PPP: From Point to Point
or from Production to presentation to preservation of media art
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Lecture at the congress 404 Object Not Found

I am neither an artist nor a curator nor a conservator. My point of view is that of art history that has evolved from a historical awareness of the present. Thus I would like to discuss several aspects of production, presentation and preservation of digital media art in my introductory lecture.

The term media art, similar to video art or net art, is a most impractical construction. Nevertheless, colloquially we usually know pretty well what media art denotes and what is does not. The term generally refers to works of art that employ technical systems such as projectors, screens, monitors, control tools or computers. With the transition from the mechanical to the electronic age, there are now an increasing number of components in use that are organised on a digital basis or that contain digital intermediate stages. When I refer to media art in the following, I am intentionally leaving it open whether these works are produced or presented with the aid of mechanical, analogue equipment or with electronic, digital systems or with a combination of both.

What I am concerned with is the development of a conceptual framework with which we can conceive, explain and understand the relationship between production, presentation and preservation of media art. Within this framework, we can distinguish three logical levels: a general, a specific and a historical one. The general framework attempts to develop an epistemological structure of the relationship of production, presentation and preservation without taking special media or historical genres into account. A specific framework of thought focuses on the different conditions and possibilities of individual media or media genres. A historical framework of thought, in contrast, would relativise and scrutinise the different conditions and possibilities of production, presentation and preservation of media art in terms of their historical ties, circumstances and contexts. Each of these levels attempts to contextualise the framework of thought in a different way. A general theory of media art uses arguments that are in the broadest sense epistemological and ontological. A specific theory of media art uses arguments specific to media, while a historical theory, naturally enough, argues historically.
A media art installation is a complex system of individual components that are connected or that interact with each other. Accordingly, it would seem useful to distinguish between the organisation and the structure of media art installations. You will be able to see why I think this distinction makes sense in the following sections on the presentation and preservation of media art.

What is the fundamental difference between organisation and structure? If you consider a company or authority, for example, this company has a president, a manager and several heads of department, various departments, a staff council, a works council, a driver, and a caretaker. These abstract hierarchies and positions constitute the organisation of the particular company. However, it is equally clear that the aforementioned positions can be filled by different individuals, who then assume the respective function within the organisation. For example, the manager may be male or female, old or young, with such-and-such training, and speaking such-and-such languages. The actual embodiment of a particular organisation at a given point in time and at a given place is the structure of this company. Structure, is embodied organisation.

We can see that the organisation of a company or authority is an abstract, general system that may be embodied in many different ways by actual individuals, objects or spaces. We can, therefore, refer to the concrete embodiment of an organisation. The same may be observed in works of media art. We may refer to the abstract organisation of a work that may be structured or embodied by very concrete and different objects, equipment, machinery or spaces.

As an example, let us consider the video installation by the Finnish artist Eija-Lisa Ahtila "The House Tale", that was on show last year at Kunsthaus Zürich and at the documenta 11.

The specifications regarding structure and presentation are very precise. A brief paragraph concerning theme and subject matter of the installation is followed by a short section on structure and form. These parts describe the intention of the installation. This is followed by specifications regarding the technical equipment in the form of a darkened room, chairs, three projection surfaces, the projectors, three DVD players, and a synchronisation unit. For sound, the work needs an amplifier with Dolby Digital 5.1. audio decoder and 5 - 6 loudspeakers. While the installation instructions explicitly specify the make and model of DVD player (Pioneer DV 7300 pro DVD), the type of projector and synchronisation unit is only suggested in parentheses. So in this case different equipment of the same object class could be used for the installation.
Although the technical instructions for the structure of the work are relatively precise, many
details are not specified. The proportions of the screens should be 3:4, with a minimum width of
3.5 m. The projection surfaces should be either of wood or a suitable projection surface. The
lower edge should be 70 cm from the floor. However, the size and material of the projection sur-
faces is an unspecified variable that may be varied to cater for the specific situation. The projec-
tors and play-back units should be installed above the projection surfaces or suspended from
the ceiling; the instructions note that other solutions are possible.

This organisation of the work, prescribed by the artist in her set-up instructions, may be embo-
died by different concrete equipment, systems and rooms. A description of the actual appearan-
ce of a work at a particular time and place therefore creates a description of its concrete embodi-
ment for a viewer at this place and at this point in time. Hence, media art installations have two
kinds of components: parts that may be replaced and parts that may not. There are, then, varia-
ble parts and invariable parts for which the same detail or object must be chosen in all cases.

An example of this is the "Shadow Puppet and Instructed Mime" installation by Bruce Nauman
from 1990. This work features three wax heads made by Bruce Nauman himself that are suspen-
ded on a wire from a rod. These heads may not be substituted by any other wax heads. They
must be these self-same wax heads made by Nauman himself. On the other hand, for the latest
presentation of the work at Kunstmuseum Basel the artist agreed to replace the original UMatic
players by DVD players and the original 3-tube beamers by new units of the same make.
So, to summarise, media art installations may contain components that may not be replaced by
others, and components that may be replaced by other objects or systems of the same object
class.

So in this respect there is a continuum of possibilities and varieties. At the one end of the scale
not a single component of the work may be replaced or changed without interfering profoundly
with the authenticity of the work and its aesthetic experience. At the other end there are works
whose physical components may be completely changed at any time without affecting the
aesthetic experience of the work in any way. In principle, this includes all hidden components
not visible to the viewer, for example notations, instructions, concepts, etc. The claim to origina-
lity and authenticity of a work is intrinsically linked to the components of a media art installation
that may not be substituted.
II

Let us now proceed to the presentation of media art installations. Unlike sculptures, installations have to be re-staged anew every time they are presented. Because the space is an integral part of the work to be installed, there are two possibilities. Either the installation is adapted to a given space or it brings its own space with it. In this case, the space must be made with the aid of artificial installations that correspond to the artist’s aesthetic specifications. In any case, however, the specific setting in which the work is presented will be different for each new presentation. It will exist at a different time and in a different place and in a different neighbourhood to other works. All these factors impact on a viewer’s aesthetic experience of the work and result in a changed experience. We are familiar with these shifts of meaning, which are in fact shifts of context, from our own experience when we see a media art installation, we are familiar with, again at a later point in time in a different place. Re-presentation and re-encounter, then, are the decisive processes in the presentation of media art.

Then there is another aspect, the difference between notation and performance. Every media art installation consists of a kind of description, installation instructions or technical manual, the equipment to be used, and the concrete embodiment of the work in its presentation. A musical analogy lends itself very well to visualising this double existence as notation and as performance. A piece of classical music such as a cantata by Johann Sebastian Bach consists first of all of a text, representing a notation, that specifies the manner in which the work is to be performed and played. Only if you can read and interpret this notation can you perform the work.

Here we can see the first page of the original score of cantata BWV 79 ”Gott, der Herr, ist Sonn’ und Schild”, composed by Johann Sebastian Bach for Reformation Day 1725 for the service at the Church of St. Thomas in Leipzig. It has nine or seven bars per line. In the next picture we can see the same score in the intaglio edition of the catalogue of Bach’s works from 1868. The lines each have five or seven bars. The last picture shows a current print from 2001 in which each line has four bars. So, the arrangement of the score itself is different in each of these documents. The scores themselves also differ.

If the same cantata is subsequently performed at a given time and place by a certain orchestra and choir, it assumes a visible and audible sensory presence. The abstract textual notation that represents the organisation of the work is radically translated into a site-specific, sensory embodiment that is unique and non-repeatable. If we now listen to the two music samples, we also notice significant differences in mood, the different volume of the instruments, and the singing of the choir.
This analogy also illustrates the fact that the sound of the Bach cantata score hinges quite substantially on the specific instrumentation, orchestra, choir, conductor, and the site at which the cantata is performed and recorded. Every performance of a score is thus an interpretation of the work. However, we may not say which one is "the" interpretation of the cantata but only that there are many different performances. Moreover, it is very probable that different observers will differ in their judgement of a successful, beautiful, faithful or daring interpretation of the score.

The same situation may be observed with the presentation of media art installations. First of all they consist of a more or less precise notation containing exact instructions for installing the work. In addition, the notation for a media art installation is not only on paper but consists of numerous original objects. In the depot it exists only in the form of its non-replaceable original components. All components that are either used in the performance on site such as beamers, projects, loudspeakers, play-back units and control units, along with artificial walls, are not original parts of the work itself. They belong to their environment and determine the specific relationship of structural coupling and operational closure of such a work.

Thus, the abstract organisation of a media art work in the form of its notation or installation instruction also contrasts with a concrete embodiment in the form of its re-presentation at a particular place and time. A presentation is always an interpretation of the work. One particular notation may have many different performances, presentations and interpretations.

This difference between notation and presentation is also found in all digital media. We cannot tell what kind of document is involved merely by examining the binary numeric code. What is required is the so-called meta-code that is stored at the beginning of every binary numeric sequence and that describes its interpretation. Here again, the specific visible or audible embodiment of the data depends on the concrete embodiment of the binary ASCII notation. One and the same binary numeric code may be interpreted as an image, as a sound or as a text document. The software — metaphorically speaking — plays the role of the curator, the symphony orchestra or the actor. Sense and meaning of binary numbers thus depend on the concrete hardware and software that are used to perform the numeric notation at a certain place and at a certain time for a certain viewer. Hardware and software are thus systems of embodiment, performance, presentation and interpretation. They lend the abstract organisation of data a concrete, physical body that exists at a certain time and a certain place for a certain viewer. The same is true of the Internet and net.art works. To be performed or enacted, they also require a certain place at a certain time and a certain viewer to receive these works in a certain environment.
But let us dwell a while on questions and problems of presenting digital media art. Also in terms of the hardware components it becomes clear that every replacement and every substitution of a hardware component will have an effect on the form, the meaning and the aesthetic experience of such a work. Perhaps the most important factor to be taken into consideration is the computer architecture. Clock frequencies, scanning rates and access speeds are responsible for vast differences in performance. The greatest differences are achieved by replacing the operating system. Essentially, Windows, Apple Macintosh and UNIX are the three biggest operating systems that impact fundamentally on a software’s appearance, form and behaviour. In addition there are a wide variety of operating system versions that result in different appearance, functionality and performance. Specifically with net-based media art works, e.g. net.art, Internet connectivity is another crucial factor with regard to the aesthetic experience. It makes a tremendous difference in terms of aesthetic experience whether you view an Internet work through a 36 Kbit modem, a DSL link, or a 300Mbit Ethernet backbone.

III

Let us now consider the preservation of media art installations. There are many different questions involved here that are not always easy to answer. Let us then use a number of adverbial qualifications to cautiously approach the subject. What is to be preserved? Who should preserve it? How should it be preserved? Why should it be preserved? Where should media art be preserved? Let us turn to the first question: what should be preserved of media art? It is obvious that not everything that exists in the world can be preserved for posterity. So it is necessary to choose from the manifold reality of media art in order to draw an exemplary picture of it. The selected objects to be preserved for posterity are not chosen as material pieces of evidence of reality as it was, but rather as examples, documents and exponents of certain social and cultural values. Hence, they do not appear as "things-in-themselves" in the museum context but rather as "things for us", as interfaces to recognition and understanding.

The active selection of works of media art is the first step to preserving them. From the manifold diversity of reality, those objects should be chosen that exhibit a cultural value, whose preservation and memory is in the interest of society. Thus, an active selection is better than a random, contingent choice. Cultural heritage should be consciously and selectively appropriated and thus preserved. Precise guidelines for collecting may be developed for this purpose.
The musealized media art work as a document of past cultural and societal values, like every other object in the world, also testifies to itself. However, this does not suffice as a criterion for collection. What is more, it represents both the diachronic, historical context from whence it comes and the synchronous, contemporary context in which it exists as a museum object of the present. The particular cultural memorial value of a media art installation thus consists in the ability to document both the historical and the contemporary reference to reality for society and to convey it in a vivid manner.

Laszlo Moholy Nagy’s Light-Space Modulator is a very interesting example of this. Moholy Nagy worked on this early example of a kinetic sculpture for almost ten years, from 1920 to 1930. Originally, the modulator was to be illuminated by coloured theatre spotlights in red, green and blue, which would have created a tremendous variety of coloured, moving shadows. In 1930 Moholy-Nagy himself summed up his observations with the Light-Space Modulator in his experimental film "Lichtspiel Schwarz-Weiss-Grau" (Lightplay: Black/White/Gray). I show you a short part of this film.

In 1970, twenty-four years after his death, his widow Lucia Moholy agreed to have a replica made. It was exhibited at the Nationalgalerie of Berlin in 1999/2000 at the exhibition "Das XX. Jahrhundert. Ein Jahrhundert Kunst in Deutschland" (The twentieth century. A century of art in Germany). The replica was illuminated by an unsuitable exhibition spotlight which made the effect very literal and material. The replica could not enchant the viewer or convey the experience of virtual motion and immaterial lightplay.

Hence, when actively selecting a media art work the question must be asked what this work represents, what genre, what typical group or form of work it stands for and refers to. The museum selection should try to find typical media art installations. Thus, the collection should comprise representative examples that could stand for a whole group or particular type of work, to be preserved for posterity. On the other hand, this is currently the common cliché of collecting that leads to a situation in which many collections of contemporary media art all look so similar. Theoretically, this would provide the opportunity for an active guideline for collecting atypical, difficult, non-representative works of a group of works or individual media.

Media art in museums, taken on its own, does not have any social or cultural meaning. It exists in the museum only as a sign for something. It has meaning only when attributed by a viewer and only assumes cultural or social meaning when there is a broad consensus regarding this attribution.
There are always two major influences that determine the social meaning that media art works attain in the museum context. One is the original culture or society that authored and produced the primary object meaning. The other influence is the contemporary culture and society responsible for placing the work into the museum and re-interpreting it thus. Between these two poles, the original context of an object and the current context of interpretation, there spans a wide continuum of possibilities of embodiment, performance, presentation and interpretation of an art work in the museums environment.

The collecting institution has the task of documenting, presenting and preserving the collected works as objects of cultural and social significance. It is therefore not enough to store or exhibit merely the original components, objects and materials. Only by means of detailed documentation of the original context, by transporting and presenting the work as an authentic, representative and typical sign of a certain cultural or social situation, can a contemporary object become a historical, authentic art work preserved for posterity. For example, when visiting Gianfranco Baruchello in Rome [fig. 15] some years ago, I saw a corked-up glass bottle from 1965 into which Marcel Duchamp had blown his cigar smoke and which he then signed and gave to the Italian artist. The mere material of the empty bottle would not have revealed this history without the reported documentation.

In the museum context, however, there is yet another functional group of objects that are neither authentic nor original, but which nevertheless fulfil an important task: the substitutes. A substitute is an object that replaces another in a particular usage. The function of substitutes or substitutions is replacement, use, representation, memory, supplementation or dissemination. Typical substitutes include the copy, the facsimile, the reproduction, the cast, the imitation, the reconstruction, the model or the maquette.

Let us recall the distinction between the organisation and the structure of a media art installation and the statement that such installations may have substitutable components and non-substitutable original components. The relationship between replaceable and non-replaceable components is part of a work’s historical authenticity. Compared to the wealth of an original component, a substitute offers only a very limited repertory of social and cultural meanings. The reason is that the substitute can only create a reference to the original context of a work up to, but not beyond, its own original time. Substitutes, then, actually obstruct any reference to the original context. This crumbling of reference becomes all the more problematic, the more components of a work are substituted over time.
An interesting aspect in this context of preservation and substitution is the re-reading of a very famous text. It is by Walter Benjamin and is entitled: "The Work of Art in the Age of Mechanical Reproduction". I am not aware whether this text, much read by artists and art historians, has also been discussed among restorers. I would like to quote a few passages:

"Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. This unique existence of the work of art determined the history to which it was subject throughout the time of its existence. This includes the changes which it may have suffered in physical condition over the years as well as the various changes in its ownership. ... The whole sphere of authenticity is outside technical - [...] -reproducibility. ... The authenticity of a thing is the essence of all that is transmissible from its beginning, ranging from its substantive duration to its testimony to the history which it has experienced. Since the historical testimony rests on the authenticity, the former, too, is jeopardized by reproduction [...]. And what is really jeopardized when the historical testimony is affected is the authority of the object."

It would be extremely interesting with regard to the problem of production and re-production expounded here to re-read, interpret, and thus update Benjamin’s essay.

Through the mechanism of musealization, media art installations are detached from their original exhibition context and transferred to a permanent institutional context. The link to the original neighbourhood in which a media art installation was first produced and presented is destroyed by the active selection when transferred into the museum. It is therefore necessary to record this original context by means of an additional documentation. The historical importance of things, objects and installations preserved for posterity in museums not only derives from the fact that they are stored, but also that they are scientifically documented. Hence, documenting a work of media art involves recording and reconstructing its past and present relations.

By dint of its historical importance or its socio-cultural values (i.e. its representative nature, typicity or authenticity), a musealized media installation has been taken from an original production and presentation context. A detailed documentation can therefore often present key parts of the non-visible information content of a work. For every art work has an interface at which its visible presence ends and non-visible absences approach the work in the form of references, knowledge or histories. It would be a fallacy to think that the cultural, historical or social importance of media art is limited to the purely visible or aesthetic aspects of a work.
The question of preserving media art comprises two contrary demands or wishes. First stands the wish of the conservator to treat the works in such a way as to preserve them for a theoretically unlimited duration, and second the wish of the artist or the curator to present the works of art as often as possible in public. As everyone can see these wishes are mutually exclusive. They may only be kept in a precarious balance by means of a compromise that needs to be constantly re-negotiated and re-agreed. For the demand that media art should be preserved for posterity requires the intentional isolation of the original work from its current environment and, therefore, from the audience and public presentation.

Two extreme points of view are reflected in the conflict between presentation and preservation, and between curator and conservator. On the one hand there is the aspect of presentation. Linked to this is the gradual wear, damage and possible destruction of the original substance. On the other hand there is the aspect of preservation, with the ideal of preserving the collected work for all time as an authentic record of its historical time. In terms of media art, this conflict specifically implies that the more components of a media installation may be substituted without destroying the organisation of the work, the more frequently a work may be presented and subjected to wear. And, paradoxically, it is thereby nevertheless preserved. The Bach cantata may be performed simultaneously any number of times, at any number of sites without sustaining any damage, wear or destruction. While the original manuscript of the score can safely remain stored in the safe of Berlin State Library.

Here, in this complete separation of a physical original notation and numerous wear-free performances and interpretations, lies perhaps the solution to preserving media art. But what would be the price of ceasing to preserve original materials? Apart from the original score or the original notation there would be no authentic material but only different, contemporary versions, performances, embodiments or presentations. Would this idea really be so unbearable?

References