

Virtual Spaces and Museums

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Communication technologies are changing the ways we use actual spaces – including museums. In this article, I look at some of the most common aspects of adding “virtual” components to traditional museum activities. Through some examples and observations, I conclude that while virtual resources do not necessarily undermine the social experience of the museum, at the same time, that they should be used with care.

When we talk about “virtual museums,” we usually think of web sites, electronic networks, and 3-D graphics. The debate about use of electronic tools inside museums began with the personal computer, which made it affordable to integrate electronic information into the museum setting, and intensified with the advent of the Internet, which makes it possible to access vast amounts of information regardless of where you are. But the adjective “virtual” takes on more significance if we associate it with the visitor’s experience rather than just a specific technology or a way to represent reality.

Education - Expanding the museum’s social space

Sometimes the creation of a virtual space is clearly evident, and distinct from the conventional museum space. This is the case in several of the recent Internet-mediated partnerships between museums and schools. In addition to its usefulness in information-gathering and peer-to-peer communication, the network adds the possibility of exposing results of student projects to a wide audience, so that

participants are challenged with publishing their work and making it understandable and relevant for viewers. It is this aspect of the network I will focus on, because this is most relevant for understanding how a virtual space may be connected with a museum.

In 1994 - 96, I worked with the Laboratorio dell'Immaginario Scientifico (LIS) in Trieste, Italy, which at the time was the only Italian science center to have a web site and an information network available to users in homes and schools. At LIS, we developed a series of educational activities on air pollution, recycling, drugs, and energy¹. We asked students in several schools located in different parts of Italy and later all over Europe to work on these subjects and to use the network to exchange materials, keep in touch, and share resources. Initially, before their school had a computer and modem, students in Trieste came to the center to work. They arrived at 8 in the morning, and we had difficulty closing at 8 at night because they wanted to go on working. For as long as half a school year, small teams of students worked closely together, going to research institutes, contacting scientists, and gathering data. The learning experience was customized for every class, every teacher, and almost every working team.

One of the main outcomes of the three-year experiment was that the combination of “real” activities with “virtual” experiences proved to be seamless, with the science center playing a key role as gateway between the two contexts². Teachers and classrooms, on their own, have in most cases been unable to create equally effective projects³.

In this case, a virtual space resulted from the possibility of acting in areas not limited by the physical constraints of the museum. For the museum, this meant working with groups of students and teachers from different areas, with activities that were very

¹ A description of these projects can be found in: “Linking schools through the network”, presented at ECSITE conference, Amsterdam, 1994, and “Lessons from Laboratorio dell'Immaginario Scientifico”, published on *Informal Science*, issue n. 20, pg. 4 (Sept. Oct. 1996) - Washington, DC.

² These ideas are expressed in the thesis “The knowledge agency”, written by the author for the post-graduate master in communication of science, SISSA-ISAS, Trieste, 1996.

³ “Net Gains” - *Spectra*, the Museum Computer Network magazine, Winter 1996/97 issue (vol 24, 2), p30-33, Ottawa (co-written with James Bradburne).

much a part of the community where the users resided. For the students, it meant working with other people, on activities the school could not afford, and then publishing the results to a broad and diverse public. For LIS, this work was much more than the usual outreach program: it meant not only working with communities that are culturally very different from Trieste, such as Naples and Bologna, but on topics such as recycling and drug addiction that are not easy subjects for field activities. While taking place in a “virtual” space, the work was a very real component of the science center, and one of the most important as well.

The most common critique of computers and the Internet is the sense of isolation they are supposed to bring, and the absence of contact with other people unmediated by the screen. On the contrary, as this experience shows, electronic networks are a tool that can extend the action range of the museum and the school and increase the social space.

Virtual spaces overlapping physical ones

Another important area where we can find a virtual museum is where the virtual context just overlaps the physical one, or better, where a new set of “rules” concerning social interaction, space, and time, is available to the visitors. This is easiest to think about in the case of art museums, where the distinction between “real” -- original and unique works of art -- and “virtual” is very clear. As we will see, the virtual museum in many cases is an environment superimposed on the real one, avoiding the constraints typical of physical environments.

It is reasonable to assume that visitors go to an art museum to see original works of art. Shows of copies, although not infrequent, do not register any considerable success, and art books, even those with beautiful, high-quality reproductions, are consulted mainly by scholars. The commonly accepted behavior from visitors is that social interaction occurs, with visitors quietly talking to each other or contemplating the objects. The object, painting, or artifact remains in the context of the gallery, usually thoughtfully placed next to other relevant ones⁴. One of the main

⁴ For a critical description of how museums are traditionally structured, see P. Galluzzi, “Nuove tecnologie e funzione culturale dei musei”, in “I formati della Memoria”, Giunti, Firenze, 1997.

characteristics of museums, thus, is that they are social spaces. In contrast, virtual spaces are often thought of as isolating and lacking in meaningful social contacts.

Now, let's think for a while about what happens when visitors walk through the galleries with audiotape guiding systems, headphones on their heads, following the story narrated by the tape. The interaction with other visitors is basically gone, or limited mostly to repeating the content of the tape to others who do not have it. There is no interaction with the narrator of the guide and his or her personal views. A "virtual" context is thus built, with its own, different rules of social behavior. Conversations are limited by several constraints: in time, because they interrupt the narration of the guide; in subject, because they are always initiated by the same stimuli coming from the narration; and in interactivity, because there is no reaction from the guide. Even in a gallery where real objects are present, then, the social context can be manipulated and changed using the appropriate technology. Headphone-based audioguides in effect build a new set of implicit rules and paths that visitors follow. Visitors are provided with some information, but their freedom to explore the museum is largely limited.

But there are also positive examples – including "computer rooms" like the MicroGallery at the National Gallery in London and the ARIA at the Rijksmuseum in Amsterdam –where the appropriate use of technology can result in enlarged opportunities for visitors. In both cases several computers give visitors the possibility of looking at paintings on the screen, finding out details and additional information, and creating their own tour through the museum, printing a floor map with all the objects they select. This is also a way to create a virtual context overlapping the physical one created by time, space, and objects in the museum⁵. So, a virtual environment does not have to be an artificial one, nor even a computer-mediated one.

Giving back control to the visitors

Just as many industrial virtual reality applications overcome the problem of acting in dangerous environments or performing destructive experiments, a "virtual museum"

⁵ A more detailed description of how our environments are being modified in the electronic age is in "City of Bits", by William J. Mitchell, 1995 MIT Press, Cambridge, MA.

also can provide experiences that are not possible in the physical setting of the museum.

The first level of experience is one linked to information. Comprehensive background information is still hard to provide with the traditional media used by museums. It is not a question of which media to use; the problem lies in the different expectations, needs, and behaviors of the visitors. Offering a personalized system, which enables visitors to find information of varying levels of depth and accuracy, is the goal of the Actua system at the newMetropolis science center in Amsterdam⁶. The environment created by the computers in the Actua network is definitely a virtual one: the exhibits cease to be tools to engage processes and discoveries, and become portals to information grouped in categories like “Encyclopedia _ facts and backgrounds,” “Current issues and debates,” and “Work and labor.” The visitor is then helped to find his or her own personal interest in that exhibit: to find a job in a particular field, or to see how controversial issues such as pollution are discussed in the country. These processes are completely controlled by the visitor: using this system can be compared to walking through the museum, stopping at interesting spots. The system is not just a catalogue of existing information; rather, it takes advantage of the fact that contextual information can be available at the same time, and in the same place.

Another experience that is difficult to create in the physical domain is social interaction between visitors, and especially between strangers. The new web site of the Van Gogh Museum⁷ will provide a function that I call a “catalyst” for starting conversations about the works of art. Even though still an experimental project, the aim of this web site is to take advantage of actions that are easier in a virtual environment than in a physical one. In a museum, spontaneous conversations between individual visitors who do not know each other happen very seldom. The same two people on the Internet, however, can engage in a conversation much more easily, given the fact that all physical barriers disappear. Casual contacts can be initiated on-line, conversations can arise, and a deeper understanding of the painting can occur.

⁶ For a description of the system and the way it is related to the activities in the science center, “Turning information into knowledge” – in “Here and Now”, pg. 181, Science Museum, London , 1996 (with James Bradburne).

⁷ <http://www.vangoghmuseum.nl>

There are of course some issues that need to be verified in the next future. The ease of social interaction on-line, for instance, has often resulted from an overly enthusiastic response to the technology, which shifted the focus from the actual content of the conversation to the means of conducting it. I presume that as people become more accustomed to the technology, they will also to re-create the social barriers to which we're now accustomed in using technologies like the telephone.

The social space: a parallel case - the short history of the cybercafe

Some 5-6 years ago there was an explosion in the phenomenon of cybercafés. After their initial success – especially in London, where the first European cybercafé, Cyberia, was located – the cybercafé rapidly became the “trendiest” place to be, the place to be “connected” and part of the digital age. Cybercafés blossomed everywhere, and entire web sites were devoted to listing and reviewing these places. But within just a few years, the situation changed. For one thing, communication devices became more readily available in homes, schools, and libraries. But more important, the café has an irreducible social function – as a place to sit in public, surrounded by people, and not isolated in a microworld. In the case of the cybercafe, technology changed the function of the space, but not for long – because the space was not simply a container; it had a function that could not be reproduced in another environment.

Space, thus, does not necessarily change its function simply because a new technology is applied. Attempts to “rejuvenate” an existing space by adding computer components will not succeed, unless the technology can trigger a new function for that space⁸. At the same time, communication technologies do not necessarily need a special environment. In the city of Amsterdam, public Internet terminals are available next to public phones in the streets. Communication technology doesn't need an incubator, a protected environment where it is decontextualized and given to the people.

⁸ A remarkable description of the social role of electronic communication, in places like cybercafés and other places, is in “Amsterdam's Brave New World”, by Matt Steinglass, published on the New York Times on February 7, 1999.

The key to understanding the relationship between a virtual museum and a real one is thus to understand social actions in space and time, and the relevance of unique objects or reproducible ones and ways to experience them.

Conclusions

We are ready to move beyond the notion that virtual museums are just graphic representations of existing spaces. The appropriate application of communication technologies is to create virtual spaces – from the more “conceptual” ones like those of the Laboratorio dell’Imaginario Scientifico, to the more concrete ones like those of the Rijksmuseum that give access to a myriad of otherwise unavailable information – that become tools visitors can actively use.

Just as a museum has many functions – preservation, research, and display – in the same way, a virtual museum should also be rich and varied, not limited to a specific objective or target audience. The examples described, while still new, are moving in this direction, exploring ways that communication technologies can overcome the physical boundaries of the museum.