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Museum exhibitions - The real and the virtual ones: An account of a complex relationship

Summary

This article analyses some major issues of the complex relationship between real and virtual museum exhibitions. While museums have a long tradition and experience in setting up physical exhibitions, they seem to be reluctant in creating virtual exhibitions. A hindering aspect seems to be the relationship between object and reproduction on the one hand and mediated and unmediated museum experience on the other, including the intricate issue of the aura of the original object. With the exhibition traditionally being the discursive space of museum communication, information technology is about to change the relationship between museums and visitors, culminating in the question of whether virtual exhibitions will replace the real ones. For a deeper understanding of this issue, it is necessary to take a closer look at the motivations for visiting in person and online. In order to create content that is intellectually accessible for both physical and virtual visitors, it is important to consider the relationship between digital collections and virtual exhibitions.

1. Introduction

Museums on-line: Worth the visit? was a provocative question (Strimpel 1995) in the early days of the Web. The presentation of museum information online seemed to be an intrepid enterprise, especially because the original object, the real thing, cannot be transferred into the digital space of the Internet. With the advent of the first Web museums a heated discussion started about the so-called real-virtual divide: while enthusiasts embraced the new opportunities the digital world offered, sceptics claimed that the museum is based on materiality and reality (cf. Mintz 1998: 33). Therefore, in museum studies literature the discussion often focuses on this divide and consequently *treats remote visits as secondary or surrogate experiences to the physical ones, prioritizing the unmediated experience of the museum object - 'the real thing' - over the mediated experience via technology* (Chalmers & Galani 2008: 158).

The antagonism *object vs. reproduction and mediated vs. unmediated experience* is only one issue in a complex connection of real and virtual exhibitions. Another aspect is museum communication, traditionally a mass communication with one sender and many recipients, which is profoundly changed by the application of information technology in and for museums. These changes, caused by the shift in museology regarding the paradigms of communication on the one hand and information technology on the other, raise the fundamental question if virtual exhibitions will replace the real ones and what the motivations are for visiting an exhibition in person or online. No matter how this question will be answered, museums want virtual exhibitions to be successful as they are important elements of their outreach strategy. In order to achieve this, the institutions must become aware of the fact that creating virtual exhibitions is much more than putting existing digital collections from museum documentation systems online. The major difference between a digital collection and an virtual exhibition is the fact that the objects of the latter *are carefully chosen to illustrate a theme and tied together by a narrative or other relational threads* (Kalfatovic 2002: 1). These relational threads are important as they represent the value added by the museum and are important points of intellectual access for virtual visitors. Successful

relational threads can be attractive images that give a first impression of the online exhibition and arouse curiosity, introductions in a plain and comprehensible language, a structured presentation of the content with introductory texts and explanatory object descriptions (cf. Caraffa, Reineke & Schweibenz 2007: 60). An example is the virtual exhibition *The Flood of 1966* of the Kunsthistorisches Institut in Florence. It starts with the spectacular view of the flooded Uffizi courtyard and an introductory text on the devastation of the city and its artworks (see fig. 1). On individual pages it adds information on individual works of art, for example Cimabue's Crucifix (see fig. 2).



Fig. 1
The virtual exhibition
The Flood of 1966
- homepage

2. Object and reproduction mediated and unmediated experience

The notion about the superiority of the original object over the reproduction is closely related to Walter Benjamin's well-known essay *The Work of Art in the Age of Mechanical Reproduction* and the related concept of the withering of the object's aura due to reproduction. Outlining the development of reproduction technology from woodcut, engraving, etching, and book print to lithography and photography, Benjamin (1936: 218f) claims that photography is a revolutionary technology because it is fast and easy to use while at the same time creating an almost perfect replica of the original object. However, according to Benjamin (1936: 221), the sphere of authenticity is beyond the capacity of technical reproducibility and *which withers in the age of mechanical reproduction is the aura of the work of art*.



Many critics of the application of information technology in the museum field refer to Benjamin's aura concept to claim the superiority of the unmediated experience of the museum object over the mediated experience via technology. But what those critics tend to ignore is what Benjamin states about the advantages of reproduction technology: *technical reproduction can put the copy of the original into situations which would be out of reach for the original itself. Above all, it enables the original to meet the beholder halfway, be it in the form of a photography or a phonograph record* (Benjamin 1936: 220f). This advantage of the reproduction is an important one, especially the aspect of the encounter with the beholder. Bruno Latour and Adam Lowe (2011) give an impressive example of the complex connection between original and facsimile in describing the perceived effects of Paolo Veronese's painting *Marriage at Cana (Nozze di Cana)* (1563) being presented as the original work of art in the Louvre's *Salle de la Joconde* and its facsimile being presented at the original location in Andrea Palladio's refectory of San Giorgio Maggiore in Venice; in the original setting the position of the computer-generated facsimile of the painting, the natural light, the dimension and design of the refectory create a specific kind of aura that reaches out to the audience and strongly contrasts with the aura of the original in the dark and crowded museum space of the Louvre. This example clearly supports the hypothesis of Suzan Hazan (2001: 213f, 216) about the possibility of a virtual aura that allows enchantment in a technological world of mediated rather than first hand experiences.

What Benjamin states for the reproduction technology of his time holds also true for the much advanced information technology of today, in particular as digital media have additional advantages, i.e., the integration of diverse formats and the unlimited possibilities of distribution:

Fig.2
The virtual exhibition
The Flood of 1966
- contextual
information

The screenshot shows a website for the virtual exhibition 'Firenze 1966' at the Kunsthistorisches Institut in Florenz. The page has a header with the title 'Firenze 1966' and a navigation menu with 'home', 'khi', and 'gallery'. Below the header, the title 'Kunsthistorisches Institut in Florenz' is displayed. A sidebar on the left lists various gallery topics, including 'Size Matters, Scale and Measure in Photography', 'MS Wissenschaft', 'Bartolomeo Ammannati', 'Gustav Ludwig, The photographic bequest', 'Drawings from the Uffizi - revisited', 'Sculptures from the Boboli Gardens', 'Palazzo Grifoni Budini Gattai', 'Natural artificio - artificiosa natura: Grottos of the Early Modern Age in Italy', 'Seals', 'Monreale', and 'Cimelia Photographica'. The main content area features a section titled 'Cimabue's Crucifix' with a descriptive text: 'The symbol of the devastating effects of the flood is the almost complete destruction of the huge Crucifix by Cimabue. The crucifix, painted in distemper on wood (around 1272) by one of the most significant painters of the 13th century, had lost the majority of its layer of paint. The first action taken was to move this work of art from the former Santa Croce refectory to the Limonaia in the Giardino di Boboli. In 1976, the Crucifix underwent a major restoration, during which it was possible to conserve the remains of the layer of paint.' Below the text are three images: 'State before the flood (Photographer Razzachi)', 'State after the restoration in 1977 (Photographer Arini)', and 'The crucifix is taken down (Photographer Razzachi)'. The website also includes a logo for 'MAX-PLANCK-GESSELLSCHAFT' and a language selection menu.

Digital technologies make it possible to integrate visual and textual information and then broadly disseminate this to computer users, many of whom will be unlikely to visit the physical museum during their lifetimes. In this sense, we can look on new technology as an opportunity to extend our reach to new audiences, and to those who visit infrequently.” (Rabinovitch & Alsford 2002)

The aspect of information integration is especially important because museums as object-centric institutions were used to present information mainly in the form of objects and closely related materials such as texts and catalogues but were hardly concerned about the mode of presentation (Wersig 1998: 18). Although media such as illustrations and photos, sound recordings, film, and demonstrations have been used for a long time in museums to contextualize artefacts, it was digital technology that enabled the integration of different formats of information (Rabinovitch & Alsford 2002). In this way, the use of information technology *transformed the way museum professionals interpret the collections in their care, as well as the way visitors interact with them. Digital media have changed the way visitors are experiencing exhibitions and cultural content, whether they are in the museum or offsite* (Economou 2008: 137).

Reaching out for new audiences is also possible as information technology supports what Benjamin calls *meeting the beholder halfway*. In the museum context, this means focusing on the visitors' previous knowledge and their information needs, and then offering them access points at different levels – something that can be achieved more easily by using information technology inside the exhibition and by putting exhibitions on the Web as *a mixed reality museum visit that may cover needs and expectations that are not easily addressed by the traditional museum* (Chalmers & Galani 2008: 171). In order to find out if the visitors' needs and expectations are met, museums depend on feedback; they have to open communication channels between visitors and museum staff, especially since *through new technology and the web, discussions can now continue way beyond the confines of exhibition walls* (Calder 2009: 37).

3. Museum communication and information technology

Museum communication traditionally takes place in the exhibition; it is the discursive space where objects and visitors encounter and where the meaning of the objects is communicated to the visitors (Maroevic 1998: 267f). However, the traditional model of museum communication is based on the mathematical model by Claude Shannon and Warren Weaver (1949), adapting a mass communication model in which there is only one sender – the museum – and many receivers – the visitors (cf. Cameron 1968: 35; Hooper-Greenhill 1994: 35, 46). The consequence is that *in many museums there is still no understanding of the nature of the communication process, of the fact it is a shared process, and that if two parties are not involved, the process may not occur at all* (Hooper-Greenhill 1994: 50). Only in recent times has the concept of museum communication changed and have museums started to accept that *Communication is a two-way affair. The message goes out from one side but it is not communicated until it is received by the other. This is the aspect of communication that museums often overlook* (Fisher 2002: 33).



Apart from the communicative aspect, there is also the facet of authority over the interpretation of the objects which used to be claimed by the museum, as an institution speaking with an *unassailable voice* (Walsh 1997: 69f). This *institutional voice* (Coxall 1997: 107f) still exists in museum exhibitions as a recent study by Kevin Coffee (2006: 435) indicates. The presence of an authoritative voice in exhibitions is also part of a communication model which considers the museum exhibition to be *the result of a process of selecting and manipulating information, in which the visitor accepts the judgments and interpretations the museum determines* (Maroevic 1998: 268). This attitude specifies a clear hierarchical structure of authority which places the institution and its interpretation of objects and information above the visitor and his or her interpretation. But this *epistemically privileged museum authority* (Hein 2000: 5) has been challenged both by museological theory questioning the authoritative voice of the institution and by information technology enabling digitisation of museum objects and offering new distribution channels for digitised museum information. Harold Besser (1987: 16f, 1997: 118) identified digitisation as a major factor for democratisation in museums as their tightly controlled environments give way to increased access and interactivity on the side of the audience. The Internet as a democratised vehicle for public communication will also challenge the museum (Rabinovitch & Alford 2002); in particular the Social Web will affect the schemes of communication and participation (Schweibenz 2011). More and more, museums invite the audience to participate in the creation of online exhibitions by uploading their own materials (see for example Giaccardi 2004 or some virtual exhibitions of the Virtual Museum of Canada (VMC, see fig. 3 and 4) or Europeana (see fig. 5 and 6)) or to produce their own virtual galleries based on the museum's online collections (see for example Cooper 2006). However, some argue that the concept of virtual exhibitions goes

Fig.3
Virtual exhibitions
of the VMC
- homepage

The screenshot shows the homepage of the Virtual Museum of Canada (VMC). At the top, there is a navigation bar with links for 'Français', 'Home', 'Virtual Exhibits', 'Image Gallery', 'Museums in Canada', 'Teachers' Centre', 'News', 'VMC Lab', and 'MyVMC'. Below the navigation bar is a search bar and a 'Search only Virtual Exhibits' checkbox. The main heading is 'Explore the Virtual Museum of Canada (VMC)', followed by a descriptive paragraph. Underneath, there is a 'BROWSE BY' section with expandable filters for 'THEME', 'NAME', 'MUSEUM', 'SUBJECT', and 'EXHIBIT TYPE'. To the right of these filters is a 'SORT BY: Select' dropdown menu. The results section indicates 'Results: 1 - 6 of 839' and 'Per page: 6 | 12 | 18'. Three virtual exhibit thumbnails are displayed, each with the title 'Virtual Exhibit' and a small image representing the exhibit.

directly against the basic idea of the museum - i.e., to allow the encounter with authentic, material objects - but finally the idea of *letting objects speak for themselves* has been replaced by the emphasis on the ideas that they represent and the information they hold (Economou 2008: 153f; Washburn 1984).

4. Exhibitions: Will the virtual replace the real?

When dealing with real and virtual exhibitions, there seems always to be the anxious question explicitly or implicitly whether large parts of the audience will stop to visit museums and if virtual exhibitions will supplant physical exhibitions if all the content is available online. First of all, some museums with considerable experience in exhibiting online such as the Canadian Museum of Civilization do not see this danger (Rabinovitch & Alsford 2002). In addition, there is no solid evidence for the claim that virtual exhibitions will prevent visitors from coming to the physical exhibition because they have already seen it in the digital world, nor is there proof for the argument that exhibitions on the Internet will increase the number of physical visitors (Griffiths, King & Aerni 2007). However, a focus group evaluation for the *Colorado Digitization Project* undertaken in 2001 suggests that *having access to digitized images would result in slightly more inclination to visit museums* (Fry et al. 2002: 13). A study commissioned by the *Canadian Heritage Information Network* (CHIN) confirms anecdotal information that there are links between online and in-person visits: 67% of 435 respondents claimed that visiting a museum website inspires them to physically visit the museum; the findings also indicate that museums that put collections information and images on their websites will not reduce visits to the physical museum (Thomas

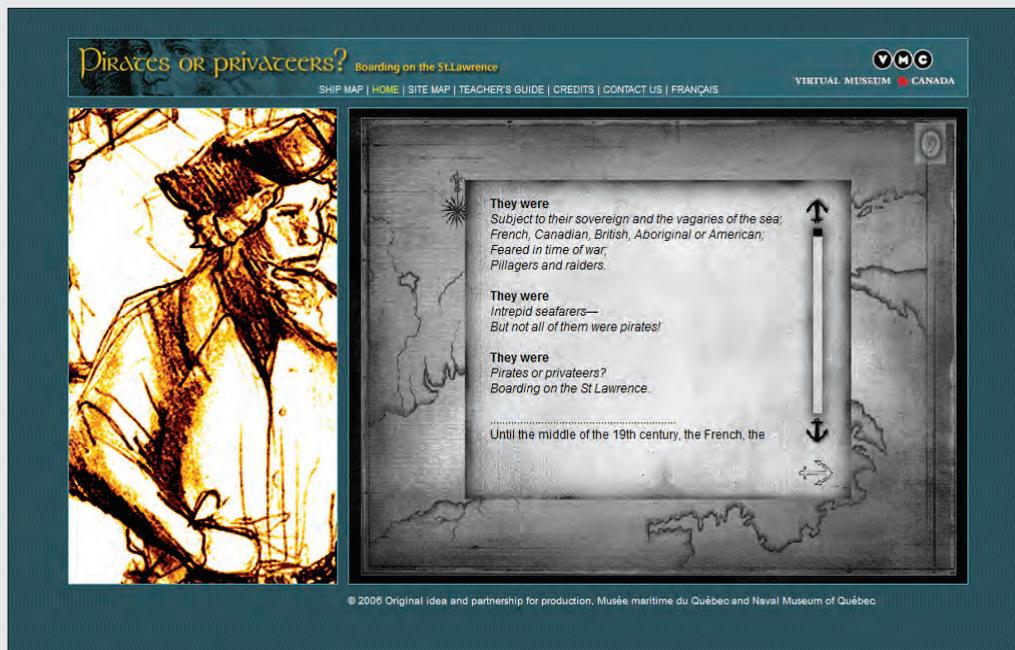


Fig. 4
The VMC's
virtual exhibition
Pirates or Privateers?
Boarding the
St. Lawrence

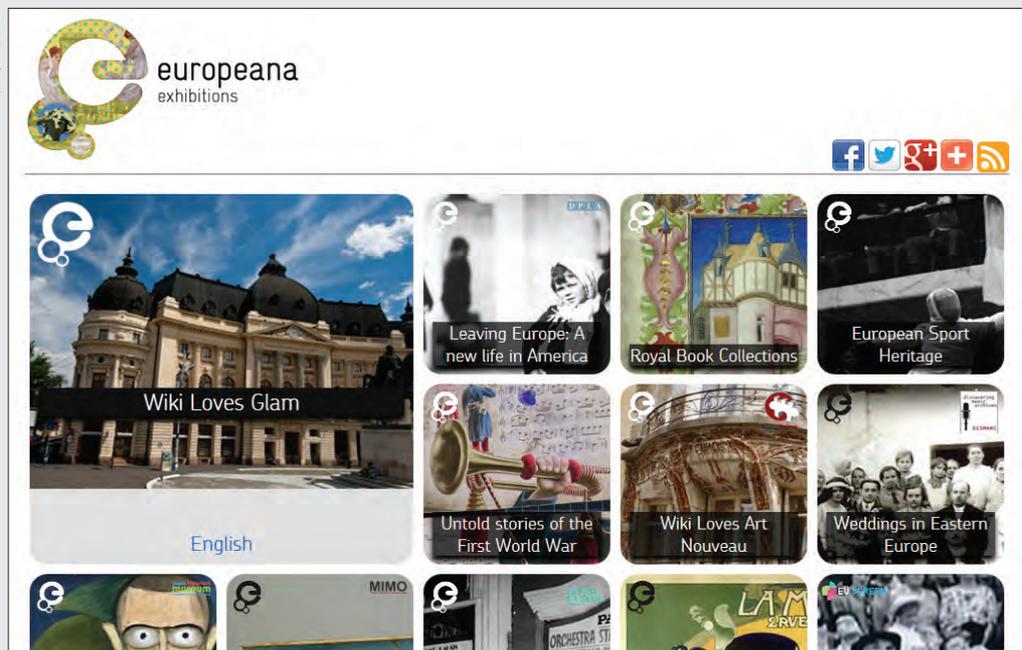


& Carey 2005). Attracting visitors to their galleries via the website is also a foremost goal of the Tate, London, as this institution considers its online branch to be a wide-reaching communication tool (Rellie 2004). Several comprehensive reports commissioned to evaluate Tate Online led to the conclusion that the website functions as a fifth site for the Tate - set up in 1998 after four brick and mortar museums and before Tate Modern - being considered as an institution in its own right and featuring a distinct and identifiable programme appropriate to the medium.

The results of these studies parallel what we know from the theory of the complementarity of media, also known as Riepl's Law. Wolfgang Riepl stated *that no instrument of information and no medium for the exchange of ideas will be completely re- or displaced by others once it has been introduced and has proved its worth* (Augsburg University 2008). Although no longer considered to be a law, the theory of the complementarity of media still plays an important role in the discussion of the relation between new and existing media. Martin Giesecke (2001: 64) applied it to museums and found that new media only have an evolutionary function when they not only replace existing ones but also improve the options of existing ones, in this way providing stability for existing systems and media. Therefore, Giesecke (2001: 75) concludes, that new, alternative forms of museums will exist side by side with traditional forms as institutions in their own rights serving the audience in different ways. For this reason, Maxwell Anderson rightfully states:

Just as slides, postcards and posters of famous works of art have encouraged generations of college students and members of the public to visit art museums, the promulgation of digital images and information about works of art will be certain to encourage future visitors. No less important, the growing surfeit of 'virtual' experiences in daily life

Fig. 5
Virtual exhibitions
of the Europeana
- homepage



is likely to result in an increased appetite for the authentic, and especially for encounters with those priceless touchstones of human creativity that cannot be adequately experienced in a virtual medium. (Anderson 1999: 29).

It seems obvious that the physical and the virtual visit are two different things. In some cases they can offer complementary experiences, but the virtual experience will never be a substitute for the real one, especially as motivations for visiting in person and online are diverse.

5. Motivations for visiting in person and online

The principal reasons to visit a museum are to see original objects from the collections; to engage in educational and entertaining hands-on interactive experiences, especially in science and technology museums; and to explore a public space that often has architectural interest. Frequently, social interactions among family members, friends, or school groups are a main component of a visit. (Strimpel 1995: 181)

As Oliver Strimpel (1995: 184) points out, these traditional aspects of the museum visit are largely absent online; therefore museums have to find new and compelling reasons for the public to visit them on the Internet. In this context it is helpful to take a closer look at the motivations for visiting a museum, both a physical institution and a virtual one. Research suggests that the motivations for visiting are quite different: *Physical museum-goers are seeking experiences learning experiences perhaps - but experiences nonetheless. In contrast, the Internet was created for resource sharing and communication. This distinction shapes the current differences in motivation in the two venues. (Haley Goldman,*



Fig. 6
Europeana's
virtual exhibition
Art Nouveau



Ellenbogen & Falk 2008: 192) The reasons for the differences in motivation are manifold. First of all, there are the discrepancies in opportunity costs. While visitors to physical museums have high opportunity costs - investments of time, effort, money and information acquisition such as finding the hours of operation, the way to the institution, current exhibitions and guided tours - the virtual visitors only invest a small fraction of time and efforts in their visits as they can stay at home, visit independent of opening hours and stay as long as they want (Haley Goldman, Ellenbogen & Falk 2008: 192). Another key difference is the social aspect of the visit. While being social is a key aspect of the physical museum visit, online visiting most often takes place as solo visitation (Haley Goldman & Schaller 2004). At the moment, the tools for providing some form of social interaction online have not answered the problem of the lack of the social context, which plays a fundamental role during the visit to a museum (Economou 2008: 153). The major problem of information technology both in the museum and online is the scarcity of interaction between visitors. While physical visits allow interaction between the visitors any time, interactive computer exhibits in museums most often allow only an exclusive interaction between one visitor and technical device he or she uses instead of interaction between several visitors (Heath, Hindmarsh & Lehn 2002: 20f; Heath & Lehn 2003: 10). It seems obvious that virtual visitors face the same problems regarding social interaction and online experiences as the systems for local and virtual exhibitions are usually designed by the same people following the same principles of interaction. In addition, it is difficult to encourage communication between different users of online cultural environments (Economou 2008: 154). So it stands to reason that there is an imminent danger for the virtual visit to become a solitary one, lacking the social context of the real visit. Therefore, understanding the sociality of online visiting should be in the forefront of the research agenda (Chalmers & Galani 2008: 176).

Contrary to the widespread belief that virtual museums will prevent visitors from visiting the physical museum, research suggests that a major factor for visiting museum websites is indeed searching information about the brick and mortar museum, usually when preparing for a visit. Virtual visitors use the Internet predominantly for looking up information related to the physical museum visit as a study by Judy Haynes and Dan Zambonini (2007) indicates. This study was based on more than 100 000 user sessions on the websites of five large museums found that the most popular information sought after were opening hours and how to get to the museum, followed by exhibitions, galleries and events. These findings support the hypothesis of Gernot Wersig (2001) who claims that museum visiting requires action planning, something that is done more and more on the Internet; therefore museums that want to be included in the action planning process of prospective visitors have to present the relevant information online. As Niels Einar Veirum and Mogens Fiil Christensen (2011: 4) point out, *in our society today, visibility is inextricably linked to the Internet. We have arrived at the saturation point where we expect to find things there, and only hesitantly look for it the 'old' way by looking in papers, books, etc.* Consequently, virtual exhibitions can support physical exhibitions by helping visitors to prepare for their visit or do some exploration after the visit (Economou 2008: 153). In order to serve these purposes, the museum information online has to be presented in a way that it is conceptually accessible for a heterogeneous group of virtual visitors.

6. From digital collections to virtual exhibitions

Once the raw material is on-line, museums will be in a strong position to take the next step of creating unique on-line exhibitions, based on their collections. (Strimpel 1995: 182).

This statement is enticing as it implies that putting information from the museum's collection database online is enough and will automatically result in successful virtual exhibitions. But the fact that the information inside the collection database is collected, structured, enhanced by comments and illustrated by digital reproductions is not sufficient for presenting digital collections to the audience in an adequate way. This is because collection information is created by subject specialists for subject specialists while the audience consists of laypersons who lack background knowledge, familiarity with terminology and a clear understanding of the information available in the collections database and how it is structured – all inevitable prerequisites for executing a successful search and gaining intellectual access to the retrieved content. A study commissioned by the U. S. Institute of Museum and Library Services supports this point of view: *Museum collection databases often do not provide profound intellectual information for the users.* (Hastings & Kravchyna 2002).

The lack of intellectual accessibility is only one problem of the collection database. Another problem is that the collection database can only provide access to a specific piece of information but provides hardly the required contextual information and definitely not a flow experience that is important for involvement and learning (cf. Csikszentmihaly & Hermanson 1995). Therefore alternative forms of information presentation should be considered for virtual exhibitions – for example, narrative approaches by telling stories that put objects and information in context as Kevin Donovan (1997: 130) recommends: *Instead of leading with the object, lead with the story of the culture, historical context, people and places and their importance. Tell engaging stories with objects woven through them.*

No matter what kind of educational approach is used for the presentation of collection information in virtual exhibitions, it is the task of curators and e-learning specialists to create the concepts. Curators are needed, more than ever, to process the mass of data available in collection databases in a user-friendly and conceptually accessible way, as Maria Economou (2008: 152) points out. The result of this process will be virtual exhibitions that offer more than metadata and digital objects but content in context. This is important because *access to information [...] entails both making information readily available and ensuring that its users have the ability to comprehend it* (MacDonald & Alsford 1991: 307).

The issue of creating successful virtual exhibitions is a complex one with many factors to consider (cf. Kalfatovic 2002). Although there is a wide range of research literature available concerning virtual exhibitions, there is still little systematic research analysing the factors that make them successful. Instead, there is a large number of recommendations, hints and so-called tricks of the trade that do the rounds on mailing lists, in discussion lists and on websites; usually



these pieces of advice are given with the best of intentions but quite often they provoke the opposite effect creating really bad online experiences for the virtual visitors (cf. Schweibenz 2012).

7. Conclusions

For a long time the discussion about the real-virtual divide held centre stage in the museological discourse implying that the virtual visit should be considered as a secondary or surrogate experience to the physical one. This discussion should be closed by now as it seems obvious that visiting experiences in-person and online are different, both having their own strengths and weaknesses, nevertheless being experiences in their own rights. Therefore they should be considered as equal instead of treating one as secondary to the other. For those who cannot visit an exhibition in person, the virtual visit is the next best thing to do. For those who are prospective visitors, the virtual exhibition will probably achieve what is a key concept of each reproduction, i.e. *the creation of a demand which could be fully satisfied only later* (Benjamin (1936: 237) when coming to the physical exhibition.

Drawing the attention of prospective visitors to real exhibitions is one of the major tasks of virtual exhibitions. This is eminent as museum visiting is high in opportunity costs and requires action planning. Therefore, presenting museum information on the Web is no longer about *be there or be square*, but more to the point it is about *to be or not to be because if it's not on the Net it doesn't exist* (Veirum & Christensen 2011), at least it might not be relevant for the prospective audience and their action planning.

An important feature of the in-person visit is social interaction between visitors. In virtual visits, this aspect is basically absent as they are mostly solo visitations. Therefore, learning more about the sociality of online visiting is a priority for future research, the proper implementation of online sociality a main concern for the future development of virtual exhibitions.

From the content perspective, creating virtual exhibitions is more than putting existing museum information from the collections database online as this kind of information is often intellectually inaccessible for users who are laypersons. To meet the needs of this audience, user-friendly and conceptually accessible ways of designing virtual exhibitions have to be considered. Although there is a wide range of research literature, there is still little systematic research analysing what makes virtual exhibitions successful. Consequently, there is need for research on how to design successful virtual exhibitions.

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