive model I will describe in a moment. It can then be designed for larger groups, which can gather around a table or in front of a large wall, for example.

Just as interfaces have to be reinvented, so do screens. Today, you can find holographic screens, smoke or water screens and even air screens. You can project on stones, walls, boats, floors and ceilings. Your imagination is the only limit!

6. Conclusion

It is a definite plus if museums and archaeological sites can find ways to attract more visitors, to captivate and surprise them, and at the same time educate them and transmit the integrity of the scientific content they want to share.

The New Media are there to help. They have to be used with intelligence, creativity and efficiency. They can make the visitor's experience unique, help museums stand out and thus attract more visitors. The key word here is creativity. The use of sound, video and multimedia in a creative way, as a support for the artifacts and remains and museography, is a must. Museum exhibitions are fantastic and unique opportunities to use a variety of media. The authentic objects are the stars of the exhibition, and New Media presentations are there to help add meaning. They are powerful means of communication, tools for transmitting our heritage and attracting visitors.

Acknowledgements

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Notes

[1] Manovich 2001, 19.
[2] Manovich 2001, XIII.
[3] Bolter and Grusin 1999, 189.
[4] Kahn 1999, 2.
[5] Bolter and Grusin 1999, 147.

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