Lausanne, Musée cantonal des Beaux-Arts. © Michel Krafft

Réunion du Comité ICFA

Lausanne, 27 – 31 mai 2015

Palais de Rumine. Musée cantonal des Beaux-Arts

Les Musées de Beaux-Arts à l'heure du numérique

Liste des participants

ANDREEVA Galina, Moscou, Russie

BAKANOVA Irina, Musée Pouchkine, Moscou, Russie

CARACENI Simona, Bologne, Italie

ERICANI Giuliana, Museo civico Bassano del Grappa, Italie

KUHNMUNCH Jacques, Dijon, France

KUOJÄRVI-NÄRHI Reetta, Sinebrychoff Art Museum - Finnish National Gallery, Helsinki, Finlande

GLASEMANN Karin, Sweden National Museum of Fine Art Stockholm, Suède

HARRISON Colin, Ashmolean Museum, Oxford, Royaume-Uni

LJUNGKVIST Maria, Sweden National Museum of Fine Art, Stockholm, Suède

MISS Stig, Thorvaldsen Museum Copenhague, Danemark

MOOLHUIJSEN Nicole, VITRARIA Glass +A museum, Venise, Italie

TITOVA Elena, Moscou, Russie

UMSTÄTTER Lada et Gabriel, Musée des Beaux-Arts, La Chaux de Fonds, Suisse

YAMADA Shoji, International Research Center for japanese studies Kyoto, Japon

Compte-rendu de la réunion

Pour la première fois de son histoire le Comité ICFA s'est réuni en Suisse, à Lausanne, au Musée cantonal des Beaux-Arts, appelé aussi sous le nom de Palais de Rumine, de style néo-Renaissance, construit à partir de 1892 sur des fonds offerts par Gabriel de Rumine, fils de princes russes. Il abrite cinq importantes institutions culturelles dont le Musée cantonal des Beaux-Arts et le Musée cantonal de zoologie. Nous répondons ainsi à l'invitation de son Directeur, Bernard Fibicher et du Président d'ICOM Suisse, Roger Fayet. La Présidente Giuliana Ericani a retenu comme thème d'étude : « Les Musées de Beaux-Arts à l'ère du numérique ». Durant toute la durée de cette réunion annuelle, nous avons été accompagnés par Chantal Ebongué-Pittet, Chargée de communication au Musée de zoologie de Lausanne. Bernard Fibicher et elle-même ont réservé le meilleur accueil aux participants ; que tous deux soient chaleureusement remerciés pour l'attention qu'ils nous ont témoignée, la parfaite organisation de cette réunion dont le programme de visites riche et varié s'intégrait parfaitement à la thématique de notre meeting.

Jeudi 28 mai

La journée d'étude « Les Musées de Beaux-Arts à l'heure du numérique ». s'est déroulée au Palais de Rumine, dans l'auditorium du musée de Zoologie.

Lausanne, Auditorium du Musée de zoologie. © Michel Krafft

Après les traditionnelles paroles de bienvenue de Bernard Fibicher et de Giuliana Ericani, nous entrons dans le vif du sujet avec en plus des intervenants suisses présentant l'expérience Muséomix au Musée des Beaux-Arts de Genève.

Programme de la journée d'étude

Giuliana Ericani : The museums of Fine Arts in the digital era

Maria Ljungkvist - Karin Glasemann : Possibilities in the digital era and realities at a Fine Art Museum

Nicole Moolhuijsen : Fine Art museums in the digital age: participation and shifting knowledge paradigms

Simona Caraceni : Museums: bulwark of the digital dark age ?

Discussions

Leila Bouanani et *Sylvie Treglia-Detraz* : Museomix or hacking museums

Sarah Burkhalter : Content is King. Documenting and Digitizing the Artwork

Stig Miss : Thorvaldsen on a silver platter – from dead capital to a gold mine

Shoji Yamada : Rethinking digital reproduction/ replacement of cultural properties

Galina Andreeva : Innovative formation of digital presentation of an international show

Les résumés ou les textes des communications sont en annexe, p. 9-29

Les visites

Vendredi 29 mai

La journée débute par la visite des collections de l'Art Brut dont l'origine remonte à la création en 1948 par Jean Dubuffet, André Breton et Jean Paulhan de la *Compagnie de l'Art Brut*. Rappelons que ce terme « art brut » apparaît pour la première fois en 1945 dans une lettre adressée par Dubuffet au peintre suisse René Auberjonois. Conservée dans un premier temps à Paris, la collection est offerte par Dubuffet en 1971 à la ville Lausanne; celle-ci l'installe au Château de Beaulieu, demeure patricienne du XVIIIe siècle. L'inauguration a lieu en 1976. Riche de plus de 60.000 œuvres représentées par des créateurs de toute nationalité, cet ensemble fait à juste titre la fierté de la ville de Lausanne.

© Collection de l'Art Brut

Chacun d'entre nous a pu mesurer la force et l'intensité de ces créations réalisées par des auteurs autodidactes, souvent marginaux ayant parfois effectué de longs séjours en hôpitaux psychiatriques ou même en prisons. La muséographie, volontairement sobre, met parfaitement en valeur l'angoisse et les drames vécus par ces artistes dont l'art spontané laisse libre cours à leurs impulsions, leurs phantasmes, leur mal de vivre transcrits dans un langage singulier qui ne peut laisser indifférent.

Après cette matinée particulièrement dense qui marqua tous les participants, un moment de détente s'imposait. Nos amis avaient programmé la visite du charmant village médiéval de Lutry et des vignobles de Lavaux, inscrits au patrimoine mondial de l'Humanité par l'UNESCO. Le vignoble existe depuis le XIIe siècle, aménagé en terrasse par les moines cisterciens et prémontrés. Cette disposition unique, orientée plein sud au bord du lac Léman, est à l'origine du classement par l'UNESCO en 2007. Le site est indissociable de l'histoire de Lausanne et du Canton de Vaud.

Samedi 30 mai

La cathédrale de Lausanne, que nous fait visiter avec brio Gaspard de Marval, est le monument phare de cette ville. Fondée en 1170, c'est le plus vaste édifice gothique de Suisse célèbre pour son portail peint, son beffroi et sa rosace représentant le monde au début du XIIIe siècle, sans omettre les stalles de la même époque. Le portail, élevé entre 1225 et 1235 est un modèle architectural unique ; l'iconographie renvoie aux scènes de l'Ancien et du Nouveau Testament avec une statuaire qui a conservé sa polychromie d'origine. Les stalles sculptées au XIIIe siècle faisaient partie du mobilier de l'ancien chœur capitulaire. Aujourd'hui démembré, l'ensemble reste impressionnant par la qualité et la diversité de la sculpture figurative (*Combat de David*) tant végétale qu'animale. La cathédrale fut aussi le dernier chantier de Viollet-le-Duc (par ailleurs mort à Lausanne). Commencé en 1874, la restauration de cet édifice (reprise du couronnement de la tour-lanterne ; remplacement de la flèche) ne prit fin qu'en 1910 en attendant les restaurations du XXe siècle….

Poursuivant la découverte du patrimoine religieux du canton de Vaud, nos pas nous conduisent à l'abbatiale de Romainmôtier, le plus ancien édifice roman de Suisse. La visite de se fait sous la conduite de Bernard Fibicher. L'abbatiale se situe en montagne, dans un site

propice à la méditation, situé dans la région limitrophe de la France connue sous le nom de « Pied du Jura ». Au Xe siècle, le monastère rejoint le puissant et prestigieux ordre de Cluny qui imprime sa marque en faisant construire l'abbatiale, entre 990 et 1030 sur le modèle clunisien. L'édifice dans son état actuel est une heureuse synthèse entre les styles roman et gothique : le transept est roman avec des voutes en berceau tandis que le chœur central est gothique.

Abbatiale de Romainmotier

Nous ne pouvions quitter cette région du Jura vaudois sans visiter, sous la conduite de son directeur Pierre Lukaszewski, la Fondation Michalski pout l'écriture et la littérature. Elle se trouve à Montricher dans une région de forêt. Ses architectes Vincent Mangeat et Pierre Wahlen ont repris l'architecture de la forêt voisine en imaginant une série de piliers servant à soutenir une grande pergola ajourée qui joue de la transparence avec le paysage environnant. Les bâtiments comportent une immense bibliothèque multiculturelle dont le catalogue est entièrement numérisée ; elle dispose de cinq étages capables d'accueillir à terme 80.000 livres réunissant les chefs d'œuvres de la littérature mondiale, une salle de conférences, des salles d'exposition et des résidences ou *cabane*s pour écrivains. L'ensemble a été inauguré en 2014.

Jan Michalski est d'origine polonaise. Né en 1953, il étudie la sociologie à l'Université de Lublin tout en se passionnant pour la littérature. Sa rencontre avec Vera

Hoffman, qui deviendra plus tard sa femme, fut décisive. Ils créent ensemble une maison d'édition. Après sa mort, Vera Michalski-Hoffmann est à l'origine de la fondation qui porte son nom. Son objectif est de promouvoir la création littéraire par l'attribution d'un prix, de bourses et d'aides financières ou par l'accueil d'écrivains en résidence. Lors de notre passage, nous avons eu le privilège de visiter l'exposition *Henri Michaux. Figures-Ecritures* rassemblant 70 œuvres réalisées entre 1937 et 1984 provenant d'une collection privée.

Avec cette visite, notre meeting prend fin en attendant le prochain rendez-vous à Milan et Bassano.

Introduction par Giuliana Ericani, présidente du Comité ICFA

Les Musées de Beaux-Arts à l'heure du numérique

Chers collègues,

A mon tour, aujourd'hui, de tenter de donner un sens au titre général de cette journée d'étude.

La conception nouvelle du musée, orientée dans une nouvelle relation entre le patrimoine et son public, est en lien avec deux centres d'intérêt différents et complémentaires, la muséographie avec l'utilisation de paramètres permanents ou plus souvent éphémères et les panneaux pédagogiques supposant connaissance et communication externe.

L'introduction des Technologies de l'Information et de la Communication (TIC) dans le lien entre contenant et contenu va même évoluer davantage dans un sens participatif. L'aspect de la conservation, et ainsi le travail du conservateur, ont été en grande partie facilités par les TIC, mais beaucoup pourrait être fait avec les bases de données pour accroitre la diffusion des connaissances dans différents lieux et pays.

L'utilisation des TIC dans l'amélioration et la mise en œuvre des politiques muséographiques a engendré trois approches différentes dans le lien musées/public :

- ✓ La première concerne la modification des espaces muséographiques et des modalités de visites.
- ✓ La seconde concerne le contenu de la visite d'un musée et conduit à un approfondissement de la visite elle-même et des modalités de la visite. Elle exige une approche différente du parcours muséographique.
- ✓ La troisième exige pour le public une certaine méthode de réunir le musée et ses parcours et une nouvelle perspective, celle de la création de nouveaux ensembles innovants de circuit.

Les TIC ont introduit et vont introduire des changements significatifs dans les programmes éducatifs des musées et dans l'approche des différents publics ainsi que dans leurs procédures de communication.

L'approche de l'Archéologie a été modifiée par le recours aux objets virtuels. Les Musées de Beaux-Arts utilisent moins les TIC, notamment dans la mise en œuvre et l'amélioration des politiques muséographiques, cependant leur usage s'accroît et nous verrons aujourd'hui ce qui a été fait en ce domaine.
Bon travail

Maria Ljungkvist, Digital Co-ordinator
Karin Glasemann, Digital Catalogue Manager
Sweden National Museum of Fine Art, Stockholm

Possibilities in the Digital Era and Realities at a Fine Art Museum
On diverging priorities, different understandings of "digital" and some ideas on how to find a collective vision and how to get there

On diverging priorities, different understandings of "digital" and some ideas on how to find a collective vision and how to get there

Nationalmuseum, Sweden's national museum of Fine Art has been closed to the public since February 2013. While renovation of the main building is advancing quickly, major parts of the staff are focusing on a vision of what the new museum should be.

When it comes to the question what we should be, provide, present and develop *digitally*, it becomes clear very quickly that we do not only have very different opinions of *how* the museum should act, present and evolve, but also *what* it is we actually mean with digitization and access.

Nationalmuseum can be a case study of how hard it is to have collection information stick together in larger institutions. One department is in charge of the images, another one in charge of scientific documentation, others of material analysis, another department produces physical exhibitions and a public department is there to communicate everything out. Meanwhile, a huge development has taken place outside the institution offering vast possibilities, to present content, to link data to quickly growing initiatives such as Europeana, Wikipedia, viaf, AAT, CONA ….

While it is relatively easy to persuade colleagues and directors that this is a necessary work to be done, even if there of course always are restrictions on how much time, work and money one is supposed to offer to these "niche-activities", it is surprisingly (?) a lot harder to achieve some sort of "linked-data-attitude" in house.

How do you bridge the enormous differences in digital competence between some staff and the possibilities that are there? We talk a lot about digitally engaging your public – but how do you engage your colleagues in actively participating in digital production?

How do you meet the entirely different documentation needs of a public that mostly wants a few, very well documented highlights, engaging their attention, inviting them to interact with your collection and the need of a storage manager who wants a number, an image and a location, but please for the whole collection? And of course, how do you slid in the researcher's wish to see all publications plus updated, concise and peer-approved information online? How do you persuade colleagues of the synergies between Wikipedia and technical and physical collection management? Are there any synergies at all?

A lot of best practice information has been shared about mass-digitization, crowd-sourcing and how to engage your public. The ultimate goal is always to do it all – but manpower, skill and time are never enough at whatever institution we look at. In 2015, Nationalmuseum established a new strategic department on digital cooperation and development where we hope to find some answers to the questions above. We will look at how you meet staff where they are, how you need clear priorities, but also a certain flexibility between short-term and long-term goals in order to have everybody aboard. We will also look at how other challenges, such as moving the whole collection, can surprisingly push a collective digital vision a bit on the way.

Nicole Moolhuijsen
VITRARIA Glass +A Museum, Venice

Fine Art museums in the digital age: participation and shifting knowledge paradigms

The presentation discusses the ways in which information is generated and presented in displays featuring Fine Art. It will be argued that Fine Art museums, in spite of current museological trends relating to the concept of participation and public access, still largely interpret their collections from disciplinary perspectives. As a result, curators and museum professionals remain the primary and only source of knowledge in developing displays, limiting objects' potential of being meaningful to a non specialist audience. This model contrasts the idea of an open, social and participatory framework of knowledge production, which characterizes information infrastructures, such as the museum, in the digital era.

Rather than looking at digital medial as a set of tools to communicate information and collections in the art museum, the presentation will raise questions about their epistemological foundation. Hence, it will start with a review of post-structuralist and postmodern theories, discussing their effect on material culture studies and objects' ontology. It will be sustained that the concept of the artwork as a polysemic entity can underpin its interpretation from different perspectives and can be used as a trigger to include new voices in the museum. Through a selection of case studies from Europe and the United States, it will be possible to observe how institutions have worked with audiences to include diverse points of view in the displays (including their own) through digital storytelling and new medias. The presentation aims to offer fresh insights into ways displays may be reconceptualised to form new knowledge paradigms in line with contemporary debates relating to the social role of the museum and audience inclusion.

Main References
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Hooper-Greenhill, Eilean. *Museums and the Interpretation of Visual Culture* (Routledge: New York, 2000)
MacLeod, Suzanne. (Ed. by) *Reshaping Museum Space: architecture, design, exhibition* (Routledge: New York, 2005)
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Simona Caraceni
AVICOM VICE PRESIDENT – KION spa, Bologna

Museums: bulwark of the digital dark age?

Museums are institutions devoted to communicate and exhibit tangible and intangible heritage in their own definition [ICOM Statutes, 2007]. In this paper it is shown a case history of the most advanced examples in communicating heritage using emerging technology. The questions that this paper investigate are about the results of those examples,

but also their future, related to the software or platforms used, the files format and the technological know-how of fine arts museums.

Efforts done in creating award winning Apps, or CD-Rom, or metadata for huge collections portals do have a limited lifetime, that has to be considered to avoid what is agreed to be the "information black hole" [Cerf, 2014] of the future, also in Heritage field.

Jon Ippolito and Richard Rinehart are the authors of one of the most brilliant books in the last years: *Re-collection*. This book looks in the field of art and technology with a new mindfulness: the acknowledgement that all what we are collecting now is dead, and can vanish in a flash, and new technologies are only amplifying the situation, instead to give practical and practicable solutions.

Ippolito and Rinehart start their analysis from the question of the preservation of new media art, and identify 4 reasons that contribute in killing contemporary culture [Ippolito 2013, 29] and are causes of the "disease" of our contemporary culture, to give it a cure in preservation and communication of our culture.

For the above mentioned authors, culture is death by institution: the examples given focus on storage, instead of memory [Ippolito, Rinehart, 2015, 87]. Death by law: the authors give the example of the speech "I have a dream", that has copyrights issue that don't allow to stream it on the internet [Ippolito, Rinehart, 2015, 142]. And death by technology, that with its instability [D'Amrbrosio and Parrella, 1998, 40] is a part of this disease, instead of being a cure. [Ippolito, Rinehart, 2015, 31]

From the observation of the state of the art in the application of emerging technologies in heritage field, and the discussion and the practice in the museum professional communities, in the last years, starting from the first international meeting of AVICOM in 1991 [Tonon, 1993][1] the digital technologies was observed with great interest and enthusiasm from the community of museum professionals.
Far away from the awareness of computer science, and also social and cultural studies, the passion about the new means for communicating heritage by the professional community of museologists lead them to define virtual museum as 3D reconstruction, both CD-Rom, digital museum guides, digital archives off-line and on-line, DVD, image galleries (2D) as an unique, whole thing, and every one at the same level [Acidini and Cappellini, 2008; Appartenenza, Fotis, Kostas and Styliani, 2009][2], and the same thing happened for augmented reality experimentations, mixed reality, and use of social networks. In this field it is interesting to

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[1] Tonon M., Santin A. and Santolin A., (1993). L'Audiovisuel à l'intérieur du Musée: l'expérience pordenonaise du Musée des Sciences. In: AVICOM '92: nouvelles technologies de l'audiovisuel au service des musées : recueil des conférences tenues dans le cadre de la 1.6e Conférence générale du Conseil international des musées, Québec, 19-27 Septembre 1992. Fiesole: Amalthea, pp.60- 68

[2] "Emerging technologies, such as VR, AR and Web3D are widely used to create virtual museum exhibitions both in a museum environment through informative kiosks and on the World Wide Web. This paper surveys the field, and while it explores the various kinds of virtual museums in existence, it discusses the advantages and limitation involved with a presentation of old and new methods and of the tools used for their creation"

note also the studies of Elisa Giaccardi [200[3]6], for the study about how social technologies can enhance virtual visit to virtual heritage.

Ann Mintz [Thomas, Mintz 1998, 20][4] describes why the age of information raises interesting issues in museology. In her opinion that happens because museum professionals are "Knowledge workers engaged in creation and transfert of information", this information is not a simple data, but a real object, and here lays for her the paradox in the relationship between museums and computers: museums are so centered in the reality that enhancing the "virtual", the information media field can really enhance visitor experience, and the process of information transfert, and that's interesting for museum professional, not so much the technological medium by they enhance visitor experience. The use of information technology in museum has got a quantitative and qualitative dimension: quantitative, because computer technology can give to visitor the control of the amount of textual information they "have" to read during a visit that can be also a social activity, or, at the opposite side, can increase the amount of information that visitors can reach during their visit; qualitative, because computer can expand exponentially the contexts for more conventional exhibitry [Thomas, Mintz 1998, 23]

Museum professional, approaching the concept of "virtual museum", consider all the communication technology that can enhance the visitor visit in the museum or from their desks (or on their couches) at the same level, making differences between the technological medium used, but stating the variety of different cases that the umbrella term "virtual museum" can present.

Considering the evolution of FIAMP award from its first edition to the last one,

AVICOM was born on 1991, but the first edition of the FIAMP prize was in 1996. Before 1996 there were meetings in which the implications of the use of audio-visual technologies were discussed (1991),[5] and only in 1992 the committe opened to the use of so called "nouvelles technologies de l'audiovisuel". FIAMP prize were enstablished in 1996, and the cathegories that were awarded were:

  a. The FIAMP awards were established in 1996, the categories covered were:
  b. a. CD-ROM
  c. b. Audio-visual (divided into thematic categories) In 1993:
  d. a. CD-ROM
  e. b. Websites In 1994
  f. a. CD-ROM
  g. b. Websites
  h. c. Audio-visual (not divided into thematic categories)
  i. The situation of the categories awarded was increased only in 2004, with:
  j. a. Audio-visuals (divided into short, medium, long)

[3] Giaccardi, E., (2006). Collective Storytelling and Social Creativity in the Virtual Museum: A Case Study. *Design Issues*, (22)3, pp. 29- 41
[4] Mintz, A and Thomas S., (1998) The virtual and the real: Media in the museum, Washington: American Association of Museums
[5] http://archives.icom.museum/publications/avicom.html

k.   b. CD-ROM

l.   c. 'Generalist' websites

m.   d. Virtual exhibitions

n.   In 2006 the categories were:

o.   a. Interactive stations and exhibits

p.   b. CD-ROM and DVD-ROM

q.   c. Audio-visuals (short, medium, long)

r.   d. Websites ('simple' websites and interactive exhibitions on the web)

s.   52

t.   Since then the situation has been substantially the same (the websites category has been known as WebArt) since 2009, when thing changed substantially. The categories became:

u.   a. Audio-visuals (short, medium, long)

v.   b. Multimedia mobile applications, 'WebArt', interactive stations and exhibits, CD-ROM.

w.   Since 2012, the categories are:

x.   a. New museology

y.   b. 'Generalist' websites

z.   c. Exhibition and dossier websites

aa.   d. Audio-visuals (short, medium, long)

bb.   e. Multimedia (localized project, mobile app and digital exhibition on touch screen)

cc.   These categories, (ignoring audio-visuals as stated before), are relevant in their reality datum aspect, however in the AVICOM archives they have been defined as 'products',

dd.   awarded for their ability to enhance museum experience and communicate heritage. In the following subsections I will focus on the emerging technologies used in these products, in addition to a more general overview of these 22 years of experimentation.

The natural activity that has to be planned in AVICOM board is to create a digitized archive of almost the winners of the categories. Starting from this project, what came out with evidence is: how can I digitize and communicate a CD-Rom created in 1996, that was made for Operating systems that doesn't exist anymore, and for file formats or plugin (Flash, Quicktime) that evolved and have malfunctioning issues if opened now? What about the screen resolution, that make older websites or CD Rom interface to small and not readable anymore for current screens resolutions?

Ippolito and Rinheart face this situation as previous cases that can be mentioned here.

Considering the case of the 1998 project of the Museum of the IX Centenary of the University of Bologna, based in Palazzo Poggi Museum, intended to create a new type of

museum, proposing narratives to be told by the multimedia objects on display. Spaces are offered as fascinating supports for the representations of objects, episodes, characters and 'theories' in which spectators are the protagonists of their own itineraries. The design, completed in the second half of 1999, was aimed at creating a work responding to the request of the commissioners for a space dedicated to the nine centuries of history of the University of Bologna, at the same time creating an innovative form of exhibition for temporary displays with the potential of a permanent laboratory.

The guidelines were:

1. to create a 'chamber of wonders' with a contemporary feel, for example the rooms of the Palazzo Poggi housing the scientific collections of the Academy of Sciences in the second half of the eighteenth century;

2. the need to represent the paradigms of the university that took shape in the city of Bologna: the storage, transmission and pursuit of knowledge and its parallel variations – past, present and future; time, space, and ritual.

The configuration of the environment, the general criteria for use and interaction of the information and ultimately the aesthetics of the exhibition; the need to make different types of information on the history of the university available to the public with the use of multi-vision techniques for the spectacularisation of spaces.

It was created between 1996 and 1998, and was one of the first virtual museums of this kind in Italy. It was destroyed in 2012, because there was no plan for the restoration or maintenance of the hardware and software; the creators made clear their commitment to the need for this kind of maintenance, now common practice, but this maintenance, after a change in the rectorship of the University, was deemed unnecessary, with the consequence that the system had to be shut down when the touch screens and first projectors broke down with no replacements available on the market and no alternative but to change the format.

At that time the culture to support this kind of museum had not yet been born. All interactions took place through an active action by the visitor (touching a screen, pointing a device). This museum only contained one real object: the Magna Charta Universitatum, signed by a significant proportion of university rectors worldwide in 1988.

I was involved as researcher in some plans of restoration of this virtual museum, but the issues were almost about software updates, that were the consequences of the hardware possible replacement. At the end this museum was completely demolished, after a last experiment that we tried to carry out in order to mantain it alive.

We tried to create an augmented reality app [Roccetti, Marfia, Amoroso, Caraceni, Varni, 2011][6] in Bologna Palazzo Poggi Museum, in order to create a virtual temporary exhibition in

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[6] Augmenting Augmented Reality with Pairwise Interactions: The Case of Count Luigi Ferdinando Marsili Shooting Game. Publication date: M. Roccetti, G. Marfia, A. Amoroso, S. Caraceni, A. Varni (2012). Augmenting Augmented Reality with Pairwise Interactions: The Case of Count Luigi Ferdinando Marsili Shooting Game. In: 9th IEEE Communications and Networking Conference

which the experiment was to augment the interaction degree of AR mobile apps by exploiting interactions occurring between multiple users and virtual objects and developing a shooting game based on the AR browser Junaio, the developed system after few months was not working anymore without the need of a software update, due to Apple IOS update for IPhone, and the following malfunctioning of all the software parts. So also in this last effort, the experimentation about a reuse of old hardware, and the maintainance of huge efforts (also in tangible exhibit assets) of the museum were

MAB Italia is an association devoted to the convergence of Museum, Archive and Library professionals in some focus of interest. Obviously my research and professional focus in in Technology, and how technology can be an aid (and not a desease as Ippolito and Rhinehart say) in which both preservation, and communication of heritage can coexist together using the aid of technology.

Digital preservation and long time preservation is an ancient problem in digital humanities studies, held most of all from archive and library professionals, and less from museum professionals. The aim of communicating heritage that is in the definition of museum given by ICOM[7] have to cope to law, institutional aspects and also with technological choices that are undertaken in digital projects, that can be temporary, as an exhibition or a communication campaigne, or permanent, because a technological choice made now can affect the museum aim 10, 25, 100 years in the future. Is any company in the world supposed to survive in 100 years as the museum institution? This question can be a lighthouse to orient the museum in choosing one technological solution instead of another. That were also the conclusions of the UNESCO Afghanistan projects ROSSCA and OSACA - the Open Source Alliance of Central Asia (Kabul, 2011), held by the founder Alessandro Califano

A possible solutions to this problems can be to base the technological assets of the museum on open source systems and framework. In some projects held by City Council of Bologna in collaboration with University of Bologna, Cineca and Museum of the City of Bologna Genus Bononiae the benefit of an open source workflow were evident.

In years '90 a research project held by University of Bologna and City Council of Bologna and Centro Gina Fasoli was enstablished in order to create a 3D model of the historical center of the city. This project, held with GIS and 3D modeling software, originated in 1998 the NUME virtual museum.[8] Those models, maintained and integrated in 2010 with Blender software, thanks to a huge Blender Render Farm created and maintained in Cineca server farm,[9] permitted the modeling of "Apa alla scoperta di Bologna", that is a 3D movie integrated in the museum Genus Bononiae of History of the City of Bologna.

(CCNC 2011), Las Vegas (USA), January 2012, p. 6-10. PISCATAWAY, NJ:IEEE Communications Society, ISBN: 978-1-4577- 2069-7

[7] I.C.O.M., (2007). ICOM Statutes, approved in Vienna (Austria) – August 24, 2007. Accessible at <http://icom.museum/the-organisation/icom-statutes/>

[8] Guidazzoli A., Bonfigli, M.E_ "The creation of the Nume project", Conference: ACM Siggraph 99, Volume: Workshop Siggraph '99 (Los Angeles, 7-13 August 1999)

[9] http://www.cineca.it/en/content/blender-render-farm

In conclusion, digital humanities and museum studies have a long way to go to be effective in order to enhance both the comuncative aim of art museums, and the long time preservation issues of digital assets of museums, libraries and archives. A digital production is an asset of the museum, and has to be considered as something that can last more then the time lapse of the lifetime of an operating system, a browser or a plugin.

Leila Bouanani (MUSEOMIX Léman)
Sylvie Treglia-Detraz (Musée d'Art et d'Histoire, Genève)

Museomix en Suisse : une première au Musée d'art et d'histoire de Genève

Développement d'une stratégie numérique au MAH
Il y a quatre ans, le Musée d'art et d'histoire a mis sur pied une stratégie numérique qui porte aujourd'hui ses fruits.
Cette stratégie fixe notamment quatre objectifs principaux:
- Répondre aux besoins et demandes actuels, à savoir : l'ouverture au plus grand nombre et une plus grande transparence
- Valoriser l'image du musée et augmenter sa notoriété grâce à la visibilité d'Internet
- Développer une nouvelle relation avec le public en travaillant sur l'interactivité, l'échange
- Préparer le nouveau visage du MAH en vue de sa réouverture après rénovation et agrandissement.

Elle s'articule autour des éléments suivants :
- Tout d'abord, nous travaillons sur deux axes, souvent à la croisée des domaines de la communication et de la médiation culturelle. Le premier concerne la **dimension *extra muros***. Elle vise à rendre le musée accessible et à permettre une interaction avec lui à toute heure et en tout lieu. Le site, le blog, les réseaux sociaux permettent ainsi de travailler notamment à l'avant et à l'après venue au musée. Ils cherchent aussi à mettre en avant les coulisses de l'institution et les personnes qui y travaillent, ce qui renforce notre accessibilité. Le second axe concerne le **numérique *intra muros*** *(tables tactiles, réalité augmentée, etc.)*. Des installations permettent d'offrir une plus-value à la découverte des objets, des œuvres et des collections *in situ.*
- Nous mettons l'accent sur le fait que le numérique est un moyen et non une fin en soi. Nous n'avons pas la vocation d'aller dans le sens d'une surenchère technologique ou de partir sur un tout numérique : nos piliers, nos matières premières sont les collections, les objets d'histoire et les œuvres d'art, ainsi que les lieux qui les abritent. Nous ne remplaçons pas l'objet mais facilitons, modernisons ou rendons attractifs son approche.

L'introduction de cette stratégie numérique au musée a eu un impact interne important. D'une part, la frontière entre médiation et communication tend à disparaître, amenant les deux secteurs à réaliser ensemble certains projets. D'autre part, l'utilisation des technologies implique un décloisonnement entre les équipes scientifiques et celles en lien avec le public.

En entrant en dialogue avec nos utilisateurs, séparer le contenu « savant » de sa médiation et des échanges avec le public n'est plus possible.

Pourquoi accueillir un événement comme Museomix ?

Quand le Musée d'art et d'histoire a été approché pour accueillir Museomix, nous avons accepté sans hésiter. Cet événement s'intégrait en effet totalement dans notre stratégie, à la croisée de la communication et de la médiation. Il nous donnait une opportunité unique de travailler sur l'expérience de visite (avant, pendant, après) et concrétisant en quelque sorte la voie ouverte par l'introduction des réseaux sociaux. Cela nous permettait également de travailler concrètement à la préfiguration du musée de demain et d'explorer de nouveaux outils de médiation. Enfin, c'était l'occasion de travailler sur un mode différent, collaboratif, participatif et co-créatif, impliquant le musée et le public.

Pour une institution comme la nôtre, Museomix était une formidable opportunité de sortir du cadre traditionnel et de nous ouvrir à de nouvelles pistes de réflexion. C'était l'occasion de nous immerger dans la « culture numérique » en ouvrant le musée à l'expérimentation. Tout en garantissant le sérieux et la rigueur qui doit nous caractériser, nous allions pouvoir intégrer la fraîcheur de compétences externes. Notre musée allait devenir, l'espace de trois jours, un laboratoire !

Les facteurs de réussite au sein du musée pour garantir le succès d'un tel événement

L'idée de Museomix est de « hacker » le musée. A première vue, ceci semble dénué de règles… Hors, accueillir Museomix dans un musée impose un certain nombre de contraintes et une organisation solide car ce ne sont pas moins de 100 personnes qui allaient se trouver réunies au MAH autour de l'événement. Voici donc quelques éléments que je recommanderais de prendre en compte si un musée a envie de se lancer dans l'aventure…

- **Un ou des chefs de projet engagés**

  Organiser Museomix, ce n'est pas réaliser un événement classique. C'est pourquoi il est essentiel que l'équipe en charge du projet soit motivée et engagée. Collaborer avec une association de bénévoles implique un rythme de travail différent des horaires de bureau habituels, des modes de fonctionnement – d'ailleurs souhaités par Museomix – souvent très éloignés de ceux pratiqués dans les musées, etc. Dans le cas du MAH, il y avait deux chefs de projet (la responsable de la communication et un médiateur culturel en charge du numérique) soutenus par une coordinatrice.

- **Le soutien de la direction**

  Pour mener à bien un tel événement, qui secoue fondamentalement les habitudes de l'institution, il est impératif que la direction soit convaincue du bien-fondé du projet et qu'elle le soutienne très fortement. Dans ce cadre particulier et compte tenu des délais très courts, elle doit également accepter dans une certaine mesure de « perdre le contrôle » ! Ouvrir le musée, c'est en effet accepter que « d'autres », pour certains des non-initiés, portent un regard sur l'institution, ses collections et donnent leur avis. C'est aussi accepter les imprévus…

- **Un budget**

  Même si l'association locale de Museomix s'engage à trouver les fonds auprès de sponsors, organiser un tel événement occasionne inévitablement des coûts au sein de l'institution. Il est donc indispensable de prévoir un budget minimal.

Pour le MAH, notre budget était d'environ CHF 30'000.-, comprenant :
- les frais de surveillance hors des horaires habituels
- les frais d'aménagement des salles réservées aux muséomixeurs
- la production du matériel de communication

C'est sans compter le coût en ressources humaines qui est loin d'être négligeable. L'équivalent d'un 80% a été dédié au projet pendant 6 mois. Durant l'événement, les équipes du MAH ont également été très sollicitées.

- **L'implication des collaborateurs du MAH**
  Pour amener des changements au sein d'une institution, il est important de mobiliser les collaborateurs dès le début de l'aventure. Organiser Museomix ne doit pas être le fait de deux ou trois passionnés.

  Nous nous sommes invités dans différentes séances pour présenter le projet (séances de cadres, collège des conservateurs, etc.) ; mis en place des entrevues bilatérales avec certains acteurs internes; envoyé des emails réguliers d'information, etc. Concrètement cela s'est traduit par :
  - L'intégration de collaborateurs du MAH dans les équipes de Muséomix
  - La mobilisation des scientifiques qui ont été sollicités en amont pour définir les thèmes sur lesquels faire travailler les museomixeurs et durant l'événement pour renseigner et conseiller les muséomixeurs
  - La sollicitation des équipes techniques dès le départ. Les plus sollicités furent les infrastructures et la sécurité/surveillance. Ils ont contribué à l'évaluation des besoins et à définition d'un cahier des charges , au soutien logistique pendant l'événement ; etc.
- **Un soutien informatique par la Ville de Genève à laquelle est rattaché le musée**
  Museomix est basé sur l'exploration des nouvelles technologies. Il était donc indispensable que le matériel informatique fonctionne et de pouvoir offrir un réseau stable, des serveurs ; assurer du wifi ; mettre à disposition du matériel (PC, imprimantes, etc.). Le département informatique était donc un partenaire indispensable à la réussite du projet.

Le bilan
- **Les prototypes**
  Concrètement, six prototypes ont été créés. Tous étaient intéressants et pertinents. Dans le cadre de la possible prochaine fermeture du musée, nous aimerions bien pouvoir en développer un en particulier : des personnages de nos œuvres, sur des écrans disséminés dans la ville, qui s'animent et interpellent les passants. Nous sommes actuellement en cours de discussion avec Museomix pour étudier les modalités qui nous permettraient de passer en mode projet. D'autres prototypes pourraient également nous intéresser pour le futur musée.
- **De nouvelles perspectives**
  Museomix est une expérience unique, stimulante et enrichissante autant pour les gens qui participent que pour l'institution. Cet événement démontre la puissance des

méthodes de travail basées sur la co-création et la collaboration : en trois jours, des personnes qui ne se connaissent pas et qui viennent d'horizons différents, s'approprient un sujet, une thématique et arrivent à développer un prototype pertinent. Ceci bouscule les codes habituels du musée où les projets prennent souvent des années à se mettre en place et ouvre d'incroyables perspectives pour autant que l'on accepte de décloisonner les disciplines.

- **De l'engagement et de la visibilité**
  Accueillir Museomix était une manière de renforcer notre positionnement dans le domaine du numérique. Cela a permis de créer de nouveaux liens avec nos visiteurs aussi bien « réels » que « virtuels ». A titre d'exemple, en cinq jours surTwitter, nous avons compté un peu moins de 300 mentions et RT, soit quelque 139'060 « impressions ». Au niveau de la presse, les échos ont également été enthousiastes.
- Les organisateurs de Museomix parlent de « hacker le musée ». En réalité, l'expérience nous a montré que les museomixeurs sont restés très « conventionnels » dans le bon sens du terme et très respectueux de ce que représentent le musée et ses collections, heureux de pouvoir approcher les objets. Nous avons constaté que la rigueur que nous nous imposons dans notre travail quotidien, ils se la sont également imposée. Chaque prototype avait réellement du sens par rapport à nos collections.

En conclusion, Museomix est un sprint et un processus exploratoire dans lesquels les collaborateurs du MAH se sont pleinement engagés. Notre musée a vibré comme une ruche pendant 3 jours et 2 nuits grâce à l'enthousiasme et à l'implication de toutes les personnes présentes. Offrir la parole aux muséomixeurs, c'est découvrir l'intérêt du public pour le musée ainsi que pour la diffusion et le partage des savoirs. C'est également dégager des pistes de réflexion pour le musée de demain.
Sylvie Treglia-Détraz, responsable de la communication aux Musées d'art et d'histoire

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Stig Miss
Thorvaldsens Museum, Copenhagen

The digitalisation and the publication of the Thorvaldsens Museum Archives

Thank you for this opportunity to give a few remarks about The Thorvaldsens Museum in Copenhagen in the digital era and especially about the research and publication project **The Thorvaldsens Museum Archives**. We have been focusing quite a bit within the last years at our museum in Copenhagen on how we could use the digital possibilities in our public work, in our education, in our research and in spreading the knowledge on the Danish neoclassical sculptor Bertel Thorvaldsen (1770-1844), his comtemporaries and his time to the public.
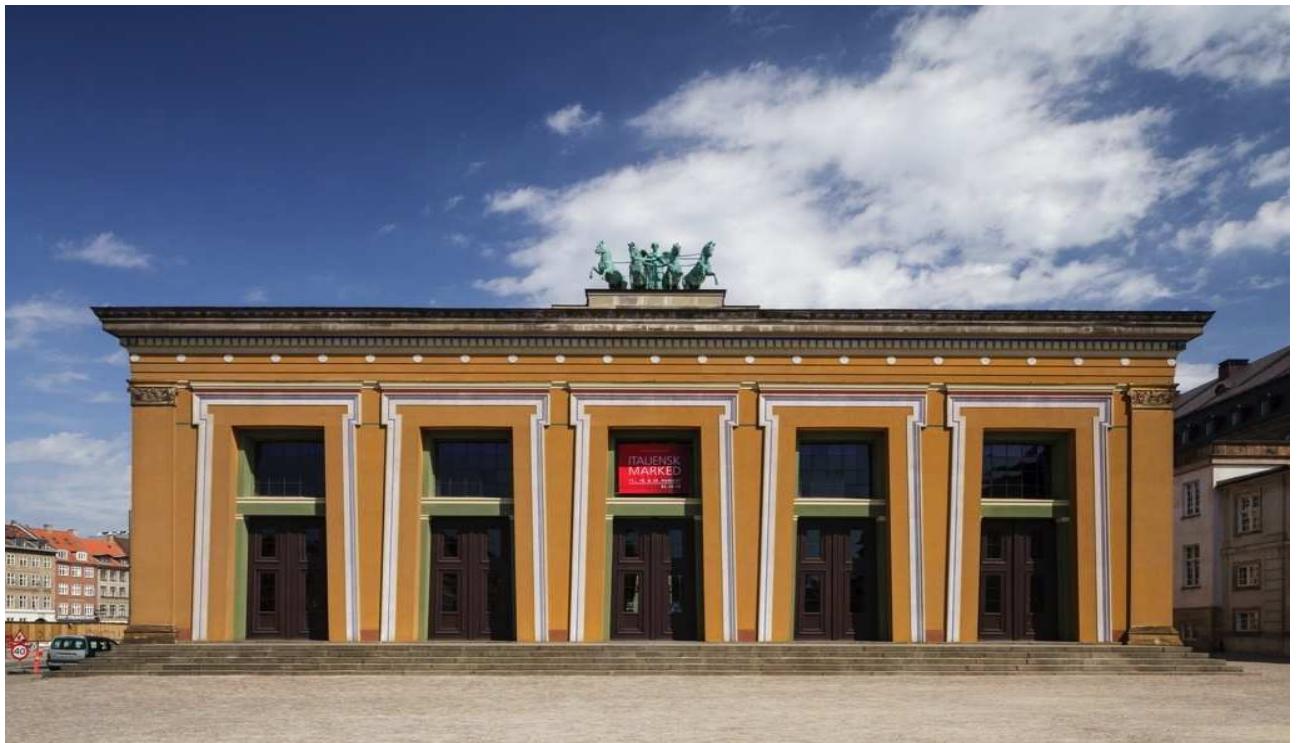
Thorvaldsens Museum contains primarily nearly all of Thorvaldsen's sculptural works in the form of the original models in plaster for the final sculptures in marble or bronze spread all over Europe. Furthermore it contains the sketch models – the bozzetti – for his sculptures and reliefs, more than 1000 drawings by Thorvaldsen as sketches for sculptures, and Thorvaldsen's rather widespread private collections – paintings, drawings and grafic works made by other artists, books, medals and an important collection of antiquities, Egyptian, Greek, Etruscan and Roman objects, sculptures, coins, vases etc.. We also hold many of Thorvaldsens personal belongings, clothes, hats, pistols, spectacles, etc. and more than 8000 written documents, letters primarily forming the basis for the project: The Thorvaldsens Museum Archives.

Thorvaldsens Museum stands in the centre of Copenhagen more or less as it opened in September 1848 being the first public museum building in Denmark, and because of its protected status and status as a monument in itself, not much can be done in respect to traditional means of communicating as f.ex. written signs on the walls. We do use of course audioguides and guided tours, and we publish books, exhibition catalogues, leaflets etc. like all other museums.

But with the digital era a whole new range of possibilities seem to open: Interactive screens, hot spots, I-beacons etc. using the devices our public are carrying with them – tablets, smart phones – and it gives many new possibilities for a museum like Thorvaldsens Museum with its seemingly static character.

It is in this context that you should see the ongoing digital publication and research project – The Thorvaldsens Museum Archives – which we have been working on for some years now and which will continue in its present form until summer 2017. We are looking for partners

though in order to continue the project after 2017 which could include the written sources for the European Neo Classicism as such.

Many will know how impossible it can be to overlook a whole archive – or if possible only one or two researches overlook a specific archive in its totality.
And many archives are of course of a size which makes it nearly impossible to imagine, that all of the documents could be digitalized and made accessible on a database, but still the digitalisation means a whole new way of working with archival material.

The aim of the work in The Thorvaldsens Museum Archives Project is in short to create a research and documentation centre for the written sources on the works of Bertel Thorvaldsen. The written sources have many forms as you may imagine, letters, poems, invitations, workshop accounts, dedications in books, spontaneous notes, printed sources contemporary with the time of Thorvaldsen etc. And we have until now restricted ourselves to deal with the contemporary sources, either handwritten or printed – but lately we have included some printed texts written after the death of Thorvaldsen in 1844, if we think that the texts are relevant to be included in the searchable body of texts. And relevant in this context means that the texts to an extent use archival material as its base.

The archive contains up till now more than 9000 handwritten and printed documents, which are written by nearly 3000 different "hands" and all in all in 11 different languages, dominated by Danish, Italian, German and French. Not all of the documents in the archive belongs to Thorvaldsens Museum. We include documents and printed correspondances from other libraries and archives, if they are relevant for the understanding of the works of Thorvaldsen. The archival material is published in the language in which they are written and for the Danish letters supplied with an English summary.

The first step of this digitalisation of the texts was to have the material read and typed, and as you can imagine this really needed experts who could read the often very difficult and often as well gothic handwriting of so many writers. As a start it took 6 years for one person to transcribe about half of the material!

The main goal has changed somewhat from the beginning from being a publication of and research in solely the written sources to an intention of creating litterally a Thorvaldsens encyclopedia with the knowledge and understanding of his *works* in the centre. The artworks – sculptures, reliefs, portrait busts, drawings – must be in the centre of the project preventing the database to develop into a borderless encyclopedia.

In these times of segmentation and targeting specific user groups we have chosen to focus on the material itself, on the content of the material and at the same time done our very best to make the system and the navigation easy to understand - or even better to let the user navigate intuitively. It is also important that you easily can reach the page you want. The archive contains at the moment more than 14000 pages, and none of the single pages are more than 3 clicks away.

Working with the documents in the archive consists at the museum of three phases:

Publication:
- Transcribing, proof reading
- Facsimile scan (+ if necessary OCR scan)
- Uploading to the internet database we have created
- Establishing creator, recipient, date connected with each document

Determining and/or revising basic knowledge:
- Close reading
- Detailed commentaries, identifying immediate context, art works, persons, topics, events, etc.
- Linking to other documents, persons, topics, art works
- Referring to literature
- Creating / adjusting chronologies, biographies

Interpretation:
- Putting document into larger context (researched articles)

All of the documents are published in the "raw" form with the basic facts (phase 1) right from the beginning. And informations and interpretations from phase 2 and 3 are connected with the documents gradually while they are produced. It is a work in progress and the work with the database and its development is going on in the public.

When you reach the archive from the website of Thorvaldsens Museum you will meet a kind of "teaser" page with examples and entrances for the many search possibilities you are now bound to explore. Here you find the basic facts of the archive and a drop down list with all the sculptures of Thorvaldsen connected with references to the written archival material in which they are mentioned. You will also find handpicked articles suggested for further reading, examples of persons from Thorvaldsens network, a time-line mentioning what actually happened in the life of Thorvaldsen on this particularly day where you are visiting the archive. The principle here is definitely that you navigate intuitively. You can search whatever is in your mind and you can enter the archive from a tempting angle. The pictures and the texts in the categories shift every time you enter the page, but *never* while you are visiting the page.

The primary navigational tool for the user in the archive is the "header" with five columns: *documents – chronology – persons – subjects – related articles* . Under *documents* you can either search completely free or use one or several filters to narrow you search. If you want you can see a high resolution facsimile of any given document. In *chronology* you will find all the time indications we know of year by year concerning events and whereabouts in the life of Thorvaldsen and the production of his sculptures. *Persons* is of course an alphabetical list of all the persons mentioned in the archive. In *subjects* you will find an alphabetical list of general subjects mentioned in a number of letters, under *m* f.ex. *monetary units, marble carving, museums and collections in Rome* just to mention a few. The informations and the lists under *chronology, persons* and *subjects* are expanding daily and all informations are linked with the exact archival material on which they are based. The subject *museums and collections in Rome* refers f.ex. to 29 documents. The *related articles* column lists alphabetically all the articles produced by the researchers connected to the archive in the ongoing project and earlier articles written with extensive use of the archival material. Under *t* you will f.ex. find *Thorvaldsen and the allegory, Thorvaldsen and the marble, Thorvaldsen's Assistants, The transportation of Thorvaldsen's works to Denmark.*

By publishing the letters the museum wants to share ownership to the documents with anybody. An earlier academic tradition – and the restricted technical possibilities – would demand that all of the process in reading, transcribing and interpreting the archival material would take place before the publication. Sometimes it would even be impossible for others to have access to a certain archival fund before a researcher had finished his work. This has changed completely with the internet and in the change of attitude towards including the public. Documents in The Thorvaldsens Museums Archive have been set free for anyone to use or interpret. The museum has abandoned its monopoly on the documents and on the readings of Thorvaldsen's art and is inviting to non-canonical readings so to speak. But in using the archive the user will easily be aware of the destinction between the base, meaning the act of establishing and presenting facts (phase 1 and 2) and the superstructure, being the act of interpreting facts by the researchers (phase 3).

And finally: The database constructed to house the archive is constructed by Thorvaldsens Museum together with a small Copenhagen-based IT designer and development company *Oncotype* with extensive public and private funding and the basic system is given away for free for other museums or libraries to use.

Shoji Yamada
International Research Center for Japanese Studies

Rethinking Digital Reproduction/Replacement of Cultural Properties

1. What is digital reproduction/replacement?

In this paper, I discuss about certain situation of 16th to 18th century Japanese slide-door paintings (fusumae) that has been brought about by the most up-to-date digital technology. The slide-door painting installed in abbot's quarter of old temple is a unique form of Japanese art. The subjects of slide-door painting are beautiful landscape, flowers, trees, birds, mythical creatures, Chinese mountain hermits, and Zen stories. Usually, the painters painted them for the temple place, taking account of the function of the room and adjacent garden. I have to emphasize that the three-dimensional arrangement and the context are highly important components of this art form.

That is to say, the possibility that we can see the original artworks in person and we can go to the places where the artworks originally belong to gives us a huge dream. Someday, we will be able to visit the temple and enjoy the paintings at very place where the painter intended to install them. However, if the originals are moved from the original places and substituted by reproductions, what do people think? It is just like whole paintings of the Sistine Chapel in Vatican are replaced by reproductions. Such situation is growing quietly in temples in Kyoto and surrounding areas.

Then, what does replacing cultural properties with digital reproductions mean? First, paintings on slide-doors are digitized by a digital camera or a scanner. Next, images are printed on materials such as Japanese paper using a printer or a press based on the digital data. And then, a craftsman does some work such as adding a special embellishment using gold foils as necessary. A life-size high definition reproduction made by such method. Meanwhile, the original is stored in a museum or storage of the temple and the copy is put in the place where the original was.

2. Two case studies

Next, I will introduce two typical cases of digital reproduction/replacement. The first case happened at Daijōji Temple in Hyogo prefecture. Daijōji possesses slide-door paintings by Ōkyo Maruyama, a famous painter who lived in the 18th century. All sixty-three paintings of Ōkyo were replaced by digital reproductions in 2009. On digital copy, ink strokes were replaced by blacker print ink and gold foils that created pale aerial atmosphere became glitterier. It is apparent that the original flavor has been lost. The problems exist in details as well. In the original paintings, overlapping pine leaves were expressed by recoating of ink. However, with digital reproduction, overlapping pine leaves cannot be reproduced due to technical limitations. To cover-up the deficiency, white edge was inserted around pine leaves to emphasize them. The original paintings of Ōkyo were stored in an exhibition room, which

also serves as a storage in the temple. Only in specific occasions, we can barely see them in the dimly lit room.

The second case can be seen at Nanzenji Temple, one of the most prestigious Zen temples of Japan. Nanzenji holds the paintings on slide-doors of Kano school artists of the 17th century, which were originally in abbot's quarter. These 84 paintings were replaced with gaudy digital reproductions in 2011 and the originals were put away in a storage of the temple.

Such replacement has been increasing rapidly since 2007.The cases, which we can judge as replacement by digital reproductions, have been found in 13temples in and surrounding area of Kyoto including Daigoji Temple Sanpōin, Daitokuji Jukōin Temple, Shūon'an Ikkyūji Temple, Kōdaiji Entokuin Temple, Kenninji Temple and Nanzenji Temple. The targeted painters were Motonobu, Eitoku and Tanyū Kanō; Yūshō Kaihō; Tōhaku Hasegawa; Jakuchū Itō; Ōkyo Maruyama and so on, and many of their paintings have been designated as National Treasures and Important Cultural Properties of Japan.

3. Discussion

We are not able to see such artworks in the original places again. Because, once the slide-doors stored in controlled environment of storage, the paper and wood stop expansion and contraction with natural change of temperature and humidity. As a consequence, the slide-doors never fit in the thresholds of original building. And of course, the Agency of Cultural Affairs imposes guidance to keep the artworks in artificial environment.

The painting existed where the painter painted it several hundred years ago, and then, the next thing people know is that it was replaced by a digital reproduction. What kind of consensus has been made to conduct such irreversible replacement? In digital replacement cases, all the process went through behind closed doors. Those who enjoy arts are kept completely uninformed until the replacement was completed. Is it fair for citizens? Aren't the Japanese art fans or tax payers important stakeholders? And we should underscore that government subsidy is spent for the storage construction. I think such replacement has problems.

Those who concerned say the same thing, that he results of the digital reproductions are equal to the originals, but is it really so? In most cases, the answer is apparently NO. Do they properly explain to visitors that the artwork is a reproduction? Some temples do not show the fact or indicated only in Japanese. Is creating digital reproduction better option than commissioning the best artist of the day to create a new work? There is no discussion on that. Materials used for digital reproductions will more rapidly deteriorate than many people believe. When a reproduction is deteriorated, who is going to pay for a substantial amount of fee to reproduce it again? And above all, do people take the trouble of visiting a temple where the original artworks are lost?

There is a reason why such replacement is increasing. The initial premise is compliance with the requirement from the government to preserve cultural properties in storage. Researchers of arts support such government policy. As for temples, they can reduce a risk of losing artworks by a fire or theft if such items are stored in storage.

There are companies whose main attraction is digital technology joins to invest. Their motive is to grab an opportunity for propaganda for their technologies. Sometimes a

NPO which promotes such digital reproductions provides fund. As such, since the motive of people concerned around cultural properties matches, replacement is promoted almost uncritically. However, especially in the case of slide-door paintings, they were painted as a part of buildings to which they are fit in, and a garden connected with the building. Paintings, building and garden are appreciated as a single unified object. The intention of the painter is the paintings are to be seen at abbot's quarter of the temple. There is no doubt the painter did not want his artwork to be kept in a storage and placed in a dimly-lit exhibition cases.

The replacement is a conduct of destroying the context of the artwork. To rub the context of the artwork is an act of destruction to devalue the cultural properties. However, art specialists do not see it as destruction. Why? Because paintings, construction, and gardens have been taught and studied as completely separate areas of expertise.

In Japan, under the conservation system of cultural properties, paintings, buildings and gardens are classified in different categories; paintings are artwork, buildings are structures and gardens are famous sights. Also in the organization of the Agency for Cultural Affairs, paintings, buildings and gardens are handled by separate departments. There is an established framework in which separation of slide-door paintings from a building and a garden presents no problem.

I repeat, slide-door paintings, building and garden are a single unified object. At least the painter painted based on that assumption. For visitors of the temples, they are inseparable items. To deprive the artwork of its context means to devalue that cultural property. Digital reproductions are not the same with the originals. No matter how similar a reproduction may be, it is not an original.

I heard that in some temple where the replacement was carried out, the number of visitors decreased drastically. People do not visit temples to see reproductions.

I naturally agree that we must protect cultural properties. Japanese traditional paintings are more fragile than that of the Western. I don't have supporting data to overturn the established theory, that is, putting arts in storage is best to preserve them. However, when reading the latest reference book of cultural property conservation science of Japanese arts, I found the following sentence: "The Agency for Cultural Affairs and academic societies have not established guideline or standard value for clean lines of atmosphere of a space in which cultural properties are stored."[10] When I interviewed in some museum, they said that no color records were kept for the collections and that it was not possible to implement regular check for all of the collections they had, which was a huge number. These facts made uneasy.

Is the storage really a safe place compared with the environment of abbot's quarter where people check the paintings every day? Cultural properties have been handed down to us by applying countless regular repairs over several hundred years in a severe environment, which is close to a natural environment. The established conservation method consists of an ecosystem woven by cultural properties, temples and believers, craftsmen in charge of cultural properties repairs, and supply of necessary materials for repairs. Easy replacement by digital reproductions might destroy such ecosystem. It apparently gives negative impact on long-term preservation of cultural properties.

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[10]Tokyo Bunkazai Kenkyūjo, *Bunkazai no Hogokankyō*, 66.

4. Code of practice

As long as it is thought to contribute the preservation of cultural properties, the ongoing trend of digital replacement will last for a while. The projects, however, should be carried on under accepted code of practice. I offer the following six points for digital replacement, based on the observations of many projects.

The first is the "Present State Reproduction." If the reproduction project tried to restore the state of several hundred years before, the personal judgment and creativity of the supervisor/engineers/artisans affects the outcome and certainly invites an argument. Of course, it is necessary to conduct a study of fading process of artwork; however, it is problematic if they permanently replaced the originals with controversial copies. Consequently, the gold-colored works are not suitable for digital replacement; because it is hard to replicate the actual state.

The second is the "Explicit Notification." In any instance of replacement, the temple should provide clear notification in multiple languages. Surprisingly, a number of temples do not follow this self-evident practice.

The third is the "Local Conservation." The replaced originals should be preserved in the temple or its close location. It is a necessary practice to make possible to compare between the original and copy.

The fourth is the "Monitoring of Reproductions and Original Works." The digital reproductions fade. The status of decay should be scientifically monitored. This practice leads to the next one.

The fifth is the "Replacement Reproductions." If obvious degradation occurs on digital copy, someone should remanufacture them taking advantage of digital technology. Those who promote the digital replacement should incur the costs.

The sixth is the "Periodical Re-installation of Original Works." Needless to say, the replaced originals should be open to the public at specified time intervals, at least.

If a digital replacement follows these codes of practice, the replacement could be regarded as more reasonable. Needless to say, we should continue more discussions on these points.

In conclusion, the cultural properties should be preserved at the original place as evidence of the long-lasting temple ritual. What religious institutions should try to do is to increase the visitors of the temple and to make them hear the lay sermon of the abbot, who is surely passing the masterpiece from generation to generation. What is important now is that people, who understand cultural properties to belong to us, think over this issue.

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Galina Andreeva
ICOM Russia Board member

Innovative formation of digital presentation of an international show

Inclusion of digital means into permanent and temporary museum displays is now very often. The question is in what scale, power content, and with what task we use it.

Normally it helps the goals of interpretation and education, to widen the context, to give information which might be presented only in this form and so on.

The Decorative arts museum in Moscow initiated a big international show Unrivalled Wedgwood (with 10 Russian and a few UK partners) where originally digital meanswere planned for demonstration of BBC video film about history of Josiah Wedgwood and the brand of his famous company.

A special construction as an organic part of space design was made for the purpose. Thus "digitalization" of exhibition space made design decision more dynamic ,modern interesting.

More than that digital instrument was used to create a privilege for a sponsor the museum was seeking. Economic sanctions made the number of potential sponsors smaller and competition for their loyalty was rather tough and demanded creativity. Fundraising for the project seemed difficult. Necessity is mother of invention.

To match the sponsors expectations and not to betray museum policy and ethics innovative form of mutual digital product as far as content and its physical presentation is concerned was suggested by a team of young artists and proved by museum curators. Its format was successfully approbated while Unrivalled Wedgwood exhibition duration (December 2014-January 2015).