Media Art needs Histories and Archives: New Perspectives for the (Digital) Humanities

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Abstract: Over the last thirty years Media Art has evolved into a vivid contemporary factor. Digital Art became “the art of our time” but has still not “arrived” in the core cultural institutions of our societies. Although there are well attended festivals worldwide, well funded collaborative projects, numerous artist written articles, discussion forums and emerging database documentation projects, media art is still rarely collected by museums, not included or supported within the mainframe of art history and nearly inaccessible for the non north-western public and their scholars. Thus, we witness the erasure of a significant portion of the cultural memory of our recent history. It is no exaggeration to say we face a total loss of digital contemporary art, and works originating approximately 10 years ago can most likely not be shown anymore. The primary question is: what can we learn from other fields to develop a strategy to solve the problems of Media Art and its research, to answer the challenges Image Science is facing today in the framework of the Digital Humanities? This question opens up a perspective to overcome the typical placement of Media Arts in an academic ghetto. The development of the field is supported in an increasingly enduring manner by new scientific instruments like online image and text archives, which attempt to document collectively the art and theory production of the last decades. By discussing examples from a variety of projects from the natural sciences and the humanities, this article tries to demonstrate the strategic importance of these collective projects, especially in their growing importance for the Humanities.

Keywords: Media Art, Media Art Education, Media Art Research

MEDIA ART’S REVOLUTION?

Media art is the art form using the technologies that change our societies fundamentally. Globalization, information society, social networks, Web 2.0 - the list could be far longer – are enabled by digital technologies. Although not all Media Art comments on the social, cultural and political conditions, it is nevertheless the art form with the most comprehensive potential for cultural necessity. We know that media artists today are shaping highly disparate areas, like time-based installation art, telepresence art, genetic and bio art, robotics, Net Art, and space art; experimenting with nanotechnology, artificial or A-life art; creating virtual agents and avatars, mixed realities, and database-supported art. These artworks both represent and reflect the revolutionary development that the image has undergone over the past years (Fig. 1).

Currently, we are witnessing the transformation of the image into a computer-generated, virtual, and spatial entity that is seemingly capable of changing “autonomously” and representing a life-like, visual-sensory sphere. Interactive media are changing our perception and concept of the image in the direction of a space for multi-sensory experience with a temporal dimension open to evolutionary change and gaming. Images appear, whose condition is defined by the functions of display and interface, images serve as projection surface for interfaced information, images enable to move us telematically in immersive scenarios, and reversely images allow us have an affect into the distance.

Contemporary media art installations include: Digital stills and video, 3-D objects and animation, digital texts and music, sound-objects, noises and textures, whereas different meanings may be inscribed and combined with each other. Meaning develops by chance, experiment and well directed strategy. The active spirit, the combining user, becomes the new source of art and meaning if you leave enough degrees of freedom to him to develop to the actual artist. Dynamic he is involved to navigation, interpretation, transfer, contextualisation or production of image and sound which may come into being by his participation. Memory, thoughts and experiments with accident may respond to a fertile connection. Increasingly the art system transforms to an organism with slices which organize themselves while the user has a chance to experience and produce combinative meaning.

Media Art makes use of the latest image techniques and strategies for aesthetic and reflective means: With Johanna and Florian Dombois’ Fidelio, 21st Century, named after Beethoven’s “Fidelio,” for the first time a classical opera was directed as an interactive virtual 3D experience. The protagonists embody music, follow the dramaturgic direction and react to the interventions of the visitors (Fig. 2). Artist-scientists, such as Christa Sommerer and Berndt Lintermann, have begun to simulate processes of life: evolution, breeding, and natural selection have become methods for creating artworks.
Eduardo Kac’s installation Genesis raises open-ended questions about the complicated ethical issues involved in the manipulation of DNA.¹

In *Murmuring Fields*, Monika Fleischmann and Wolfgang Strauss create a virtual space of philosophical thought, where statements by Flusser, Virilio, Minsky, and Weizenbaum are stored. The work creates a new type of a “Denkraum” (Thinking-Space) — a sphere of thought.” Constructed on a database, the interactive installation *Ultima Ratio*² by Daniela Plewe offers a first glimpse of a future system for interactive theatre. Intellectually challenging, her concept allows the spectator to solve an open conflict at a high level of abstraction and combination of different dramatic motifs. Daniela Plewe’s goal is to generate a visual language for argument and debate.

Diana Domingues, one of the most known artists in the Americas, created with *TRANS E: My Body, My Blood* for more than a decade poetical, transitoric and immersive experiences for body and senses: Again and again her artistic will "Kunstwollen" pushed the transposition of the technological border by developing innovative image procedures. With this, she questions the growing aesthetics of medical and scientific image worlds, using them in her work strategically.

**Media Art and the Humanities**

Typical for media revolutions is, they are again and again platonistic or even apocalyptic commentaries. Their positions often exhibit an anti-technology thrust and have developed partly from Critical Theory and Post-Structuralism. At the other end of the spectrum are utopian-futurist prophesies. Variations on ideas like: “now we will be able to touch with our bodies into the far distance,” and “now the illusion will become total” on the side of the utopians have collided with fears like “our perception will suffer,” or “our culture will be destroyed,” and even “we will loose our bodies.” This discourse mechanism, provoked by media revolutions, comes again and again. Let’s remember the discussion the discussion around VR in the 1990s, the cinema debate in the early 20th century, the Panorama in the 18th century, and so forth. Both poles are either positive or negative teleological models, which follow largely the pattern of discourse surrounding earlier media revolutions. But analogies or fundamental innovations in contemporary phenomena can only be discerned through historical comparison.

Seen in this light we cannot consider the protagonists of this latest media revolution debate with their projections and dark fantasies as contributors to a serious discussion anymore, but rather as meaningful sources of the thinking from their time. In addition, it must to be assumed that not only analogies but also fundamental innovations of current phenomena become clearly recognizable only through historical comparison. “Depth of field” analyses of images can play an important role in facilitating our political and aesthetic analysis of the present. Only if we are aware of our media history with its myths and utopias, its interests and power games, we will be able to make decisions that go beyond the heritage of ancient believers in images. Beyond that, by focusing on recent art against the backdrop of historic developments, it is possible to better analyze what is really new in media art and to better understand our present and our goals in a period where the pace appears to get faster and faster — that is the epistemological thesis. It is necessary to take stock soberly in the realm of art and media history.

It is essential to create an understanding that the present image revolution, which indeed uses new technologies and has also developed a large number of so far unknown visual expressions, cannot be conceived of without our image history. Art History and Media Studies help understand the function of today’s image worlds in their importance for building and forming societies. With the history of illusion and immersion, the history of artificial life or the tradition of telepresence, Art History offers sub-histories of the present image revolutions. Art History might be considered as a reservoir in which contemporary processes are embedded, like an anthropologic narration on the one hand, but as well the political battleground where the clash of images is analyzed on the other hand. Furthermore, its methods may strengthen our political-aesthetic analysis of the present through image analyses. Not left to last, the development and significance of new media should be illuminated since the first utopian expressions of a new media often take place in artworks.

The evolution of media art has a long history and now a new technological variety has appeared. However, this art cannot be fully understood without its history. So the Database for Virtual Art, Banff New Media Institute, and Leonardo produced the first international MediaArtHistory conference. Held at The Banff Centre, Refresh! represented and addressed the wide array of 19 disciplines involved in the emerging field of Media Art²⁶ Through the success of Replace (2007) at Berlin’s House of World Cultures, (the Department for Image Science hosted the brainstorm conference in...

¹ At the center of the installation is the so called “artists gene”, which Kac created by translating a sentence from Genesis in the Bible into Morse code and the converting of the Morse code into DNA base pairs open for manipulation by the visitors.
Göttweig 2006), Re:live was planned for Melbourne 2009, and an established conference series was founded with Re:2011 is on the way\(^\text{\textsuperscript{vi}}\). Re:fresh! was not planned to create a new canon, but to create a space for the many-voiced chorus of the involved approaches. The subtitle HistorI\(E\)S opened up the thinking space to include approaches from other disciplines beside ‘art history’. Re:fresh, Re:place and Re:live were organized via the MediaArtHistory.org platform, which is now developing into a scholarly archive for this multi-faceted field, ranging from art history, to media, film, cultural studies, computer science, psychology etc. Meanwhile almost 1000 peer-reviewed applications have been coordinated on MediaArtHistory.org.\(^\text{\textsuperscript{x}}\) With the 19 disciplines represented at Re:fresh! serving as its base, MAH.org is evolving with future conferences under the guidance of an advisory board, among them: Sean Cubitt, Paul Thomas, Douglas Kahn, Martin Kemp, Timothy Lenoir or Machiko Kusahara.

**IMAGE SCIENCE: FROM THE IMAGE ATLAS TO THE VIRTUAL MUSEUM**

The integration and comparison of a “new” image form within image history is not a new method, there were different historic forerunners: Inspired by Darwin’s work “The Expression of the Emotions” Aby Warburg began a project of an art-historical psychology of human expression. His famous *Mnemosyne* image atlas from 1929 tracks image citations of individual poses and forms across media – and most significantly, independent from the level of art niveau or genre. He redefined art history as medial bridge building – for example including many forms of images. Warburg argued that art history could fulfill its responsibility only by including most forms of images. The atlas, which has survived only as “photographed clusters”, is fundamentally an attempt to combine the philosophical with the image-historical approach and Warburg arranged his visual material by thematic areas.

Let’s remember that it was art historians dealing with artifacts in a non-hierarchical manner who founded the first arts and crafts museums for the artifacts that were not counted as art. Art historians also founded the first photographic collections at the end of the 19\(^\text{th}\) century containing besides art photography, also images of everyday life. Alois Riegl examined the popular culture of late Roman art industries and Walter Benjamin was drawn to Aby Warburg’s cultural studies library, whose ground floor was completely dedicated to the phenomena of the image. Warburg, who considered himself an image scientist, reflected upon the image propaganda of World War I through examination of the image wars during the reformation. Warburg intended to develop art history into a “laboratory of the cultural studies of image history”, that would widen its field to “images (…) in the broadest sense”. (“Bilder…im weitesten Sinn”).

Let us remember too, that Film Studies was started by art historians: An initiative by Alfred Barr and Erwin Panofsky founded the enormous *Film Library* at the New York MOMA, called by its contemporaries the “Vatican of Film”. This way film research already in the 1930s possessed a dominant image science approach and cultivated it further. This initiative allowed the large scale comparison of film for the first time. The same spirit concerned with new investments for infrastructures to provide for and analyze the Media Art of our time is needed in the Digital Humanities.

**Art History – Visual Studies – Image Science**

We know that for years academic discussions and battles have been raging around the fields of images and the visual and perception of them. Specific to segments of the English Language Humanities there continues to be a not very fruitful and ultimately simple polarization between Art History, which partly is considered conservative, formalistic, aesthetic, sometimes even elitist and male-dominant and the Visual Cultural Studies\(^\text{\textsuperscript{v}}\), which emerged to a large extend from Literature Studies. Drawing upon a multi-cultural and post-colonial\(^\text{\textsuperscript{xiv}}\) etiquette, Visual Cultural Studies attempts to research the visual within approaches of societal and identity politics.\(^\text{\textsuperscript{xi}}\) Within the traditionally strong German Language Humanities we perceive a two folded development: Art History departments increasingly rename themselves as Institutes for Art and Image History, allowing Art History as the oldest scholarly endeavor dealing with images to avoid tendencies of separation; and at the same time to renew the interdisciplinarity that bloomed in German Art and Image History before National Socialism with representatives like Warburg, Panofsky, Kris or Benjamin.

Image Science does not imply that the experimental, reflective, and utopian spaces provided by art are to be abandoned. On the contrary, within these expanded frontiers the underlying and fundamental inspiration that art has provided for technology and media is revealed with even greater clarity. With strong representation of art history\(^\text{\textsuperscript{xv}}\), the project of Image Science expands towards an interdisciplinary development that connects neuroscience\(^\text{\textsuperscript{xx}}\), psychology\(^\text{\textsuperscript{xxi}}\), philosophy\(^\text{\textsuperscript{xxii}}\), communication studies\(^\text{\textsuperscript{xxiii}}\), emotions research\(^\text{\textsuperscript{xxiv}}\), and other scientific disciplines.\(^\text{\textsuperscript{xxv}}\) Recently, interdisciplinary scientific clusters have been built around the subject of the image that lie increasingly perpendicular to the human, natural and technical sciences, which have succeeded in profiting from the paradigm “Image” as well as from an increased disposition towards interdisciplinarity. More and more, tendencies appear that require a farewell or at least a
new evaluation of the relation Word / Image in favor of the latter. Already in 1993 Martin Jay triggered with his work “Downcast Eyes” xxiv a criticism of the “sight-hostility” of language-fixated French Philosophy. Contemporarily this critique unfolds in terms like “Image Immersion” (Oliver Grau, 1998 and 2001)xvii; “Power of the Iconic” (Gottfried Boehm 2004)xviii; “Picture Act” (Horst Bredekamp 2005).xix The central thesis is that in every image cognition, the eyes cannot be separated as the sole perception organs, more so it is that the entire body perceives. xxv

Preconditions

In contrast to other disciplines concerned with images, ones that not infrequently try to explain images as isolated phenomena springing from themselves, the primary strength of art history is its critical potential to define images in their historical dimension. Exactly because art history emphasizes a rigorous historicization and the practice of a critical power of reflection can it produce its most natural possible contributions to the discussion around images. Scientific work with images is based on three pre-conditions: 1. definition of the object, 2. building of an image archive and 3. familiarity with a large quantity of images. This enables and defines the understanding that images follow a diachronic logic; without this historic base, image science remains superfluous and cannot realize its full potential. If those pre-conditions are fulfilled, image science may be practiced within any field - medicine, natural science, history of collections, design or art technique. If these requirements are not fulfilled, we see merely a form of aesthetics. All of those approaches of comparison are based on the insight that images act diachronic, within a historical evolution and never function simply as an act and without reference. This diachronic dynamic of image generations is increasingly interwoven with understanding the images alongside those of their time, the synchronic approach.

Image Science, or Bildwissenschaft, now allows us to write the history of the evolution of the visual media, from peepshow to panorama, anamorphosis, stereoscope, magic lantern, phantasmagoria, films with odors and colors, cinéorama, IMAX and the virtual image spaces of computers: The medium of the phantasmagoria for example is part of the history of immersion, a recently recognized phenomenon that can be traced through almost the entire history of art in the West, as I have documented in a previous bookxix: History has shown that there is permanent cross-fertilization between large-scale spaces of illusion that fully integrate the human body (360° frescoes, the panorama, Stereopticon, Cinéorama, IMAX cinemas, or the CAVES (Fig. 4) and small-scale images positioned immediately in front of the eyes (peepshows of the 17th century, stereoscopes, stereoscopic television, Sensorama, or HMDs). Evidently among the latest examples of this development are computer games like Grand Theft Auto, which mix the emotional involvement of the story with immersive graphics. It is, let me underscore, an evolution with breaks and detours; however, all its stages are distinguished by a relationship between art, science and technology. Image science is an open field that engages equally with what lies between the images.

André Malreaux, the adventurer and former French minister of culture, described after the war the field opened up by photographic reproductions as museé imaginare, because it goes beyond the museum and can contain works of art that are bound to architecture, like frescoes. The famous picture at the introduction of the book shows Malreaux in an archival grid compiling, side-by-side, the most diverse objects from various epochs and cultures. Being recontextualized like this, a crucifix becomes a sculpture and a sacred effigy for example a statue. xxv We may say, the museé imaginare is both product and symptom of globalization. And now as a key project for the Digital Humanities we are witnessing the birth of the Virtual Museum.

The Virtual Museum

The Virtual Museum represents an extension of traditional museum forms. It is a museum “without walls,” a space of living, distributed information, database driven and network oriented. It is a space where artists and scholars can intervene and foremost it is museum where documentation and preservation of media art is supported and international networks can develop. Art and the connected information are presented on new forms of displays, via new interfaces within the traditional museum cube, but also via networks beyond the walls to a larger public. The Virtual Museum offers a multimedia data flow in real time that continuously reconfigures over time, and on the other hand it preserves the physical elements media art installations contain.

COLLECTIVE STRATEGIES AND NEW TOOLS FOR THE HUMANITIES

In the first generation of Digital Humanitiesxxvi, data was everything. Massive amounts of data were archived, searched and combined with other databases in the nineties for interoperable searches yielding a complexity and realization at a previously inconceivable rate. Yet the amount of material to be digitized is so vast that, in real terms, we are only at the tip of the data iceberg. In non-textual fields, such as visual arts, music, performance, media studies, we are “at the tip of
the tip”. Now remember that digital art has still not “arrived” in our societies; no matter how well-attended digital art festivals are or how many scientific articles the artists have published. Due to the fact that this art depends entirely on digital storage methods, which are in a constant state of change and development, it is severely at risk. Many art works that are not even ten years old can no longer be shown and it is no exaggeration to say that 30 years of art threatens to be lost for the next generations.

During the last decades the natural sciences started to address new research goals through large collective projects, in Astronomy for example the Virtual Observatory compiles centuries worth of celestial observations; global warming is better understood with projects like the Millennium Ecosystem Assignment, at a detail never before calculable, evaluating 24 separate life systems and the global change they are part of. The rapid expansion of computational power has effected biology, and the Human Genome Project became already legend. So far, unknown collective structures give answers to complex problems. For the field of Media Art research and the Digital Humanities in general an appropriate approach is needed to achieve equivalent goals.

Comparable with natural sciences, digital media and new opportunities of networked research catapult the cultural sciences within reach of new and essential research, like appropriate documentation and preservation of media art, or even better, an entire history of visual media and their human cognition by means of thousands of sources. These themes express in regard to image revolution current key questions. In order to push humanities and cultural sciences in their development, it is necessary to use the new technologies globally. Timelines and new methods of visualization belong to the history of invention of visual techniques, image content and especially their reception in the form of Oral History in popular and high culture, in the western as well as in non-western cultures. So we live in an exciting time for Image Science and the Humanities! The credo is: not to give up the established individual research, but to complete it in a new way through collective, net-based working methods which allow us to deal with explosive questions in the field of humanities and cultural sciences.

a. The Database of Virtual Art

Begun as a counterpart to the systematic analysis of the triad of artist, art work and beholder in digital art under the title Virtual Art, we originated the first documentation project, the Database of Virtual Art, which celebrated it’s tenth anniversary last year. As a pioneer, supported by the German Research Foundation, it has been documenting in cooperation with renowned media artists, researchers and institutions the last decades of digital installation art as a collective project. We know that today’s digital artworks are processual, ephemeral, interactive, multimedial, and fundamentally context dependent. Because of their completely different structure and nature they require a modified, we called it some years ago, an “expanded concept of documentation”.

As probably the most complex resource available online: hundreds of leading artists are represented with several thousand documents and their technical data, more than 2000 listed articles and a survey of 750 institutions of media art, the database became a platform for information and communication. The Database runs completely on open-source technology and since the artists are members it avoids copyright problems. Beside this group there are theorists and Media Art historians totaling at this point an additional more than 300 contributors - therefore we say the Database of Virtual Art is a/the collective project.

The system allows artists and specialists to upload their information and the DVA relies on its advisory board. Beside that, the policy, whether an artist is qualified to become a member is the number of exhibitions, publications, awards and public presentations; high importance is ascribed also to artistic inventions like innovative interfaces, displays or software. Over the last 10 years about 5000 artists were evaluated from which 500 fulfilled the criteria to become member of the DVA.

b. “Bridging the gap:” New developments in thesaurus research

And now together with probably one of the most important unknown art collections, the Göttweig print collection, representing 30 thousand prints emphasizing Renaissance and Baroque works and a library of 150.000 volumes going back to the 9th century like the Sankt Gallen Codex, the Database of Virtual Art strives to achieve the goal of a deeper Media Art historical cross examination. Just as the Media Art History conference series aims to bridge a gap, the combination of the two and other databases hopes to enable further historic references and impulses, in the manner,
Siegfried Zielinski calls “The Deep Time of Media”. The Göttweig collection also contains proofs of the history of optical image media (Fig. 6), intercultural concepts, caricatures, illustrations of landscapes in panoramic illustrations. For the future this will provide resources for a broader analysis of media art.

Keywording is bridge building! The hierarchical Thesaurus of the DVA constitutes a new approach to systemize the field of Digital Art. It was built on art historical thesauri from institutions like Getty, Warburg Institute or festival categorizations and discussions with artists, so that it supports historical comparisons. Out of the Getty Arts & Architecture Thesaurus from the subject catalogue of the Warburg Library in London, keywords were selected which also have relevance in media art. On the other side, out of the most common used terms from media festivals like Ars Electronica, DEAF, Transmediale new keywords were selected. Important innovations such as “interface” or “genetic art” have been considered as well as keywords that play a role in traditional arts such as “body” or “landscape” and thus have a bridge-building function. It was important to limit the number to 350 words so that members of the database can assign use and keywords their works without long studies of the index.

The categories led to natural overlapping, so that the hybrid quality of the artworks can be captured through clustering. Important was the thematic usability for the humanities – it was necessary to avoid developing something only new, separated from our cultural history. It was important to compile a thesaurus that connects cultural history with media art and does not isolate them from another. As expected, the material has produced a multitude of fractures and discontinuities, which we make visible in the terminology of the database.

One of the goals for the future is to document the works within a context of complex information and, at the same time, to allow users to find individual details quickly. In addition to statistically quantifiable analyses and technical documentation, Databases should also present personal connections and affiliations and funding information, with the idea to reveal interests and dependence. The term “database” may be misleading: like Warburg’s image atlas which supports key icons that define the extent of problems and enables possibilities for comparison, databases should possess an experimental character in order to find thematical clusters within media art. And yet, the tools only hold the data - the quality of the analysis continues to rely on thoughtful developments in the Digital Humanities. In addition to searches of themes, Media Art documentation should also admit questions of gender, track the movement of technical staff from lab to lab, technical inventions pertaining to art, the destinations of public and private funds allocated to research, and, through the thematic index, show reminiscences of virtual/immersive art in the forms of its predecessors, for example, the panorama. In this way, documentation changes from a one-way archiving of key data to a proactive process of knowledge transfer.

c. Media Art Education

Bridging the gap for Media Art means also the use of new telematic forms of education, which enlarge the audience now being able to intervene interactively from other continents, as we practice with the archived Danube Telelectures. The future of Media Art within the Digital Humanities requires the further establishment of new curricula, as we developed with the first international Master of Arts in MediaArtHistories, with faculty members like Erkki Huhtamo, Lev Manovich, Christiane Paul, Gerfried Stocker and Sean Cubitt, which deals also with the practice and expertise in Curation, Collecting, Preserving and Archiving of Media Arts. The necessity for an international program capable of accommodating future scholars coming from diverse backgrounds and all continents was answered by a low-residency model allowing professionals to participate in the advanced program of study parallel to ongoing employment and activities.

It was necessary for the needs of the field to create a course specific to MediaArtHistories with experts that normal universities could not gather all in one institution in order to pave the way towards development of innovative future educational strategies in the field. Giving an overview of the relevant approaches and on the other hand a specialization via project and masters theses, the Masters of Arts provides an initiation for fresh students and depth for seasoned students into this emergent field.

THE PROBLEM OF MEDIA ART DOCUMENTATION TODAY – FUTURE NEEDS

Since the foundation of the Database of Virtual Art a number of online archives for digitization and documentation arose: Langlois Foundation in Montreal, Netzspannung at the Frauenhofer Institut or MedienKunstNetz at ZKM – all these projects were terminated, their funding expired, or they lost key researchers like V2 in Rotterdam. Even the
Boltzmann Institut for Media Art Research in Linz, faced its close-down after evaluation. In this way the originated scientific archives which more and more often represent the only remaining image source of the works, do not only lose step by step their significance for research and preservation but in the meantime partly disappear from the web. Not only the media art itself, but also its documentation fades that future generations will not be able to get an idea of the past and our time. To put it another way, till now no sustainable strategy exits. What we need is a concentrated and compact expansion of ability. There is/was increasing collaboration with these projects in a variety of areas and in changing coalitions. But let me add some remarks: In the field of documentation projects - real preservation projects do not exist yet - the focus is still directed too much towards particularisation, instead of concentrating forces, what is an essential strategy in most other fields.

A new structure for Media Art research

Especially the university based research projects and partly also the ones which are linked to museums have developed expertise that needs to be included in cultural circulation, not only in order to pass it on to future generations of scientists and archivists but also to give it a chance to flow into future university education in the fields of art, engineering, and media history. Clearly, the goal must be to develop a policy and strategy for collecting the art of our latest history under the umbrella of a strong, let’s say “Library of Congress like” institution. Ultimately, however, this can only be organized by a network of artists, computer and science centers, galleries, technology producers and museums. Those projects which collected culturally important documents in the past and which often expired, were not further supported or even lost their base must be supported and reanimated. They should be organized like a corona around an institution which receives the duty of documentation and may be even the collection of contemporary media art, such an institution could be in the USA, the Library of Congress; in Europe, besides the new European digital libraries database Europeana, it could be the Bibliothque National, the British Library, the V&A or in Germany beside the ZKM for example the Deutsche Bibliothek. Interestingly the libraries show increasingly interest to archive multimedia works and their documentation; however, the usually complex cultural and technical know how is lacking in order to preserve principal works of the most important media art genres of the last decades. A structure which updates, extends and contextualizes research – whether in historical or contemporary contexts is required. The funding and support infrastructures which have been built in the end of the last century are not suitable for scientific and cultural tasks in the Humanities of the 21st Century.

One key issue for the digital humanities would be to identify all the existing databases, also those smaller ones in countries where you do not search first. In astronomy the funding agencies developed and modernized their systems towards sustainability, which is needed as well in the humanities: The virtual observatory infrastructure is funded on an ongoing basis and there is international coordination between a dozen or so countries that produce astronomical data. What we need and we could archive in the near future is an electronic “Encyclopedia of Visual Media” (EVM) created from a network of databases and the thousands of existing websites. Based on scholarly criteria of every known image medium in history described and on the basis of original sources, it should precisely capture how our forerunners experienced them. The EVM could allow scholars from all over the world to research their image media and discover further unknown treasures of human image making.

We know that a central problem of current cultural policy stems from serious lack of knowledge about the origins of the audiovisual media and this stands in complete contradistinction to current demands for more media and image competence. Considering the current upheavals and innovations in the media sector, where the societal impact and consequences cannot yet be predicted, the problem is acute. Social media competence, which goes beyond mere technical skills, is difficult to acquire if the area of historic media experience is excluded.

What is urgently needed is the establishment of an appropriate structure to preserve at least the usual 1 – 6% of present media art production, the best works. This important step is still missing for media art from the first two generations. The faster this essential modification to our cultural heritage record will be carried out, the smaller the gap in the cultural memory; shedding light on the dark years, which started about 1960 and lasts till now. The hybrid character of media art requires a shift of the paradigm towards an orientation of process and context recording, which includes more and more the capture of the audience experience.

Our hope for the future is that we can bring together the expertise of the most important institutions in order to form an up to date overview of the whole field, to provide the necessary information for new preservation programs within the museum field, new university teaching programs for a better training of the next generation of historians, curators, restorers, engineers and others involved in the preservation and new form of open access to media art. Just as research in the natural sciences has long recognized team efforts, a similar emphasis on collaborative research should make it’s
way into the thinking of the humanities.

REFERENCES

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7 Some of the conference results can be found in the anthology MediaArtHistories by Oliver Grau (Ed.). (Cambridge Mass.. MIT-Press 2007); recently: Andreas Broeckmann and Gunalan Nadarajan (Eds.): Place Studies in Art, Media, Science and Technology: Historical Investigations on the Sites and the Migration of Knowledge (Weimar: Verlag und Datenbank für Geisteswissenschaften, 2009).

8 See: www.mediaarthistory.org

9 The content development of Re:fresh! was a highly collective process. It involved three producing partners, a large advisory board, 2 chairs for each session, call and review for papers, a planning meeting in 2004, keynotes, poster session and the development of application content over the time of two and a half years. Before Banff could host the conference, this was organised by the team of the Database for Virtual (DVA).

The international planning meeting at Vigni/Italy in 2004 (hosted by the Database of Virtual Art) agreed that it is of importance to bring media art history closer to the mainstream of art history cultivating a proximity to film- cultural and media studies, computer science, but also philosophy and other sciences. After nomination and acceptance of the chairs, coordinated call for papers, review by the program committee and selection of speakers by the chairs organized and funded by the Database of Virtual Art - the conference brought together colleagues from the following fields: invited speakers, (based on self description from bio) HISTORIES: Art History = 20; Media Science = 17; History of Science = 7, History of Ideas = 1; History of Technology = 1; ARTISTS/CURATORS: Artists/Research = 25; Curators = 10; SOCIAL SCIENCES: Communication/Semiotics = 6; Aesthetics/Philosophy = 5, Social History = 2; Political Science = 2; Woman Studies = 2, Theological Studies = 1; OTHER CULTURAL STUDIES: Film Studies = 3; Literature Studies = 3; Sound Studies = 3, Theatre Studies = 2; Performance Studies = 1; Architecture Studies = 1, Computer Science = 2; Astronomy 1


xi Simon Faulkner and Anandi Ramamurthy (Eds.): Visual Culture and Decolonisation in Britain (Aldershot (Ashgate) 2006).


xv Klaus Sachs-Hombach (Ed.): Bildwissenschaft (Frankfurt am Main: Suhrkamp, 2005).

xvi Marlon G. Müller: Grundlagen der visuellen Kommunikation (Konstanz: UVK 2003).

Albeit concentrated on the gravitational field of art history, the courses in Image Science at the Danube University in Göttweig are interdisciplinary aligned. www.donau-uni.ac.at/dis.


A first glimpse of his theory of “picture act” Horst Bredekamp presented during his Gadamer-Lecture series at the University of Heidelberg in 2005. A research project “Picture Act Research: History, Technique and Theory of the Picture Act” was approved by the German Research Foundation in 2008 and supported with 2.3 Mio Euro.

Hans Belting emphasised in 2001 that we, as living media, are the “Location of the Images” and not the apparatuses, see: Hans Belting: Bild-Anthropologie. Entwürfe für eine Bildwissenschaft (Munich: Fink 2001).


André Malraux : Psychologie de l'Art : Le Musée imaginaire - La Création artistique - La Monnaie de l'absolu, 1947.

For the discussion and development of the field see the Journal Digital Humanities Quarterly.

The International Virtual Observatory Alliance (IVOA) was formed in June 2002 with a mission to “facilitate the coordination and collaboration necessary for the development and deployment of the tools, systems and organizational structures necessary to enable the international utilization of astronomical archives as an integrated and interoperating virtual observatory.” The IVOA now comprises 17 international VO projects.

The Millennium Ecosystem Assessment assessed the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,360 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition and trends in the world’s ecosystems and the services they provide, as well as the scientific basis for action to conserve and use them sustainably.

The Human Genome Project was an international scientific research project with a primary goal to determine the sequence of chemical base pairs which make up DNA and to identify and map the approximately 20,000-25,000 genes of the human genome from both a physical and functional standpoint. The mega project started 1990 with the collective work of more than 1000 researchers in 40 countries, the plan was to achieve the goal in 2010. A working draft of the genome was released in 2000 and a complete one in 2003. See: IHGSC (2004). “Finishing the euchromatic sequence of the human genome”, in: Nature 431: 931–945. doi:10.1038/nature03001


www.gssg.at. The digitization of the collection is a project developed by the Department of Image Science at Danube University and conducted in cooperation with the Göttweig Monastery. The collection of prints at Göttweig Monastery, which itself was founded in 1083, is based on acquisitions made by various monks since the 15th century. The first report of graphic art kept in the monastery dates back to 1621, with an archive record that mentions a number of “tablets of copper engraving” (“Täfelein von Kupferstich”). The actual act of founding the collection is attributed to Abbot Gottfried Bessel whose systematic purchases in Austria and from abroad added remarkably a total of 20,000 pieces to the collection in a very short span of time! Reaching to the present day, the print collection at Göttweig Monastery has grown to be the largest private collection of historical graphic art in Austria with more than 30,000 prints. The Department of Image Science’s digitization center at the Göttweig Monastery uses technology to scan paintings and prints from the collection (up to 72 million pixels).


The Danube Telelectures from the MUMOK in Vienna contained debates between Sarat Maharaj and Machiko Kusahara: Does the West still exist?, Gunalan Nadarajan and Jens Hauger: Pygmalion Tendencies: Biart and its Precursors; Christiane Paul and Paul Sermon: Myths of Immateriality: Curating and Archiving Media Art as like Lev Manovich and Sean Cubitt: Remixing Cinema: Future and Past of Moving Images. See: www.donau-uni.ac.at/telelectures

Also compare the OASIS/ (Open Archiving System with Internet Sharing (2004-2007) of the GAMA project (2008-2009), a gateway, a metadatabase, which is not connected with the Europeana. “The issue of generally accepted machine-readable descriptive languages in these semantic and metadata approaches and the long-term interoperability of databases have lead to an emphasis on questions concerning the openness of the sources and the source codes.” Rolf Wolfsberger. On the Couch – Capturing Audience Experience, Master Thesis, Danube University 2009.


The loss might be even more radical and total than that of the Panorama, the mass media of the 19th century. Almost 20 Panoramas survived which is more than 3% of the ever existing 360° image worlds – we should be glad if at all 3% of the most important exhibited media art works.

See Grau 2003, recently: Lizzie Muller: Towards an Oral History of New Media Art (Montreal 2008).