WIDOK.

WRO MEDIA ART READER

FROM ABSOLUTE CINEMA TO FUTURE FILM

WRO ART CENTER

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Materials from the history of experiment in the moving picture art

Edited by
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Online English Edition
Original source materials used for the revised Polish
publication of WIDOK. WRO MEDIA ART READER

The paper edition of WIDOK including DVD is available
for purchase at the publication's website

This document is available freely at
www.wrocenter.pl/widok

PDF revision 1.0
30 January 2009

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Cover picture: a still from *Pharmacy* (Bruce Checefsky, 2001), a reconstruction of film

by Franciszka and Stefan Themerson *Apteka* (1930).

CONTENTS

INTRODUCTION

This book, *From Absolute Cinema to Future Film. Materials from the history of experiment in the moving picture art*, initiates a new series of publications entitled *Widok. WRO Media Art Reader*. Its subsequent topical issues will be devoted to the presentation of materials about theory, esthetics and history of new media art.

Widok (Polish for "the view") means a particular perspective, but it is also the name of the street in Wrocław where WRO Art Center has opened in 2008. In accordance with its name, the series presents an insight into cultural and artistic phenomena from the realm of new media, as seen through the collection and archives of the International Media Art Biennale WRO. It is thus a view shaped by the works, topics and personalities throughout 20 years of WRO activities, presenting the nexus of art, technology and social phenomena emerging from the shifting domains of artistic creation and media.

The topic-oriented publications will include texts by the leading experts and their presentations recorded at WRO Biennale as well as DVDs containing rich selection of films and video materials. The focus of the present issue, *From Absolute Cinema to Future Film,* are the unusual artistic practices constructed apart from the movie industry cinematography.

The first part of this issue contains texts proposing a wider perspective on the changes undergone by moving picture art, its basic interfaces, and the evolution of screens, and an examination of tape as an art medium.

The Waning of the Tape Medium by Piotr Krajewski is a reflection on the role of tape in moving picture art, the standard audio-visual medium of the most of 20th century. The remarks have been made in the time of transition between analog, linear and digital media, undergone by both artistic avant-garde and mainstream culture in the last years of the 20th century.

The two following historical essays by Erkki Huhtamo, professor at UCLA, are devoted to tape and screen. Similarly to *The Waning of the Tape Medium, Play! Stop! Forward! Rewind! Reflections on Tape as a Medium* was published on the occasion of WRO 99 Biennale – *The Power of Tape*. Both texts were published in the Biennale's catalog. *Elements of Screenology*, was published two years later, in the WRO 01 Biennale – *Screens* catalog. As opposed to tape, which was rapidly losing its dominance, this was the time of proliferation of screens. The popularization of small portable monitors, ubiquitous companions in the form of cellular phones and laptops, as well as large-scale urban space displays, initiated a true outburst of electronic image, both in private and public spaces. The symposium accompanying the 2001 Biennale was also devoted to this topic. Erkki Huhtamo's texts have been reprinted in various publications, and anticipated his further writings on the topic.

A spacious text by Ryszard Kluszczyński, Poland's major authority on multimedia art, *From Film to Interactive Art. Transformations in Media Arts*, provides a closure to the first part of this issue. Unlike the former texts,

reprinted in virtually unaltered historical form, the article by prof. Kluszczyń-
ski is a recently revisited reflection upon the issues dealt with in his essay
Kultura audiowizualna wobec interaktywnego wyzwania [Audiovisual culture
and the interactive challenge], written for the WRO 95 Biennale catalog. The
present version originates from the article published in *MediaArtHistories*,
edited by Oliver Grau (2007).

The basis of the second part of this issue is formed by three notions: the
phenomenon of absolute cinema – an abstract filming practice developed
since the 1920; the phenomenon of found footage cinema, developing pa-
rallel to cinematography and, later, television, an abstract and subversive re-
cycling of images; thirdly, the contemporary media experiments referencing

Charles-Émile Reynaud
Théâtre Optique
Paris 1892

Etching by unknown
author, depicting the
first public projection
of moving images from
a tape. Reynaud made
use of an improved
magic lantern and
hand-operated drums
with tape

the language of cinema and its tradition, and transferring it into the realm of
digital, non-linear strategies. These chosen topics aim to present the ideas
of forms freed from the literary and psychological burden, searching for their
own esthetic autonomy. Similarly, the tape as an art medium, steps outside
of the celluloid strip, through the physical, analog form of video recording,
into the abstraction of the digital. This last medium encompasses the entire
scale of possibilities between the abstract and the narrative convention,
adding (regardless of the style) the possibility of audience interaction.

The absolute cinema is dealt with, in writing, and in speech, by William
Moritz (1941-2004), professor at California Institute for the Arts, Valencia,
one of the greatest authorities on abstract cinema and animation, whose
rich presentations on these topics took place at WRO 90 Biennale (*History
of Visual Music* screening) and at WRO 99 Biennale (lecture). This issue of
Widok presents an article *Absolute Film*, originally published in the WRO 99
- *The Power of Tape* catalog. Additionally, the DVD includes rich commentary
to the absolute cinema films, recorded during Moritz's lectures at WRO 99.

In his talks, Moritz deliberately omitted the works by Canadian experimental filmmaker Norman McLaren, treating them as a separate phenomenon, outside of his own notion of absolute film. Thus, as a supplement to the issues of absolute film, we are also presenting an article *Norman McLaren: Synergist* by Jarosław Kapuściński, himself a pianist and intermedia composer searching for the deep connections between image and sound. Professor Kapuściński is presently the head of Intermedia Performance Lab at Stanford University.

Piotr Krajewski writes about the phenomenon of found footage in his text *Recycled Images. Remix, sampling, scratching… About found footage cinema*, pointing to the material practice of reusing preexisting film footage. Introduction, in the place of conventional transparent editing which facilitates reception, of discontinuities, noises, drop-offs, scratches, varying playback speeds, manipulations of sharpness, colorization and negativization, disturbances of image and sound are the most common operations performed on an appropriated footage. Along comes the departure from the clarity of propaganda, the primary meaning or utilitarian intentionality in the case of materials sourced from movie, information or advertising industry. Found footage, recently gaining substantial position in contemporary art, is a once rare strategy of artistic individuals such as Bruce Conner, Ken Jacobs, Chick Strand, Zygmunt Rytka, Józef Robakowski, activists including Serbian Apsolutno association in 1990s, and artists-theorists like French situationists in 1960s and 70s.

The textual part of *Widok* ends with Lev Manovich's lecture *Seven or even eight things we can learn from Dziga Vertov…*, presented on *Geo/InfoTerritory* symposium at WRO97 Biennale. The lecture, accompanied by a screening of Vertov's *The Man with Movie Camera*, is an outline of ideas that later resulted in the publication of *The Language of New Media*, a book which positioned Manovich as a top theoretician in this area.

DVD

The idea of *Widok* is to include audiovisual material from WRO collection and WRO Biennale archives, as examples of the examined phenomena and processes – in the form of works, documentation, lectures, and artists' own statements. The themes of *Widok* are illustrated with linear and non-linear productions, presenting various, at moments parallel, paths of the development of media esthetics from absolute film, through video and computer animation, to net projects and installations. Due to copyright constraints, not all works written about are representetd by examples. Such is the case with William Moritz's lecture: a full recording of the talk is available on the DVD, but it lacks the video examples. Most of these can be however found on the Internet sites, posted by users unconstrained by the regulations of law.

The division of materials collected on the DVD corresponds with the three themes dealt with in the textual part of the publication. The absolute cinema is represented by classical, historical productions described in Moritz's lecture, diligent reconstructions of Franciszka and Stefan Themerson films done by Bruce Checefsky, as well as contemporary animations by Anita

Sarosi, Michael Scroggins, Edward Zajec, and lastly the live performances by Jarosław Kapuściński and Gameboyzz Orchestra Project.

The found footage theme is represented by an analogous selection of classical films by Malcolm Le Grice, Lewis Klahr, Martin Arnold, videos by Péter Forgács and Apsolutno association, as well as installations of Frank Den Oudsten, and contemporary performances by Burstscratch, Sala Kolster and Derek Holzer, and Brian Mackern.

A separate part of DVD, *Film after cinema*, includes works and documentation of projects by such artists as Tamás Waliczky, Jeffrey Shaw, Chris Dodge, Andrzej K. Urbański and Julien Maire, a discussion with Lev Manovich concerning the 1920s avant-garde and its impact on computer-based and social changes, recorded in Bauhaus, Dessau at Electronic Art Forum OSTRANENIE in 1997, and a recording of his lecture during the *Geo/Info Territory* symposium at WRO 97 Biennale.

Violetta Kutlubasis-Krajewska, Piotr Krajewski
December 2008

Piotr Krajewski

THE WANING OF THE TAPE MEDIUM

In whatever configuration it may appear, it is always a relatively long, narrow, thin and elastic strip, wound on a reel or enclosed in a cassette. The data is recorded or played back thanks to a linear motion of the tape in some device, it always requires an appropriate apparatus.

It was in 1891 that William Dickson first used the celluloid band in his film camera, a band that had been employed by Eastman Kodak for photography only three years before. From 1895, when the Lumière brothers used this invention in their cinematograph, for the decades that followed the band became the only medium that permitted visual recording and playback of events changing in time. In 1927 to the possibility of recording images the parallel recording of sound was added. The gradual improvement in sensitivity, picture definition, and color rendition made film tape the medium providing the most accurate visual reproduction in the world. Its role has been crucial in registering the outside world for the last one hundred years, in actively shaping our vision of reality, in transformation of our perceptive abilities, our emotionality and memory, and ultimately increasing our passivity.

A magnetic tape – a band coated with a material capable of storing magnetic codes of processed sounds (in the case of a tape recorder), images and sounds (VCRs), or computer data (streamer). Regardless the kind of data recorded, the process is always expressed with a change in the level of magnetization. This medium, which in the beginnings (around 1934) was used only to record sound, coupled with multi-track recording facilities (from 3 tracks in the beginning of the 1950s, through 8 tracks in 1966, up to 64 tracks in the 1980s), resulted in a ground-breaking invention of sound recording that has been essential to the evolution of music in the 20th century.

The TV tape that in the beginning was two inches in width, was used for the first time in 1956 in large television studio units. In 1965 a much narrower half-inch tape was first employed in portable sets of a camera and a VCR. Since that moment the magnetic recording has become a basis for professional television, and later also for amateur and home video. The application of magnetic recording of pictures broke the absolute dominance of film aesthetics and introduced new possibilities for the magnetic manipulation of the image.

The film, video, and audio tape – a medium that has been developing and expanding its possibilities in the course of the 20th century – was incorporated into TV, radio and cinema communication, thus becoming the basic medium of mass culture as well as a vast field of modern art. It was only the appearance of a new hypermedium – a computer – that in the 1990s made this enduring media configuration fall into oblivion. It gives way to new

demands and new visions. That is not likely to be changed by the fact that the tape was rapidly adapted for digital recording and is likely to be still around for a long time. A new model for culture and communication has emerged.

The tape – a pillar of a passive culture, of one-way communication where the roles of the sender and the receiver are completely disjointed, and where culture becomes an object of consumption, is going to give place to partici-pative culture that is not based on clear-cut fixed and one-sided communi-cation of the content.

The tape is not an instrument, but merely a medium carrying a recorded composition of a finite character – a result of the work of an artist in a studio or on a computer. It can be played back, watched or listened to. None the less it is this already historical experience of working with tape that has shaped the development of modern multimedia concepts to such a remark-able extent.

MULTIMEDIA AND TAPE

Real capabilities of the multimedia are accessible mainly during live in-teraction with a new generation of digital devices: a computer or a computer network, which enable real-time activities and interaction. The computer, albeit preprogrammed, becomes a creative instrument, interacting in the course of a dialog with an artist, the audience, or both of them at once.

The avant-garde musicians experimenting with tape, using it to record and mix all types of sounds: instrumental, concrete or electronically gener-ated, were the first to attain a kind of artistic freedom, breaking free from simple recording to organize, deconstruct, and form the auditive reality. It was this freedom to record and deform sound, to mix multiple independent sonic backgrounds to create the course, harmony and dynamism of a piece of music that inspired visual artists to find its visual counterpart. Nam June Paik started off as a composer working in an experimental electronic music studio in Cologne after all.

OPTICAL TAPE

One often wonders where the origins of ideas and concepts of modern art lie, what changes they undergo alongside the culture and reality in gen-eral. One tries to trace back the development of the new field of art, a work of art, an artistic communication – the domain which is commonly called „multimedia".

Multimedia is a vague term invented primarily to describe the new possi-bilities for integration of graphics, photography, moving images, written texts and sounds using the digital platform that arrived together with the com-puter era. The term is for example used to describe moving images played back to an appropriate music by a computer, which is obviously merely a digital reformulation of age-old solutions developed by such 'passé' medium as film.

You cannot deny that the character of a film is generally multimedial – it was the film tape that became the first platform for integration of image and sound, using mechanical, optical and electrical methods: the light passed

through the celluloid tape and the registered patterns were subsequently decoded in order to reproduce both image and sound.

Nevertheless I wish to reserve 'multimedia' for a deeper structural combination of image and sound instead of referring to any relationship between these separate means of expression by this term. So even if saying 'multimedia' I do not think about a 'regular' film, still it is this domain of cinema, or to be more precise, the peripheries of cinema, where we can find the first ground-breaking and unique attempts at integration of sound and image which can be identified as examples of' 'pre-computer' multimedia.

The cine-film gives the optical possibility for reproduction of the visual and acoustic reality. Perceived by a naked eye, it makes not only particular frames captured by the lens of the camera visible, but also the graphic form of the sound recording. The soundtrack is seen as a linear wavy ornament of a varying thickness running along the edge of the tape. The sound has obtained a visual representation of its change over time. The possibility of seeing a recorded sound therefore raises a question why we should not reverse this process and draw a shape so as to listen to it.

Analyzing the shape of the soundtrack on a cine-film, in 1932 Fischinger began experimenting with graphic ornaments. He copied hand-painted patterns on paper rolls onto the cine-film, which resulted in integration of the image and sound of related shapes. The film played through a projector made it possible to experience each shape both as an image on the screen and as a sound heard over the loudspeakers. The ornaments played back produced noises of varying pitch and volume, of pulsation and intensity corresponding to the dynamism of the shapes projected on the screen. Fischinger called it Absolute Sound Film (Der Absolute Tonfilm) or more modestly 'Klingende Ornamente' and 'Tönende Ornamente'.

He went to share his experiences with two composers who changed the face of modern music: Edgar Varése and John Cage.

Those once radical, technical possibilities for a total fusion of vision and sound within the platform of the cine-film from today's 'electronic' perspective may appear very modest or even banal.

After all the possibility for 'listening' to the shape drawn on screen is offered these days by a plethora of standard music composition programs. But these are those experiences of absolute cinema that gave rise not only to artistic but also technical research. The innovations introduced by absolute cinema are referred to by the next generations of film and video artists working within the experimental genres of video art as well as the commercial video clips. The ideas of absolute cinema had also a strong influence on development of computer art in each case when the artists were in search for new forms of expression and creative combination of image and sound.

AUDIO TAPE

In the 1950s the composers did not have at their disposal an instrumentarium capable of assisting them in real-time electronic creation in front of a concert audiences. Despite the long-standing experiences with telharmonium, thereminvox, trautonium, Martenot's waves and other electronic sound generators, in the 1950s there was no such machine, no such

instrument that would satisfy the creative expectations of the composers and could be used during a concert at the same time. Still, there existed a studio equipment that allowed for preparation of a tape on which each sound was a result of many hours of work with a variety of electronic devices. Paradoxically, therefore, the public in concert halls was thus exposed not to new musical instruments, but only to the device playing back the tape. The tape was introduced into the concert halls as a surrogate – the electronic music concerts came down to to playing back the tape already prepared in the studio; instead of a live contact with performers and new instruments only a sound from the loudspeakers was to be heard.

A certain analogy may be drawn with the first years of the multimedia art, when the public was exposed to similar situations and similar confusion.

The lavishly equipped computer studios provided a place for a variety of technological and artistic experiments. In the 1980s some artists gained access to advanced digital equipment opening a world of new possibilities for creation of interactive and nonlinear works, as well as new methods of recording and creation of the reality. However, there were only few of them. Similarly infrequent were those who had the possibility to work in few well-equipped laboratories and studios that existed at that time. The problem, which significantly hindered the circulation of new compositions, consisted in the problems with recreation of the original technical conditions under which a piece was created during the performance. Although the first interactive work of art was created by Lynn Hershmann in 1984, the most popular form of computer art of the 1980s was graphics and animation, as they could be easily copied using the traditional media of print and a video tape. As a matter of fact each second of computer animation was still a result of several hundred of hours of work with expensive computer equipment, yet the result of this work could be presented as a recording on a video tape or a cine-film. It was enough to play the tape and this did not require great expenses. The compromise is evident here – the digital world was reduced to an analogue signal on a tape. Technological constraints severely limited the circulation of works that „did not make it onto tape": such creations had yet to wait for another decade.

NEW COMMUNICATION SPACES

Electronic music created a new type of space: it broke away from traditional instrumental performance, and consequently, also to a large extent from traditional concert halls. In this context it is interesting to recall the year 1930 and Paul Hindemith's experiments with the trautonium – an electronic instrument designed by the German engineer Trautwein and Oskar Sala. One of the first concerts for trautonium was performed as a radio concert, where three musicians, including Paul Hindemith and mentioned Oskar Sala played their own instruments in the experimental radio studio at the Berlin Music Academy. From its inception, the radio was used as a creative space for electronic music. Development of art is not limited to the search for new

forms and devices, it is also a search for new environments, new space for art, a space that could still do without a tape.

DEPARTING FROM THE TAPE

For the multimedia, as it was with electronic music, it was very important firstly to depart from the tape, and second, to relegate the technical equipment to the background. Today rarely can we observe a composer or a performer hidden from the audience behind a barricade of electronic devices. Instead, more and more often the stage is occupied only by the performer controlling an interface, while the equipment itself is hidden from view.

In the 1990s the artistic research moved towards the direction of the domain of interactive integration of the audiovisual sphere, as well as the exploration of the new techno-cultural environments, such as virtual reality and computer networks. A networked computer enhanced with a multitude of interfaces made very complex creation possible. The all-encompassing network of the Internet is becoming one of the main points of reference for the new definition of 'media art'. Consequently, artistic endeavors have started to concentrate on new communication strategies, leaving the tape out of the account.

From today's point of view the new media art is a about a separation of the message and a physical medium, a detachment of the image from the screen and discovering aesthetic dimensions of communicative space where art is no longer confined to an area of sacrum, but may become a part of the participative culture instead - a theme which may well be the subject of a next Biennale.

Translated by Ryszard Kasprzyk

Erkki Huhtamo

PLAY! STOP! FORWARD! REWIND! REFLECTIONS ON TAPE AS A MEDIUM

0. SHUFFLE (2007)

Observing the fates of media technology can be fascinating. When I wrote the following article in 1999, it was becoming clear that the days of the magnetic tape as a recording medium were numbered. However, both videotapes and audiotapes were still in active use.

Fast forward to 2007: except for an occasional VHS video I have not yet had time to burn on a DVD, or the Mini-DV camcorder that I still use from time to time, I don't have much to do with tapes any longer. When I listen to music, I use my iPod. When I"tape" an interview, I simply dock a small digital recorder attachment to it. When I take pictures, I use my digital camera. Even many of the short movies I show to my students these days have been shot in this way.

Or, when I want to watch a movie, I choose a DVD. Some friends record tv shows on the hard discs of their TiVos, and later burn the ones they want to keep on DVDs. The option of buying movies on VHS tapes does not exist anymore, at least not in Los Angeles. Even finding a basic VHS player is becoming difficult. Clearly, magnetic tape as a consumer item has become obsolete. Should we lament or rejoice? Thinking about the image and sound quality of the VHS, the owner of even a basic DVD player cannot possibly feel sad. DVDs also take less storage space, and of course, they offer all kinds of "extras" that attract the collector.

Still, some arguments speak for the good old tape. Using DVDs in teaching is difficult, particularly if they don't contain a chapter list. It is much easier to forward and rewind a VHS tape and find exactly the scenes you need. Another issue is preservation. Many of the C-cassettes (my students don't even know what they are!) and VHS tapes I may have recorded thirty years ago are perfectly playable today. The signal has deteriorated hardly at all. But no-one is sure how long CDs and DVDs will retain their data. An external hard drive I used to back-up my digital data silently died some months ago, sealing all my files in its belly forever. There are even specialists, for whom storing digital information on tape – DAT, Mini-DV, etc. - is still the safest option.

But clearly, there is no way back. Sooner or later all material stored on magnetic tapes will have to be transferred into some other form to keep up with the evolution of the media culture. Will some artist eventually re-

discover the specific properties of the tape 'medium,' just like disc-spinners redefined vinyls as musical instruments? That would also mean revisiting the 'heroic' era of music concrete, but of course not as Pierre Henry or Pierre Schaeffer experienced it. We cannot turn back the clock of media history, but perhaps we can give it a few extra spins.

What follows, then,has already turned into a media-archaeological document, an account of the imminent demise of the tape medium that has since happened.[1] How totally and definely, remains to be seen. We should not underestimate the cunning of media history.

1. STOP?

Compared with its near ubiquity, the cultural esteem of the tape media is not very high these days. The tape, audio as well as video, has lost its status in the technical avant-garde of media culture quite some time ago. It is an everyday commodity, available in the local supermarket with corn chips and coke. For many viewers, movies exist primarily as VHS videotapes. Even in technically less developed countries video and audio tapes are known and frequently used. All this makes it invisible, a kind of everpresent nonpresence.

Although it persists, there is a widespread feeling that magnetic tape is technically obsolete. It is only the „next best thing" while waiting for some-

VHS casette with Nam
June Paik's works
Japan, 1984

thing better – digital, miniaturized, disposable hard discs, for example. Although digital tape formats, such as DAT and DVC, have been introduced in recent years, these are often seen as transitory. The sound quality of a DAT tape is excellent, but the recorder can still „eat" your tape. And finding video sequences from a sixty minute DVC tape still takes time. Indeed, disc-based digital formats, such as the Minidisc or DVD (Digital Versatile Disc) and

....
1   Except for correcting a few typographic errors, I have kept the article in its original form. Some footnotes have been added to make the article more useful for those who want to pursue these ideas further.

VCD (Video Compact Disc) have begun to challenge the hegemony of audio and video tape on the consumer market.

The recent trend toward interactive media has certainly contributed to the tape media's retrogression. Magnetic tape is seen, at most, as a „corrected" linear medium. Video and audio recorders provide a possibility to stop the tape, to rewind it or to forward it; yet the structure of the programs stored on the tape is sequential and linear, resembling its predecessor, film. Although media artists have explored the potential of magnetic tape for producing spatial colleges and simultaneous sensory experiences, the spokesmen of interactive media see it as unsuited for their purposes. Interactivity implies a conversational relationship with media and an immediate, random access to spatial and architectural databases.[2]

2. PAUSE

There are those who wonder if tape ever was a „medium". Wasn't it really an „auxiliary" medium, adding features to existing media, rather than developing a character of its own? For the 1950's television, the newly introduced videotaping provided a possibility for recording the programs and broadcasting them at other times, making the cumbersome practice of refilming live broadcasts from the TV screen meaningless. [3]Yet, instead of transforming the prevailing ontology of „liveness", tape turned it into an ideology: who could tell anymore if a program was live or pre-recorded?

Although this may have been true, there were those, especially in the late 1960's, who believed that video was indeed a new, revolutionary medium.[4] Artists, activists and enthusiasts looked for the „distinctive features of the medium" (David Antin).[5] For them these seemed to lie in the electronic nature of the medium itself, which made both real-time feedback (the origin of TV) and recording possible. Video was something unprecedented; spontaneous, direct, multifaceted, adaptable; a real chameleon.

Film had always been something else. Although experimental filmmakers like Stan Brakhage had dealt with it in highly personal and intimate ways, it was still a record of a past event, a „monument". Videotape was a trace as well, but somehow much closer to the act of recording itself – and also to its potential erasure. Videotape created a delicate tension between a past and a present, as early video artists demonstrated with their installations, combining live and recorded images in complex and ambiguous ways.

Videotaping was also seen as a democratic medium. With off-the-shelf consumer equipment, everyone could create „one's own TV". Yet a proper Medium (a social system of communication) involves not just the production, but also the exhibition and distribution of images and sounds. Although

2   Nam June Paik explored the possibility of the non-linear interactive use of sound tape already in his work Random Access (1963).
3   The most detailed history of video recording remains Siegfried Zielinski's Zur Geschichte des Videorecorders, Berlin: Vissenschaftsverlag Volker Spiess, 1986.
4   See, in particular Michael Shamberg and Raindance Corporation, Guerrilla Television, New York: Holt, Rinehart and Winston, 1971.
5   See David Antin, "Video: the Distinctive Features of the Medium," in Video Culture. A Critical Investigation, edited by John Hanhardt, Layton, Utah: Peregrine Smith Books and the Visual Studies Workshop Press, 1986, 147-166.

its early spokesmen hardly noticed it, this has probably been video's greatest stumbling block and the strongest argument for those who have refused to grant it the status of a „medium".

If you show a videotape on television it becomes television. So the video activists of the 60's tried to create their own television channels (cable TV, narrowcasting), but soon gave up. Renting or selling tapes at stores has been another option – the paradox is that most works in distribution have been movies, certainly not videoworks exploring the „distinctive features of the medium". Distribution by mail is another possibility, but it has not really worked out. VHS „videomagazines" soon died out; perhaps videotapes were just too big and heavy – but people buy books by mail, anyway.

3. PLAY!

Things have worked better with audiotapes, although few people bother to use them for recording their thoughts and experiences. „Audio letters", stamped envelopes sold with a blank Cassette by post offices in some countries, have never been popular, in spite of the general availability of walkmans and other kinds of cassette players/recorders. Yet thanks to their ubiquity, audiotapes have become an effective medium, even if only in the restricted sense of listening and copying music, or perhaps learning languages.

Audiotaping, invented about a decade before video in the late 1940's, never raised quite as enthusiastic expectations in the art community as videotaping. Why was it so? Perhaps it had to do with the fact that the interplay between live feedback and recording, an essential feature of video, was never so pronounced in the case of audiotaping. Listening to your own voice through the system in real time doesn't make that much sense unless you are singing Karaoke. In contrast, seeing the live video image on a monitor or in the viewfinder is still an essential element of the video experience.

Audiotape, it seems, was born purely to record, store and transport a real time auditive event – within another medium, radio. According to its myth of creation Bing Crosby, tired of endless live appearances on the American network radio in the 1940's, invested his earnings to ease his own life. In the process he created a surrogate presence for himself: an auditive likeness that would sing with Bing Crosby's voice whenever and wherever needed, but without his own physical presence. [6] A virtual electronic echo.

Audiotape made possible the infinite cloning of Bing Crosby's voice, but implicitly also its manipulation and erasure. That the audiotape provided possibilities not just for recording and repeating the voice, but also for transforming it, was understood rapidly by experimental composers like Karlheinz Stockhausen and Pierre Henry. Sounds from accelerated, speeded-up and

6   Roy Armes, On Video, London and New York: Routledge, 1988, 76.

cut-up tapes entered the realm of music. Eventually this led to the cre-
ation of audio synthesizers, sometimes incorporating tape units (e.g. the
Mellotron).

4. FORWARD!

Nam June Paik's dream about „playing television with one's fingers" was
a transposition of this development to the field of the audiovisual. From
transforming television images with magnets or manipulating the speed of
open reel videotapes manually he was led (alongside many others) to build
video synthesizers. The aesthetics of Paik's videotape Global Groove (1974)
was built on the continuous metamorphosis of the electronic image. Others,
like Woody and Steina Vasulka, adopted the investigation of the video signal
as the very theme of their work.

For artists like Paik or the Vasulkas it was clear that video did have „dis-
tinctive features" of its own. Videotape was not just a replacement of cellu-
loid film; its electronic vibration, the magnetic tension of its particles, even
its „noise" and deterioration made it strangely „animate". In a way, video was
felt to be deeply in unison with the McLuhanesque global village, resonating
with the pulse of the globe turned into a nervous system by means of elec-
tricity. Television and communication satellites had given new faces to the
world; video provided a way of modifying and multiplying those faces.

Adopting a very different approach, Bill Viola came to a surprisingly simi-
lar conclusion: his long, abiding, meditative landscape videos seem to be
at the Antipodes from the flashy electronic circus of Paik's videotapes and
installations. Yet as much as they are meditations about nature, observation
and transcendence, Viola's works are also studies about the subtle, peculiar
quality of video recording. They could not be mistaken for films, optical-
chemical products. Stan Brakhage's The Text of Light (1974), an epic and
truly astonishing study of light passing through an ashtray and the movie
camera's optics, belongs to a completely different ontological plane.

5. REWIND!

And yet, it would be hard to deny that there are many connections and
crossovers. Magnetic tape, like celluloid film (and even magnetized metal
wire, the predecessor of audiotape) is like a band or a cord saturated with
information. It is stored on a reel; to retrieve the information the band has to
be wound in front of a „reader" (the magnetic head of a VCR or the lens gate
of a movie projector) and collected on another reel. The principle appeared
in moving roll panoramas and devices like Emile Reynaud's Theatre Optique
in the 19th century and was adopted by the first filmmakers soon after cel-
luloid film appeared on the market in the late 1880's.

Although central in 20th century media culture, due to the success of
film and later audio and video tape, this model of recording and retrieving

audiovisual information has never been the only alternative. From the outset, recorded sounds were stored on cylinders or discs; the recorded trace was a spiral rather than a linear line. It was easy to break the linearity of playback by bouncing the needle back and forth on the recorded surface. This possibility was equally well understood by avantgarde experimenters like Kurt Schwitters and László Moholy-Nagy in the 1920's and by scratch artists and techno DJ's in our times.[7]

Before the invention of film moving images were produced by means of spinning discs and slotted drums, leading to endlessly repeated brief image sequences. The power of this „cyclical" model can be seen in the early film culture; films were often shown as endless „loops". The repeated image sequences in video games, as well as the QuickTime Movies and Java animations downloaded from the World Wide Web, seem to provide evidence of a revival of cyclical moving images. It may not be a coincidence that phenakistiscopes, zoetropes and other antique moving picture devices have been interpreted as proto-interactive machines by the Japanese media artist Toshio Iwai, one of the premiere representatives of interactive art.

For Iwai and others, these devices represent a model which is radically different from the linearity associated with film and video. On the other hand, if „the future is digital" and the computer will be the integrated media engine of the future, it has to be stated that it will be able to incorporate both linear and nonlinear forms of moving images, as well as any imaginable combinations of them. Although both celluloid film and magnetic tape may indeed gradually give way to other ways of storing and retrieving images and sounds, the models of information these earlier „carriers" have supported so far will hardly disappear. They will return in ever new disguises.

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7   For a peek into such ideas, see László Moholy-Nagy, "New Plasticism in Music. Possibilities of the Gramophone" (1923), in Ursula Block and Michael Glasmeier, Broken Music. Artists' Recordworks, Berlin: Berliner Künstlerprogramm des DAAD and gelbe Musik Verlag, 1989, 54-56.

Erkki Huhtamo

ELEMENTS OF SCREENOLOGY

A covered framework, partition, or curtain, either movable or fixed, which serves to protect from the heat of the sun or of a fire, from rain, wind, or cold, or from other inconvenience or danger, or to shelter from observation, conceal, shut off the view, or secure privacy; as, a fire-screen; a folding-screen; a window-screen, etc.; hence, such a covered framework, curtain, etc., used for some other purpose; as, a screen upon which images may be cast by a magic lantern; in general, and shelter or means of concealment.
Definition of 'screen', The Century Dictionary and Cyclopedia, 1911 (1889)

Considering the centrality of screens in contemporary media culture, there have been surprisingly few attempts to define their "essence". True, in spite of their ubiquitous presence screens are strangely evasive, hard to grasp. They are constantly metamorphosing, appearing in new places and new forms. There are "Big Screens" and "Small Screens". Some are flat, some fat, attached to a box. Some are like the sun - active, radiating "life" of their own - while others are like the moon, passive, reflecting light projected at them. There are screens observed from a distance, and others touched

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Netcast of the *Elements of Screenology*, WRO 01 Biennale

and interacted with, held in one's hand. How to formulate a definition that would embrace them all? Does it even make sense to ask such a question?

This article is a preliminary investigation toward a historical phenomenology of the screen, or what I call "screenology". My treatment of the topic is based on one main premise: in spite of their ubiquity, screens have a history, which should be traced. Although there has been work done on specific areas (for example Siegfried Zielinski's research on the relationship between cinema and television and Lev Manovich's studies on the archaeology of the

computer screen) the general history remains largely unwritten.[1] However, simply writing a chronicle of different kinds of screens would not make much sense. Screens should not be studied in isolation of the apparata they are part of. The notion of apparatus comes from cinema studies: it comprises not only the technical system, but also the elements of the viewing situation, including the relationship between the screen and the viewer, which is both physical and imaginary.[2] The viewer is physically related to the screen in the (viewing) space, and simultaneously mentally related to the space on the screen. The notion of the screen changes in time, and so does this relationship.

For historical reception studies the viewing experience has usually been a difficult challenge. Save in some rare cases, we don't have documented evidence about what went on in the viewers' heads in front of the screen. The viewers' attitudes have to be reconstructed indirectly, through secondary source material, as Miriam Hansen has demonstrated in her studies about early film spectatorship.[3] Although we cannot enter the individual viewer's head, we can at least try to understand the general conditions that prevailed in different situations and influenced each viewing experience. We can, for example, look at the constitution of the apparatus itself, including the design of its elements, for hints about the kinds of experiences it may have triggered. We can also use "projective" material, like literary texts, popular cartoons and other forms of ephemera to provide more clues and to verify our hypotheses. Still, the aim is to reconstruct "frameworks of possibilities", rather than try to determine the actual readings by individual viewers and audiences.

The ultimate goal is the history of "screen practice(s)", to adopt a concept used by Charles Musser in his studies of early and pre-cinema.[4] Such a history should comprise not only the evolution of different kinds of screens and the interconnections between them, but also account for their uses as part of different media apparata and within changing cultural, social and economic settings. This article provides a first step toward such a synthesis by identifying and discussing some of the key ingredients of such a history. The basic questions are simple, but the answers are difficult: how were our 20th century notions of the screen anticipated in earlier times? What connections, if any, are there between these "screens" from different times and places? As should be clear by now, this article does not look for an immutable "essence" of the screen; if the screen has an essence, it lies only in the

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1   See Siegfried Zielinski: Audiovisions. Cinema and Television as entr'actes in history, translated by Gloria Custance, Amsterdam: Amsterdam University Press, 1999 (orig. in German 1989); Lev Manovich: „Towards an Archaeology of the Computer Screen", Cinema Futures: Cain, Abel or Cable? The Screen Arts in the Digital Age, edited by Thomas Elsaesser and Kay Hoffmann, Amsterdam: Amsterdam University Press, 1998, pp. 27-43.
2   See The Cinematic Apparatus, edited by Teresa de Lauretis and Stephen Heath, London and Basingbroke: Macmillan, 1980.
3   Miriam Hansen: Babel & Babylon. Spectatorship in American Silent Film, Cambridge and London: Harvard University Press, 1991.
4   See particularly Charles Musser: The Emergence of Cinema. The American Screen to 1907, New York: Charles Scribner's Sons, 1990. It should be noted that in the title of his book Musser uses the word „Screen" as synonymous with the institution of the cinema, which reflects an actual historical usage.

sum total of all the historical manifestations of different screen practices, not beyond them like some Platonic idea.

TWO LITTLE SKRENES

According to the Oxford English Dictionary, the foremost authority on the history of the English vocabulary, the word "screen" first appears in texts from the 14th and the 15th centuries, but its etymological origins remain unclear.[5] In the 16th century, and probably earlier, it was used to refer to a "contrivance for warding off the heat of fire or a draught of air". The screen meant, above all, a floor-standing piece of furniture, consisting of a sheet of lighter, often translucent material (paper, some kind of fabric, etc.) stretched in a wooden frame. There were also smaller handheld versions for ladies; a text from 1548 speaks about "Two litle Skrenes of silke to hold against the fier".[6] In addition to their main purpose, the often richly decorated hand-screens were also objects of fashion, aesthetic pleasure, and erotic play. Gradually the screens gained new connotations. Beside the natural elements, they were said to provide protection from "other inconvenience or danger, or to shelter from observation, conceal, shut off the view, or secure privacy", as the Century Dictionary and Cyclopedia (1911, orig. 1889) stated.[7] Whether from heat, cold or an intruding gaze, the screen was above all seen as a surface that protects a person by creating a barrier against something uncomfortable or threatening.

It was during the early 19th century that the word "screen" began to attain meanings that anticipated its current uses within media culture as a means of displaying and transmitting images. The earliest such occurrence recorded in the Oxford English Dictionary comes from 1810 and reads: "To make Transparent Screens for the Exhibition of the Phantasmagoria". This represents a clear departure from the domestic sphere and entry into the world of public entertainment. Phantasmagoria was a show, which enjoyed great popularity around the turn of the 18th and 19th century. It was a variant of the older magic lantern projections, but with its own characteristics. In Phantasmagoria the audience was shown images projected from behind the screen with a highly mobile magic lantern (often mounted on wheels and moving along rails). One of the aims was to create a total sensory experience. This goal was served by the hidden technology. Phantasmagoria showmen did their best to keep their machinery secret; they pretended that their show had nothing to do with the old magic lanterns. They even made efforts to hide the presence of the screen itself by plunging the audience in total darkness and opening the curtains only then. The projected figures were presented as "apparitions" flying freely through the hall. To achieve

5   Much the same goes for the French „écran", which most dictionaries, including The Oxford English Dictionary, see as „closely corresponding with" the history and the meanings of „screen". All references to the Oxford English Dictionary (OED) are to the II edition, edited by J.A. Simpson and E.S.C. Weiner, Oxford: Clarendon Press, 1989.
6   OED, vol XIV, „screen".
7   The Century Dictionary and Cyclopedia (CDC), New York: The Century Co, revised and enlarged edition, 1911 (orig. 1889), Vol VIII, „screen".

this, inventing ways to make the screen semi-transparent - the easiest of which was making it wet - was crucial.

Of course, such an explanation of the emergence of the screen as a projection surface is too simplistic. The word may not have been used in such a meaning before 1810 (I have some doubts about this), but "screen practice" as a phenomenon goes certainly much further back in time. Phantasmagoria was based on earlier traditions of showmanship involving screens. Not only was it a further development of the travelling magic lantern show, it also

built on the shadow show. Although shadow theatre seems to have originated in Asia (found in many places from Turkey to India, China and Indonesia), it became popular in Europe in the 17th and 18th centuries.[8] Most versions of the shadow theatre were based on essentially similar arrangements of the apparatus as Phantasmagoria. The audience sits in front of the screen, while the performers operate their shadow puppets behind it, between the screen and the light source.[9] The audience only sees the moving shadows on the screen, not the "machinery" creating them. In Phantasmagoria the use of

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8   See Olive Cook: Movement in Two Dimensions, London: Hutchinson, 1963.
9   An interesting exception was late 19th century „Ombromanie", the art of hand shadows. Here the shadow artist stood in front of the screen and revealed his „machinery" (his own hands) to the audience. Demonstrating the skill and mastery of the performer was as important as the end result.

shadow puppets was replaced by "fantascopes" (special magic lanterns) and projected lantern slides.[10]

In the magic lantern shows given by travelling showmen from the late 17th century on, the apparatus had been arranged differently: the audience frequently gathered around the showman and his magic lantern, which was placed fairly close to the screen. This arrangement was partly necessitated by the weakness of the illuminants available (candles or simple oil lamps), but it also emphasized the traditional role of the showman as a storyteller, who illustrated his stories with projected images. For people not familiar with such shows the presence of the mysterious "projection box" hardly diminished the "magic" of the event. Indeed, it may have served as an extra attraction. In similar fashion, early film audiences often admired the cinematograph as a technological marvel as much as the moving pictures it produced. Such a novelty easily wears off. By hiding the magic lantern behind the screen the Phantasmagoria showmen managed to re-create the lost mystery, utilizing to the full the possibilities of the new Argand lamp, a greatly improved oil illuminant. Yet in time also the Phantasmagoria lost its appeal, and the magic lantern became visible and attractive again, re-designed as a gorgeous instrument, a marvel of Victorian science.

ELIZA ON THE SCREEN

During the 19th century the connection between magic lantern shows and projection screens became semantically well established. As just one example among many, a text from 1846 stated: "Magic lantern is a species of lucernal microscope, its object being to obtain an enlarged representation of figures, on a screen in a darkened room." (1846)[11] Throughout the 19th century the size of the screen, the auditorium and the projected image grew larger. This was made possible by the development of new, more powerful illuminants (oxy-hydrogen limelight, electric carbon-arc), yet the social force motivating this development was the increasing demand for entertainment and visual instruction among the new mass audiences, particularly in cities. In the late 19th century, especially in America, the magic lantern was even taken outside to project huge advertisements and election results on public buildings, now re-defined as gigantic projection screens.[12] In less than a century, the word screen had taken on totally new meanings, in line with the emergence of the urban, technological media society. If it had been a thing that protected a single person from something unwanted, it now exposed a

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10 Although the shadow theatre was imported to Europe from the East, by late 18th century it enjoyed widespread popularity. Its influence can be felt in certain aspects of Phantasmagoria, and some shadow showmen are known to have experimented with the magic lantern as well. The true synthesis of these screen practices, however, took place in Japan. The Japanese Utsushi-e show, which emerged in the early 19th century, is an original form of popular media theatre, in which hand-held, highly mobile magic lanterns have taken the role of shadow puppets.
11 OED, vol XIV, „screen".
12 Such projections were often pictures on the front pages of popular newspapers like Frank Leslie's Illustrated Newspaper (see f.ex. Nov. 23, 1872 and Oct. 25, 1884).

whole group of people to the visual extravaganza of capitalist commodity culture.

Against this background it is anything but surprising that the word "screen" was assimilated into the early film culture. As a screen practice, early silent film showmanship was in many ways (although not exclusively) a continuation of the magic lantern show. Until well into the 1910s (and even later) most film presentations were actually hybrid forms of films, lantern slides, phonograph concerts and live stage performances. As film production and exhibition consolidated their roles as major new entertainment industries from the 1910s on, the other attractions gradually faded to the background: the center was reserved to the pleasures of the screen. With this development, the word often came to be used metonymically, meaning the film culture itself, written with capital letters: The Screen. Already in 1910 the Moving Picture World wrote that "people like to see on the screen what they read about", referring to their film preferences. And when Mrs. P. Campbell stated in 1920 that she felt "much too aged for Eliza on the Screen", she of course referred to acting in the movies, working in the film industry.

At some point the word "Big" was added in front of the "Screen". When and why this happened needs some further research. I suspect it had something to do with the appearance of new competing screen practices after the Second World War, particularly the television. The "Small Screen" promised to bring "the events as they happened" directly into the living room. As a response to this challenge, the film industry promised even more magnificent spectacles. Stretching the cinema screen to gigantic dimensions was the solution offered by Cinerama, Todd-AO, Cinemascope and various other systems in the 1950s. The most extreme form was the curved giant screen of the Cinerama, on which films were projected from three projectors simultaneously. With Cinerama, the expansion of the screen reached a paradoxical conclusion: by covering the spectators' total field of vision the screen in a sense disappeared; there was no sense of frame marking the border between the real and the imaginary. The screen turned into an environment which enveloped the audience completely. This anticipated more recent spectacles like IMAX theatres and virtual reality. Something similar had been, however, already achieved by the panorama, another large scale visual entertainment, a hundred years earlier.

MOONLIGHT TRANSPARENCIES

What about the Small Screen? Can we locate its etymological origins? The answer remains more speculative than in the case of the big screen. First of all, one might want to recall the fact that from early on the fire-screens were often embellished with images. During the Victorian era the large folding screens used at homes for various purposes often became real collages of all kinds of printed images, recalling the countless "scrap books" created by women and children as their pastime (and even the contemporary habit of covering the door of the refrigerator with postcards, photos and little magnets). Although the images served primarily a decorative function, such screens anticipated the future development of media culture by displaying the enormous proliferation of cheap mass produced images in the

19th century, made possible by advances in printing and image reproduction technologies (lithography, photography, etc.). Indeed, the habit of decorating screens with images became so common, that mediocre artworks were sometimes compared by critics with such banal screens.

Already in the late 18th century the idea of the fire-screen was adapted to the purpose of displaying transparent paintings in new and stunning ways. Such paintings, "moonlight transparencies" or "diaphanoramas", like those by the Germans Georg Melchior Kraus and Franz Niklaus König, were mounted on floor-standing wooden frames.[13] They really only came to their right when illuminated from behind, glowing in brilliant colours. In the 19th century forms of such back-lighted images proliferated, ranging from "lithophanes", porcelain images displayed on lamp-shades or in decorative wooden or metal frames, to domestic viewing machines like the massive Megalethoscope, designed for the viewing of large albumen photographs with hand-coloured filters attached to the backside.[14] Peering into a viewing "hood" and simultaneously opening a door at the back of the device, the black and white photographs were transformed into fabulous coloured spectacles. These, and many other kind of "screens" anticipated the future role and placement of the television screen, although their potential for transmitting visual information or depicting movement was limited.

Going through dictionaries, we also find other meanings that have connected small screens with media images. In the 19th century the word was used to refer to upright frames for displaying photographs, both privately and in public exhibitions. In 1888, for example, a person wrote about "some of the most delightful panel screens for photographs I ever set eyes on".[15] More interesting, however, is the connection with the photographic camera itself. The "focusing screen", or the "screen of ground-glass" (1879) was defined as "a flat piece of glass on which the image formed by a camera lens is focused prior to making the exposure".[16] This common principle was actually inherited from an earlier device, the camera obscura, which anticipated the photographic camera and influenced its construction. In the camera obscura, known already in the middle ages, an image of the outside world is formed inside a darkened box, by means of rays of light entering it through a tiny hole.[17]

Especially since the Renaissance, after one had learned to place a lens into the "pinhole" for sharper image, camera obscuras became widely used both as artists' tools and as popular pastime. From the point of view of the development of the small screen this device is extremely interesting, although very few observers have noted the relationship so far, probably because the camera obscura is merely seen as a primitive predecessor of the

13   For examples, see Sehsucht. Das Panorama als Massenunterhaltung des 19. Jahrhunderts, Bonn: Kunst- und Ausstellungshalle der Bundesrepublik Deutschland & Stroemfeld/ Roter Stern, 1993, pp.198-199.

14   Massive public spectacles like Daguerre's and Bouton's Diorama, which displayed gigantic slowly transforming paintings by means of manipulated back-lighting, were based on similar principles. All kinds of tiny toy versions, like the French Polyorama Panoptique, were also made.

15   OED, vol XIV, „screen".

16   Item.

17   The most complete history of the camera obscura is John Hammond: The Camera Obscura. A Chronicle, Bristol: Adam Hilger Ltd., 1981.

(still) photographic camera. In smaller camera obscuras the image was often directed by means of an internal mirror (45 degrees) to a ground glass on top of the device. By placing a transparent sheet of paper on the ground glass, the artist was able to sketch the outline of the landscape. There were also room-sized camera obscuras, often situated at well-known tourist locations, by the seaside or on hilltops. The image of the outside world was directed by means of a lens and a mirror from the top of the room onto a horizontal table in its center. Visitors stood around the table and admired the moving scenery from the outside, often pointing at details with their finger. Both the ground-glass and the table functioned essentially as framed screens.

SCREEN-PLAYS

It is important to remember that all kinds of camera obscuras transmitted a live image and displayed it on a framed surface. Although technically simple and involving neither electronics nor antennas, they clearly anticipated the principle of the television, defined in 1926 by Nature: "Every possessor of a 'televisor' will be in a position to see on his screen the performers in operas and plays as well as hearing them."[18] Indeed, in 1879 a cartoonist working for the British magazine Punch and envisioning the tele-vision technology of the future, captioned his creation as "an electric camera obscura", purportedly invented by Thomas Edison.[19] The visionary cartoon showed a panoramic flat screen, mounted on the wall above a fireplace - a situation which has not been realized yet, although plasma screen technology now finally promises to fulfill the expectations. The screen in Punch also provided two-way communication, another fantasy which has never been fully made its breakthrough, in spite of innumerable predictions (and working prototypes!). Most screens still serve one-way traffic, although the proliferation of the computer screen is quickly changing the situation.

Beside its resemblance to television, the camera obscura also anticipated the computer screen by encouraging a tactile relationship. The image of the camera obscura was not meant to be just observed from a distance - it could be touched, by the tip of the pen or simply by one's finger. In its time, this created an ontologically interesting and novel situation: a kind of tele-touching, caressing living and moving entities from a distance, by means of a technical apparatus. Although this situation seems alien to the television spectatorship, it was encouraged in the 1950s in one of the early experiments of interactive television, the American series 'Winky Dink and You'. Children were encouraged to draw on the television screen (actually on a sheet of transparent plastic attached to the screen) by "Magic Pens" according to the instructions given by the host John Barry while the program was running. The activity of the child in this situation is not all that different from that of an 18th century artist sketching a landscape with the help of his camera obscura. The spectatorial model proposed by Winky Dink and You never became a standard in the rigid world of TV broadcasting, but it

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18 OED, vol XIV, „screen".
19 See Émmanuelle Toulet: Cinématographie, invention du siècle, Paris: Decouvertes Gallimard & Réunion des musées nationaux, 1988.

has been in a way been realized by the introduction of paint programs and edutainment multimedia for personal computers.[20]

This article has not been meant as an exhaustive treatment of the history of screen practices. Rather, it has only hinted at the wealth of material and approaches available. Connections need to be established and new data uncovered, especially about the metaphorical uses of the word. As the Oxford English Dictionary demonstrates, the word screen has been given a large number of meanings, only a few of which have been dealt with here. How are these meanings connected? Is there any meaningful link between an 18th century fire-screen and a 20th century cathode-ray tube, other than the fact that both are "lighted" or "heated" from behind? Wasn't the traditional screen meant to isolate the person, to protect him/her from heat or a gaze, to increase his/her comfort and privacy? Isn't the function of the tele-

Field projection of a magic lantern, late 19th century
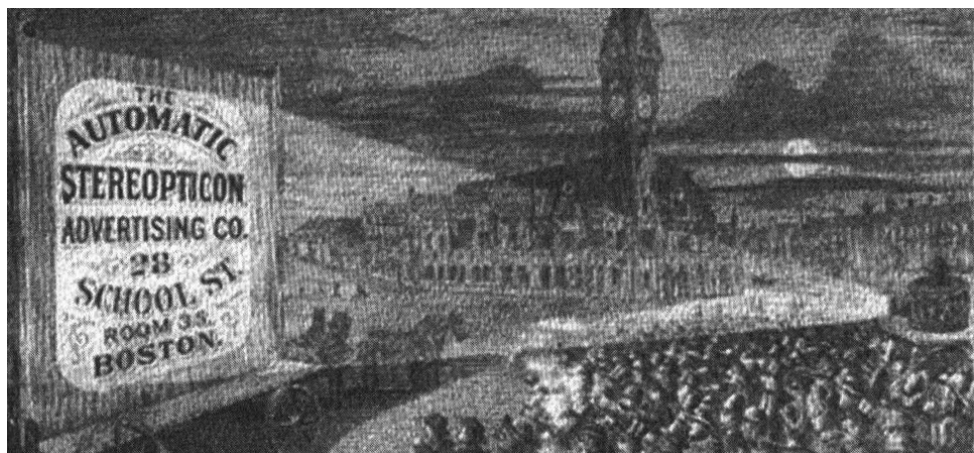
vision screen the opposite, to expose the viewer to the "heat" and "obscenity" of commercial media culture, and to invite the public sphere to invade the private? It might be claimed, however, that the relationship between issues like private/public is never so clear-cut. While blocking from view, the traditional screens also raised curiosity and desire towards the other side (best demonstrated by the countless Japanese wood-block prints showing people observing the shadows of others cast on the paper screens serving as walls). The television screen also provides privacy by offering a safe voyeuristic vantage point to observe the event "on the other side". While exposing it also protects.

There would be other intriguing parallels not mentioned in this article. For example the history of the mirror and the discourses surrounding it should be taken into consideration. Observed from a cultural and mental historical point of view, the mirror has never been seen merely as a device reflecting

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20 One reason why 'Winky Dink and You' failed may have been the simple fact that children who did not own the magic pens and the drawing screen began to draw directly on the cathode ray tube, obviously destroying the TV set!

your own image here and now; for centuries, it has been a vehicle for intricate spatial, poetic and erotic "screen-plays". In literature and in pictorial traditions it has often been treated as a kind of screen - a fantastic communication device capable of telling visual stories, displaying the future or virtually uniting people separated by physical distance. It is enough to think about a well-known fairytale like the Beauty and the Beast with its enchanted mirrors - this connection did not escape the attention of Jean Cocteau, whose film La Belle et La Bête (1946) used mirrors as information and communication screens in poetic and imaginative ways. A history of screen practices should not overlook such fantasies and discourses, which are often intertwined with more "real" - meaning: more material, more tangible - phenomena in strange ways. So perhaps it was not a coincidence, after all, that Cocteau's film appeared on the "Big Screen" exactly at the moment when television broadcasting was beginning its triumphal march into the living room.

Erkki Huhtamo 2001

A considerably extended and modified version of this essay was later published as "Elements of Screenology: Toward an Archaeology of the Screen", *ICONICS: International Studies of the Modern Image*, Vol.7 (2004), pp.31-82. Tokyo: The Japan Society of Image Arts and Sciences. The original essay is published here in unaltered form.

Ryszard W. Kluszczyński

FROM FILM TO INTERACTIVE ART. TRANSFORMATIONS IN MEDIA ARTS

The following essay is an introduction to the history of twentieth century media arts, which outlines their transformations from film to interactive multimedia arts. My aim is not merely to analyze the process of substitution or complementation of the "old" media arts by newer ones, but also to focus on the persistence of the former, their reappearance in new technological contexts. I would like to make clear that the history of media arts involves an obvious interplay between textuality, technology and cultural institutions.

CINEMA FACED WITH THE CHALLENGE OF ELECTRONIC TECHNOLOGIES

The forms of filmmaking, the contexts in which contemporary film art functions, have undergone deep transformations. For cinema, the consequences of technological progress in the field of electronics and the increasingly frequent employment of new technologies in various areas of culture have been far-reaching and profound.

The tools used by filmmakers are changing, which in some cases (e.g. that of Peter Greenaway, David Larcher, or Zbig Rybczynski) has led to an advancement and consolidation of artistic attitudes and strategies which, although clearly present, were previously realized at the expense of enormous effort (Rybczynski) or were muted and sidetracked by the traditional properties of the film medium (Larcher, Greenaway). As regards many other film artists, one can observe certain sweeping transformations of their poetics and addressed issues. It is also easy to notice numerous innovations in the areas of image presentation, editing, and narrative structure. Not only does state-of-the-art technology equip cinema with tools allowing for a better (easier, faster) realization of traditional film tasks, but it also initiates (or deepens) changes in film strategies, creating new conventions, transforming genres, contravening traditional relations between reality and its audiovisual representations. That, in turn, leads to a formation of new recipient attitudes, transcending both the identification-projection model and the distancing conventions of Brechtian cinema. Modern electronic technologies are profoundly affecting the ontological structures of traditional cinema and film.

What is more, cinema is beginning to function in new communication channels. If televising films was responsible for transforming the extant models of recipient response to a cinematic work and for introducing the first changes in film poetics, then the invention of the VCR contributed

immensely to developing these changes, especially in the field of response mechanisms. Nonetheless, the genuine revolution is occurring at present, with the dissemination of DVD; its effects will have been felt even more strongly with the appearance of films which will make full use of the navigational, interactive qualities of the computer medium. It is interactivity, above all, which will play a major role in the future development of motion picture arts.

Today, film, for a long time the sole art endowed with the attribute of the moving image, must seek its identity in an unusual situation. Namely, it has become one of the many media for which the motion picture, combined with sound, forms the basis of communication. It must therefore make choices which will define its place in the complex, varied group of (multi)media arts.

At this point, one could risk the hypothesis that in the near future the heretofore heterogeneous (despite its internal diversity) evolutionary process of the cinema will diverge into at least two separate currents: one attempting to cultivate traditional principles and forms (new technologies being used merely to enhance or refresh the existing conventions) and another, comprising interactive cinema, obliterating current conventions and offering the

Zbigniew Rybczyński
Fourth Dimension
1988

recipient a strikingly different type of experience. Another possible differentiation, overlapping with the abovementioned one, will involve a development of interpersonal relations within the group of recipients in the case of films presented in public spaces and will strengthen intrapersonal communication, where the reception turns into an intimate, individual interaction with the filmic hypertext. Both tendencies are already represented by examples both numerous (especially with regard to the first trend) and valuable.

The sine qua non for understanding this process is the analysis of the very phenomenon of interactivity. Such an analysis ought to be more than

a reflection on the strictly phenomenal dimensions of interactivity, its vari-
ants, its artistic applications and their prehistory, the structure of individual
interactive works and the first emergent poetics; it should also delineate
the methodological context and justify the choice. It is hardly necessary
nowadays to emphasize the importance of the choice of language used to
describe the object of study.

CINEMA – FILM – THE NEW MEDIA

All (multi)media that have followed after cinema are a result of the devel-
opment in electronic technologies, which are currently becoming the main
factor behind the transformations in audiovisual culture and art, and which
are consequently – because audiovisuality plays a major role in the world
of today – the primary source of transformations in culture as a whole. The
so-called digital revolution is transforming nearly all areas of human activ-
ity. Therefore, it is also responsible for transforming the domain of art and
for creating new fields of artistic practice, in addition to transforming its
traditional variants, some of which boast a history dating back thousands
of years.

As a result of the developments in information-communication technolo-
gies and the emergence of electronic (multi)media, the situation of film/cin-
ema[1] – the first form of moving image media art – is changing to an extent
which far outweighs the intensity of all its previous transformations, which
consisted mainly in the additions of sound or color, or perhaps modifica-
tions in image parameters or audial standards. Those past transformations
did not violate the basic determinants of the cinematic apparatus, but rather
enriched it by adding several new qualities and modifying certain existing
ones. In contrast, the current changes in cinema/film are profound and fun-
damental; most importantly, they occur in several distinct dimensions.

Firstly, cinema itself is changing, assuming an entirely new shape: we are
witnessing the birth and development of electronic cinema and film. The
first and most immense impact of this transformative process seems to
be sustained by the textual-artistic aspect. Image structures, editing codes
and narrative discourse systems are acquiring a form largely defined by
electronic technologies and techniques. Simultaneously, while the analogue
diegetic systems – the result of the reproductive representing machinery,
which is the cornerstone of the traditional cinematic apparatus[2] – are being

1   For the purposes of this study, the term 'cinema' will denote, in keeping with the estab-
lished tradition (owing to its heterogeneity and internal diversity, however, each reference
to it inevitably becomes an interpretation, a choice of a variant) its basic apparatus and its
dispositive (these two interconnected instances of cinema will henceforth be termed 'ap-
paratus in a general sense'), whereas the term 'film' will apply to the textual-artistic aspect.
The basic apparatus is the sum total of devices, techniques and operations used in produc-
ing a film and creating its subject, and – in its broader meaning – an array of contexts that
are connected with them, i.e. social, cultural, ideological, economic, etc. The dispositive, on
the other hand, comprises the mechanisms, processes (technical as well as psychological),
their arrangements and contexts which jointly constitute the projection and perception of
the film. Together they form the institution of cinema; cf. Baudry, 1970; Comolli, 1971-72;
Heath, 1981; Kuntzel, 1976.
2   The principal effect of which is the blurring of the distance from reality in order to con-
ceal its being constructed rather than presented or reproduced.

replaced by digital simulations, a product of synthesis technologies, we witness changes in the ontology of the film text, the diegetic structure and the epistemological function of the cinema. Instead of the image of the world, electronic cinema offers the image-as-world. In consequence, considering the gravity of this transformation, it may seriously influence the character of the dispositive, including the course and the qualitative organization of perception (even if the basic apparatus in electronic cinema does not undergo particularly significant changes). Nevertheless, for the film's dispositive and perception to attain a new character, to accomplish the "unreality effect" or perhaps the "new reality effect" produced by simulation, its appeal must be stronger than that of the traditional function of cinema, i.e. creating an impression of reality. This, however, is not the case as far as most of the electronic cinema is concerned, from which one might infer that many qualities ascribed directly to the cinematic apparatus in fact derive from textual processes or relations invoked individually (in particular films or film types) between the apparatus in a general sense and the textual instance[3].

More and more frequently, cinema employs video means (electronic means), perfecting the possibilities of editing and – most importantly thus far – expanding the domain of audiovisual effects. This latter application of new technologies grossly enhances the aesthetics of film (chiefly the visual aspect), which accounts for the attention given them by countless filmmakers. These elements combined serve to move film towards the dispositive of television. Counter to this migration, however, many of the aforementioned artists who eagerly employ electronic means in their work (e.g. Peter Greenaway) believe that despite the emergence of the new forms of presenting film works, the best way to exhibit them is a cinema screening. According to Greenaway, electronic means were supposed merely to refresh and expand film art's possibilities of expression, to create new forms of shaping the image. The cinematic dispositive, however, should remain intact as far as possible.

Combining images of photographic nature with those generated by electronic means within the confines of a single film work brings results which extend well beyond the domain of film poetics. After all, the two forms of imaging are fundamentally different. A photographic image is an analogon of the reality that precedes it, whereas an electronically generated image is free of such restrictions: the reality presented may just as well emerge simultaneously with the image. In actual fact, a complete reversal of the relation described earlier may occur, with reality acting as an analogon to the image. When the two image types, the photographic and the digital, appear alongside each other, the upshot is an upsetting of the relation between reality and its representation as well as between fiction and the systems constructing it. The relations between reality and fiction are also affected thereby. Not only do digital synthesis and photographic film differ in their ontology, but they are also subject to different metaphysics.

Secondly, as mentioned above, the context in which cinema functions is undergoing change. Film (and indirectly its assigned apparatus) enters

3   Another aspect of this situation is a certain virtualization of reality, which appears to be the long term effect of the media worlds' existence and their influence on the perception of reality.

the domain of the television program, the videotape, the laser disc, or – in response to our requirements – it reaches the television screen (display), integrated with a multimedia computer, via a fiber-optic telephone line. The consequences of entangling film in dispositives alien to it extend beyond the simple effects resulting from a transfer into new dimensions and require a separate analysis of each case type. The properties of the dispositives integrated in this way are mutually influential, leading to modifications and often – ultimately – merging to form intermedial, hybrid dispositive structures (e.g. a video projection). The frequency with which these processes occur, as well as the range of their influence, is responsible for the contemporary (multi)media being dominated by the intermediality syndrome. The deep structure of the multimedia – the basic contemporary form (and institution) of communication – is essentially an intermedial system, which,

David Larcher
VideoVoid
1993
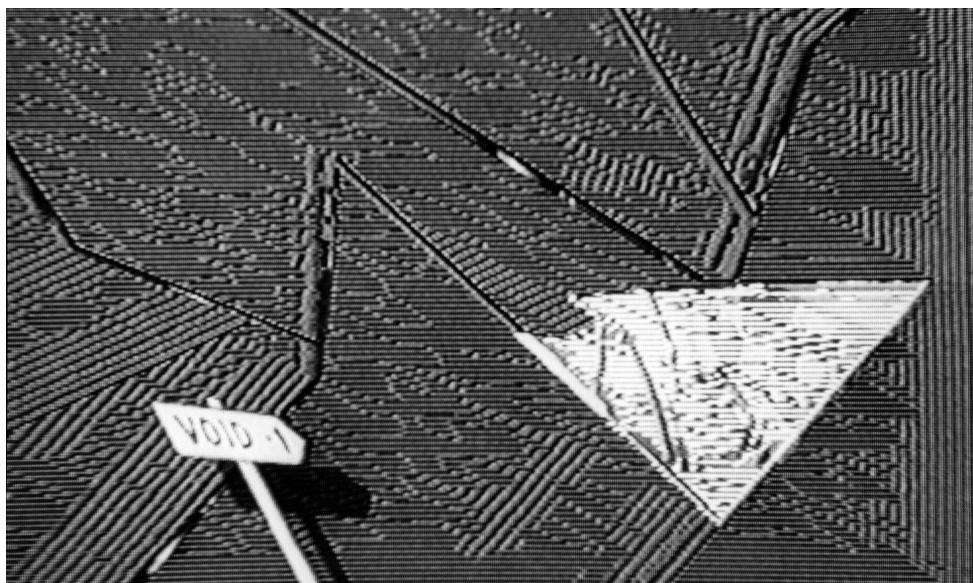
in further consequence, gives the (multi)media phenomena the character of a dynamic palimpsest.

The abovementioned functioning of film and, consequently, also of cinema, in new contexts leads to even further changes, which transcend the borders of substantial and ontological transformations. They certainly do not remain confined to the limits of film poetics, but instead reach towards film structure as a medium, transforming the methods of reception in addition to offering new forms of experience and comprehension. The previous paragraph emphasized the processes of the media dispositive integration, and the subsequent emergence of hybrid structures; as a consequence of this gravitating towards hybridity, the cinematic dispositive – if one attempts to grasp its peculiarity and realize it in extracinematic perception – reveals numerous fissures and deformations. In this transformed situation in which the cinematic apparatus is now functioning, also the films themselves are

experienced differently; similarly, the new situation influences the textual orders.

The new audiovisual media, developing parallel to cinema/film and entering into various relations with it, affect its structures and forms, as has been said above, but also undergo transformations themselves. As a result of this interference, film transcends its borders, appearing in video realizations, various forms of virtual reality and computer games. The preceding paragraphs focused on the transformations of the cinematic dispositive, resulting from its intrusion into other dispositives; however, we ought to remember that film textuality has proliferated beyond the domain of cinema. Artistic realizations belonging to the domain of video art, or the diverse multimedia art, as well as popular computer games, draw on the resources of cinema. The film-specific codes of image construction, editing, narration, dramaturgy, character development and plot structuring constitute the basic articulation system of (multi)media audiovisuality.

Thirdly, the development of interactive computer technologies calls into existence various forms of interactive cinema/film, spiritually rooted in the theory and distancing practices of Brechtian cinema, but divergent from it both on the level of actually created structures and in the character of the demands imposed on the recipient. The basic apparatus of interactive cinema and its dispositive differ immensely even from the unconventional varieties of the traditional cinematic apparatus.

What must be strongly emphasized at this point is the fact that 'interactive cinema' is essentially a term comprising an array of discrete varieties, which often differ radically. The mainspring of this differentiation is the invariance of the dispositive, conditioned by the abundance of interfaces[4] and the profusion of applicable techniques. This diversity means that interactive cinema retains close intermedial relations with installation art, CD-ROM/DVD art and computer games.

Progress in the field of interactive technologies of virtual reality (VR) creates a prospect of further, profound transformations in the structure of film experience, allowing the recipient/user (now frequently termed 'interactor' or 'visitor') to immerse himself or herself interactively[5] in the telematic (i.e. creating an illusion of bodily presence in remote locations) virtual world of the work. The basic attributes of VR apart from real-time interactivity, i.e. immersivity and telematicity, expand certain vital properties of the cinematic apparatus; thus, virtual reality – enhanced by the textual qualities of film – potentially becomes the most crucial continuation of cinema in the field of the multimedia.

Fourthly, and finally, the Internet – by introducing networks into VR technologies – creates new directions of development for the potential net-based form of interactive, virtual cinema. The principal aim seems to be to

4   This term is understood here as a channel of dialogic communication between the recipient/interactor and the artifact, as the device enabling interaction. The basic function of an interface is the creation of communication possibilities between parties employing different languages.

5   The immersion of the senses means that the subject assumes – within limits defined by the engaged senses – the internal (diegetic) point of view.

establish the possibility of a telematic, multi-user participation in the virtual world thus conjured, which would turn all recipients into active, reciprocally interactive film characters. Today, such a vision seems to belong more in the cyberpunk novel[6] than in the domain of serious research. It must be observed, nonetheless, that though multimedia technologies are still in their infancy, the rapid pace of their development can let us assume that what we regard as merely potential nowadays – a futurological project – may actually be realized sooner than expected. Making predictions in this field, as long as it is based on a correct analysis of the development possibilities available to the multimedia apparatus, an analysis conducted in the context of its history, is not entirely unfounded. The joint research project of British Telecom, Illuminations Television and the University of Nottingham, known as "Inhabited Television" and conducted under the supervision of John Wyver, which combined television broadcast with virtual reality, allowing the viewers to telematically inhabit the bodies of the characters participating in the events that occur in one particular virtual time-space, may be considered as the first attempt at merging television, the Internet, cinema and virtual reality into one coherent whole[7].

Let me conclude this fragment of the discussion at hand with the following remark. All the processes detailed above contribute to a severe detachment of film (and predominantly cinema) from its previous, "unexpanded" structure. Traditional cinema is losing its former, dominant position in the landscape of contemporary audiovisuality. At the same time, scattered in a diaspora of sorts, the properties of cinema and film not only persist, but are even developing, practically unperturbed. In consequence, we are currently facing not so much the final obliteration of cinema and film, but rather an ever more likely possibility of its further dispersion and dissolution among the plethora of the media increasingly remote from it, the forms marked by less and less similarity. Cinema – the source of audiovisual art – is slowly ceasing to be its goal, losing the autonomy of defining and delineating its paradigm. Nevertheless, cinema is still active in shaping new forms of audiovisual arts.

TELEVISION AND THE VIDEO

As stated above, television and other new electronic (multi)media – entering the domain of the moving image, previously occupied exclusively by cinema – carry their own distinct ontology and logic of structural

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6   Parenthetically speaking, contemporary researchers of cyberculture regard cyberpunk novels as a highly legitimate source of information concerning postmodernism and the social transformations occurring as a result of the emergence of new information-communication technologies. An extreme opinion in the matter is held by Doug Kellner, who contends that cyberpunk fiction offers far more insight into postmodern processes than the work of cultural critics such as Jean Baudrillard (Kellner, 1995). A more balanced view is that of Mike Davis, who argues that William Gibson's novels and short stories are excellent examples of science fiction functioning as a prefiguration of social theory (Davis, 1992).

7   In the preface to the presentation of *Out of this World* (the first, prototypical realization employing the "Inhabited Television" technology, performed in The Green Room Gallery, Manchester, on the 6th and 7th of September, 1998, as part of the 9th International Symposium of Electronic Arts), John Wyver himself remarked that the event was tantamount to the birth of a new medium.

organization, in addition to inspiring new recipient behavior. The range of these innovations depends on the particular medium, since they manifest themselves in various aspects of the work and vary according to the situation in which the reception occurs; likewise, the transformations in different media are often incomparable. The video, or computer-generated animation, while introducing a new ontology into the domain of audiovisuality, retains the domination of the work's structure over the process of reception that is characteristic for film, whereas the art of interactive multimedia overturns this hierarchy, offering entirely new methods of organizing the process of artistic communication.

Television and the video share the ontology of the image. The remaining aspects of the two, such as the dispositive, bear a limited resemblance to each other (their possession of common features alongside the qualities that are decidedly dissimilar results in the entire system's attaining a different character in each instance). The image serves different purposes in the two media: in the case of the video, it is "within reach", and touch unexpectedly becomes the sense of fundamental importance. The video is a medium of intimacy, of close contact, encouraging intrapersonal communication. As far as television is concerned, the substance of the image and sound, as well as their ontic structure, serves the function of transmitting (transferring between remote points) audiovisual information concerning events occurring in distant locations but made manifest in real time, or of presenting previously prepared programs. Telepresence – the basic quality of television as a medium of communication – is becoming one of the crucial qualities (i.e. categories) of electronic art. A television presentation (transmission) of a film transforms the medium into a sort of home cinema (tele-cinema).

The emergence and development of the video has influenced the situation of the cinema theatre more than that of film as such: the most fundamental changes offered by the video, as a new medium of cinema/film, concern the dispositive, while the least important transformations have occurred in the area of film textuality. The range of innovations introduced by the video proves to be much broader when one considers the reception process rather than the structure of the work and the poetics of film. The invention of the videotape introduced new possibilities of the reception occurring in private space, at home, in circumstances far removed from the classical cinematic reception, and yet entirely different from the standard television-watching (i.e. viewing a film included in the program). In the case of the video, the cinematic spectacle – the presentation of the film – has been replaced by a process which might be described as 'reading' the film. The condition of the viewer in the cinema has been compared to that of a person immersed in a dream; this, among other things, accounts for the specificity of the cinematic processes of identification-projection. In contrast, the reception in domestic circumstances is characterized by dispersed attention, observed already by Walter Benjamin. As a result, the consciousness of someone watching a film on a video display is far less dominated by the cinematic world and the magic of participation than if he were viewing the same film during a cinema projection.

The liberation of the viewer from the sway of the cinema screen is facilitated by the susceptibility of tape-recorded film to various kinds of

manipulation: stopping, fast-forwarding, playing the film in slow motion or rewinding it. The recipient has therefore acquired a means of influencing the course of his experience ('living' the film). Thus, the structure of a film viewed with recourse to the video dispositive loses – within the limits of the recipient's experience – its finality and inviolability (although the finality of the film's shape is still invariably inscribed into its definition).

This property of the video dispositive is perhaps what makes it essentially different from the cinema. Seen from this perspective, video art appears as yet another stage in a transformation process tending towards interactive art. As has been said above, the reception of film has transmogrified into reading, a linear (yet irregular in its course), multifunctional process of perception and comprehension.

Similarly to the past, when, after valiant efforts seeking to negate the new medium, cinema finally acknowledged television as an alternative method of disseminating film production, parallel to cinema distribution, it has now accepted the video as yet another cinematic medium (a film medium, to be precise). The expansion of the domain in which film functions has caused a peculiar split (stratification) in video textuality, leading to the appearance both of genuine video realizations (effected by means of this medium) and the transfer of cinema films onto videotape. It is here that one can trace the origins of the process which has ultimately led to the blurring of the borders between the two media (i.e. between a film work and a video work). In addition, it is worth emphasizing the consequences of the invention of the video projector: with its help, video realizations may be shown to large audiences, in spacious rooms, in the conditions resembling a cinema séance (involving screening rather than emission). Although the image quality in video projections is still far removed from cinema standards, perfectly credible promises of eliminating this obstacle are currently being made. In this way, among others, the cinematic system is attempting to absorb the video and make it the future of cinema. As stated above, this type of intermedial connections is encountered very frequently in the contemporary world.

INTERACTIVITY – DECONSTRUCTION – CYBERCULTURE

Placing computer technologies at the disposal of motion picture arts has created entirely new possibilities. Moreover, if we assume that the essence of each art form is defined by its distinctive features (or a system offeatures), then computer art begins a new chapter in the history of artistic culture[8].

Interactivity – appearing in its very rudimentary form in the case of the video, or perhaps appearing merely as proto-interactivity, a possibility of

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8   Despite an ontological perspective distinct from cinema and the video, computer animation, restricted as it is – similarly to the video – to producing moving images, remains part of the previous epoch, merely enhancing the expressive means characteristic for the two aforementioned media. This hypothesis was confirmed very forcibly, though perhaps unwittingly, by Yvonne Spielman in her paper entitled Is there an Avant Garde in Digital Art?, presented during the 9th International Symposium on Electronic Art, Liverpool-Manchester 1998. The attempt to isolate the defining qualities of digital arts by referencing exclusively the video and computer animation resulted in conclusions to the effect that there exists an aesthetic proximity (or even adjacency) between digital media arts and analogue media arts.

recipient behavior, motivated not so much by the work's structure as by the manifold needs of the viewer (including extra-aesthetic ones) – may acquire its full-fledged form in computer art. This means that interactivity is becoming the internal principle of the work, and the recipient – if s/he is willing to concretize it – must undertake actions which will result in forming the object of his or her perception. Interactivity in art, understood as a dialogue of sorts, communication between the interactor and the artifact[9], occurring in real time and mutually influential, is becoming one of the essential features of contemporary culture[10]. Interaction calls into being a peculiar work of art – theoretically (and, with increasing frequency, also practically) unique in every instance of an individual, creative activity of the recipient-interactor. We are faced with a reversal of the ontological order of the elements constituting

Luc Courchesne
Potrait One
Interactive installation
(laserdisc)
1990

Photo: Bertrand Carrière

the process of artistic communication. What is created in the first place and as a result of the artist's activity is the context of the work and not the work itself (in the traditional sense). The artwork emerges afterwards, as the prod-

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9   Artifact, in reference to interactive art, is here taken to mean the product of an artist's creative activity, a structural connection of selected elements (and aspects) of the dispositive and the interface. Seen from another perspective, the artifact is the structure of the hypertext, including the material constituting its basis: images, sounds, texts, i.e. the foundation of a work's textuality. Therefore, the artifact also fulfils the function of the work's context. The context-artifact is the product of an artist, who – instead of presenting the viewer with a traditional artwork, a meaningful object of interpretation and a source of aesthetic experience – creates a space for interaction; see Kluszczynski, 1997.
10   If 'interaction' is interpreted more generally and the notion of the artifact is not restricted to artistic references, interactivity appears as the crucial feature of all communication processes; communication, in turn, attains the status of the principal social relation. As a result, the social structure itself must be termed 'information society'; cf. e.g. Lyon, 1988; Jones, 1995.

uct of the recipient, created by him/her within the context delineated by the artist.

One may assume that both objects, i.e. the artifact and the work of art, connected by the interactor's receptive-creative actions, jointly constitute the final product of complex, multisubject artistic practices. Thus, the product acquires a processual character, becoming a complex communicative situation rather than a subject structure, while its organization may possess the character and order of a game (in the broad sense of the term). This final creation may be called – in keeping with tradition – a (broadly understood) work of art. Alternatively, it may, more adequately to the character of interactive art, be termed a field of interactive artistic communication. The situation also occasions the following question: to what extent, if any, is the process which has driven artistic practice towards its present state the peculiar apex of the tendencies leading towards the dematerialization of art, towards substituting the art object with a (hyper)text or a complex of (hyper)textual practices?

In the reflection on cyberculture and the assorted phenomena that constitute it (the most prominent among which is interactivity as such, as well as the interactive media arts), one may observe two radically opposing tendencies[11].

The first current draws together those who would like to consider interactive art in the context of earlier concepts of art and with reference to the basic categories that construct the traditional, modernist aesthetic paradigm. The principal dogmas of this system are representation, expression and the conviction that the artist-author dominates over both the artwork itself (the most characteristic view being that art equals whatever is designated as such by an artist) and its meaning (content), which is ultimately tantamount to the domination over the recipient and the perceptive-interpretative process. As a result of such an attitude towards interactive art, the experienced interaction is discussed not in terms of communication with the apparatus/artifact (or an artificial, intelligent system), but is seen as an intermediary interaction with the human (or humans) who made the work or its software. The communicative possibilities of such an interaction ought to be evaluated – according to Margaret Morse (1993) – according to the standards of human communication. This kind of attitude can be identified in countless remarks on the subject of interactive art, regardless of the language used by the authors and of the amount of the new terminology they employ (which is constructed and used primarily to point out and describe the new properties of the contemporary condition of art and culture). Very frequently the inventive, innovative character of these categories is annulled

....

11   These tendencies are radically opposed on the theoretical plane, as different models. In research practice, however, elements belonging to both models may appear within the same program. This may stem from a lack of theoretical precision on the part of the particular author, or – a more likely possibility – from a paradigmal instability of the contemporary reflection on art as a result of its remaining at the stage of fundamental transformations.

in an attempt to adapt them to the requirements of the traditional aesthetic paradigm.

The representatives of the other trend are characterized by a proclivity to overemphasize those aspects of the new artistic phenomena which transcend traditional canons and which tend towards their cancellation. According to these critics, the crucial feature of cyberart and cyberculture is the abandonment of the idea of representation. Such a view leads to a radical transformation of the role assigned to the artist, who – instead of creating, expressing and communicating content or meaning – becomes a designer of contexts in which the recipient is to construct his or her experiences, their

Paul Sermon
Telematic Dreaming
Installation
Biennale WRO 2000

references and meanings (Ascott, 1993).

A significant philosophical-methodological context for a discussion of interactivity and interactive art, particularly useful in analyzing the above juxtaposition of the tendencies in cyberculture research, is provided by the deconstructivist philosophy of Jacques Derrida.

One of the principal assumptions in Derrida's theory is the claim that the logophonocentric attitude (logocentrism – a tendency towards meaning, sense; phonocentrism – the prevalence of spoken language over written text) as a method of approaching text, language, communication and interpretation, has thus far been the dominant – if not the only – mode in Western culture (Derrida, 1972). This stance is expressed in a conviction that the meaning of everything that exists was defined once and for all as presence (only what exists can be thought and expressed), and therefore remains eternally precedent and superior to any attempts at objectification/materialization (Derrida, 1967). Thus, an interpretation of a text is reduced to decoding the sense already present, differing from the text and essentially "extraneous" to it. The meaning dominates over the text and conditions it;

the text functions merely as a neutral (more or less transparent) vehicle for the meaning prior to it.

Generally speaking, a classical logophonocentric interpretation reduces a given work, employing categories of representation and expression, in search for the work's ultimate truth or the intentions of the creator. Communication is therefore understood as conveying readymade meanings by various methods. The identity and presence of the subjects of the communication process (the author/sender and the recipient) are assumed before the communicative operation commences. The object of communication – the message and its meaning – cannot be established or modified during the communicative process. The notion of communication is inextricably linked to the function of representation and expression, since representational thinking precedes and governs communication, which merely transmits ideas, meanings and content. Thus, communication equals conveying what is already known.

The attitude towards interactive art which was presented above as constitutive for the first of the two tendencies is rooted in this above theory, which is here termed 'modernist'. Obviously, nowadays it seldom manifests itself in its extreme form; the majority of the theoreticians asserting their connection with the traditional aesthetic paradigm agree that the meaning offered to the recipient by an interactive work is largely modified in the course of the reception (the same researchers, however, are reluctant to accommodate the notion of meaning as a never-ending process). In their theories applying to interactive art, the domination of meaning over the work's relational (i.e. communicative) structure is not as pronounced as in more traditional artistic forms; their proponents draw the line at accepting meta-interactivity as a sine qua non of a work's artistic dimension[12]. The interpretation of an artwork is also liberated from the supremacy of meaning established/communicated a priori, while the rigors of communication are considerably softened, producing what one is tempted to call open communication. The "softening" and "openness" notwithstanding, the essence of the phenomenon remains unchanged: according to the theoreticians of this tendency, the process of interactive artistic communication occurs predominantly in the shadow of the Author and his primal, fundamental presence. Not only does the authorial presence transform an object into art, but it also suffuses the work with meaning and value, defining – in a somewhat softened form – all aspects of the interaction.

Derrida's deconstructivism, on the other hand, appears as a methodological matrix for the type of reflection championed by the second tendency outlined above. This theory releases the artwork from all dependency (derivativeness) in relation to any communicated (aprioric) meaning: the work occupies the primary position. Attention is paid to its structure, the process of its formation. Understood in this way, the work of art requires a different type of reception – an "active interpretation", resembling a game, promoting a transformative activity oriented towards "non-finality", "non-ultimacy". The reading of the sense is replaced by a creational reception of the work, i.e. navigating through the artifact (hypertext). The work, therefore,

12   Interestingly enough, this notion is accepted by representatives of both tendencies.

as a communicative process, assumes the character of a game (the rules and the roles, nonetheless, need not be ultimately or explicitly defined). The epistemological function is here complemented by the auto-epistemological aspect, while comprehension assumes the form of co-participation. Creative reception – communication – is a process of creating meaning, a significantly creative activity. Ultimately, both processes merge into one common syndrome.

Interactive media art appears to be the perfect example of the new, deconstructive, postmodernist, cybercultural understanding of an artwork and of artistic communication. Rejecting traditional dogmatism, it does not substitute it with a new scheme which petrifies the world of art. Derrida did not replace logocentric ideology with graphocentrism, but reduced the role of the author to one of the interpretative contexts; similarly, interactive art has demythologized the role of artist-as-demiurge, ascribing to him the function of context designer who prepares the ground for creative reception. Presently, the notion of the author is being replaced with the notion of dispersed authorship – the joint aim of the so-called artists and the so-called recipients. Seen from this angle, art is no longer a form of presenting a readymade, finalized and a priori given world. To construct art in cybersphere, according to Roy Ascott, is to construct reality, to design cyberspatial communication systems, which support our desire to strengthen human collaboration and interaction in an endless process of constructing the world (Ascott, 1993).

There is much adjacency between deconstructivist philosophy and the logic of interactive multimedia arts. One may infer that deconstructivism could become the methodological context for the research of interactive arts and cybernetic culture. Deconstructivist categories seem capable of grasping and enabling the analysis of all new features found in interactive multimedia arts. With their help, interactive communication may free itself from the traditionally understood notions of representation and expression, from the idea of meaning preceding communication, as well as from the modernist interpretations of concepts such as the author and the recipient. Interactive artistic communication could thus become a multidimensional, multiform, unceasing process in which values and meanings, as well as new realities, are created in cooperation.

Both strategies of comprehending interactive art, discussed above, ought to be perceived in terms of theoretical models. As models, they may indicate the most general properties of cyberculture and of the interactive media arts, as well as the most universal methods and techniques of their interpretation. Nonetheless, the space delimited by these two polarized perspectives contains a plethora of notions, theories, actions and works. One can encounter there artists working in the area of interactive arts and concurrently believing their duty to be the expression of their own views and the shaping of human minds; one can also find critics and theoreticians who, by analogy, claim that every artwork (the interactive ones included), is exclusively (or primarily) an extension of the artist's imagination, sensitivity, knowledge and desires. However, there is no shortage of artists and researchers who contend that

interactivity is tantamount to sharing the responsibility with the viewer and liberating the work of art from all its ties, including that to the artist.

It ought to be emphasized that the juxtaposition of the two models proposed above is not explicitly crypto-evaluative. We are faced with two different projects of introducing interactivity into the realm of culture; concerning their value, we may only state that the project allowing the recipients to act in a space characterized by reduced authorial restrictions, respects the internal logic of interactivity and leads to the emergence of "pure" interactive artifacts. Concurrently, we may observe that this is the only way which could lead the recipient towards a truly creative position, one that fulfils the expectations regarding interactive art. The other project, on the other hand, is an endeavor to situate interactivity in the context of the modernist theory of art and culture, with all its attendant categories and principles. In this case, nevertheless, the creativity of recipient behavior – perceived as broadly as it is customary with regard to interactive art – appears to be little more than wishful thinking. With reference to this type of interactive art (and this type only), one may concur with Mona Sarkis, who argues that the user of interactive artistic forms is not transformed into a creator, but rather resembles a puppet that executes a vision programmed by the artist/technician/software developer (Sarkis, 1993).

INTERACTIVE ART – HYPERTEXT ART

The new media (multimedia), functioning in accordance with the principle of interactivity, have therefore accomplished an interiorization of deconstructivist logic. As a result, considerable shifts have occurred as regards the roles and the range of their respective competences. The artist-author ceases to be the sole creator not only of the work's meaning, but also its structure, its shape; the work is thus being co-created by the recipient in a process of interacting with the artifact. The artist's task is now the creation of this artifact: a system/context, in which the recipient/interactor constructs the object of his/her experience, as well as its meaning. The recipient is no longer merely an interpreter of ready meaning which awaits its comprehension, or a subject perceiving a finalized material artwork; it is on his/her activity and creativity that the structure of the renewed aesthetic experience hinges. Let us therefore restate that both the structure of the work and the evoked meanings are co-created by the recipient, who thus becomes a (co-)creator.

However, the interactive works currently created, like our entire culture, exist under the influence of both paradigms: the modernist and the postmodernist. As a consequence, and depending on which of the two is more prominent in a particular case, the resulting works are to a larger or smaller extent the artist/author's form of expression and (in an inverse proportion) the outcome of the recipient/(co-)creator's activity. Despite this duality of paradigmatic references and the resulting compromises, the influence of interactivity is broad enough for researchers to admit that the situation encourages the establishment of new research tools and their accompanying rules of application. Within the framework of this freshly-designed research, particular attention would be paid to those features and ingredients of the

new aesthetic situation which concern the relation between the individual participants of artistic communication, and to the questions of artwork analysis and interpretation.

Interactivity is the fundamental feature of the general process which leads to transformations both in the substantial and the semantic status of art. As mentioned above, the process occurs as a result of – among other things – separating the work from the artifact and the latter becoming hypertextual in character.

Regardless of the complexity of its internal organization, the text always offers a determined (linear) direction (route) of exploration. Above, this method of interpretation has been called 'reading'; its ultimate goal is the discovery of the work's (text's) meaning and the revealing of its as yet hidden entirety. Conversely, hypertext – a multilevel, multielement structure – does not determine or privilege any direction of analysis or interpretation (i.e.

Camille Utterback, Romy Achituv
Text Rain
1999

Romy Achituv presenting his installation, WRO 01 Biennale

comprehension). The journey through it is termed 'navigation' (cf. e.g. Barrett, 1989; Berk, Devlin, 1991; Bolter, 1991; Aarseth, 1997).

It is predominantly the structure of the hypertext – along with the material which fills it: the images, texts, sounds – which becomes the object of the artist's creative work (in addition to the interface and the elements connected with the genre of the realization). Hypertext in its entirety, however, is never the object of the recipient's perception or experience, but rather – as mentioned above – the context of this experience. The technical-constructional characteristics and the properties of the medium employed by the hypertext artist delineate the standard circumstances of reception, in which the hypertext user, repeatedly faced with the necessity of choice-making and actualizing the selected elements, exploits only a slight portion

of the work's potential. The sum of these choices defines the work – the joint product of the artist (provider of material and choice rules) and the recipient (selector of material and creator of the work's structure).

It is tempting to risk the statement to the effect that interacting with a hypertext transforms it into a text, since the ultimate result is invariably a complete, finalized structure – the upshot of the recipient's selections. Such a statement, nonetheless, would be incorrect: the recipient/hypertext-user, who perceives the outcome of his/her interaction, i.e. the work, also experiences his/her own choices, as well as their contexts (the software, the interface, the spatial arrangement, etc). When s/he considers the navigation

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concluded, and decides that the result is the final work, s/he also experiences (often consciously) the non-finality, non-ultimacy inscribed into the nature of interactive art.

It could therefore be argued, and much more validly, that if the work were to be equated with the text, then in the case of interactive art we are not dealing with a work of art at all. Consequently, we must decide whether hypertext ought to be treated as an artwork (albeit one whose entirety cannot be grasped in an aesthetic experience), or perhaps agree with the verdict that the work does not exist, or, finally, assume that interactive art invokes a new type of artwork: one which materializes exclusively during a receptive (creative-receptive) interaction and is not identical with the result of the artist's creational actions. Moreover, it is not intersubjectively identical,

seeing as each recipient experiences the unique outcome of his/her own interaction[13].

One may also argue, as previously in this discussion, that the ultimate object of analysis is not the work itself, regardless of the definition, but the field of interactive artistic communication, where the work, along with other elements (the artist, the recipient/interactor, the artifact, the interface) becomes entangled in an intricate, multidimensional complex of communication processes.

In the domain of interactive art, which employs the structure of hypertext, the analytical-interpretative issues take an entirely different form. It is difficult to speak of analyzing a phenomenon that only exists during the process of reception, since one of the premises of analysis is a certain durability of the work under inspection, the repeatability of its experience, as well as the possibility of returning to the analyzed object. The same is true for interpretation; both procedures ought to be verifiable to a certain extent. What is more, both analysis and interpretation assume the immutability – even a limited one – of the examined object, the persistence of its meaning. None of these requirements can be met, however, by a consistently interactive work, as it endures only at the time of the interactive process. A subsequent activation of the hypertext, even performed by the same recipient/interactor, is bound to conjure a new work. Both the analysis and interpretation of an artwork thus understood must be parallel to the process of its reception, its (co-)creation; it must be identical with it. Reception, creation, analysis and interpretation become one and the same complex of processes, occurring in the field of artistic communication.

It is only natural, given the circumstances, to doubt the necessity and validity of analyzing and interpreting a work of interactive art. These procedures, understood traditionally, seek their justification in epistemological and educational needs. If the knowledge produced by them is not intersubjectively verifiable, and its object is not intersubjectively available, the same analytical-interpretative actions lose their status of isolated, autonomous critical or scientific procedures. They might then be treated merely as a peculiar manifestation of the work's autotelicity, a symptom and proof of its internal meta-discourse, since the work appears in the process of its creative reception, or – to formulate this hypothesis more radically – the work is identical with its reception. Therefore, logically, it is identical with its interpretation.

What remains as the possible object of analysis is the aforementioned field of interactive artistic communication. These problems, however, shall be discussed elsewhere.

The number of interactive works produced today is increasing with inconceivable speed. The works do not represent only the two model attitudes discussed above, but we are faced with a multitude of realizations resulting from the concurrent influence of the two indicated paradigms. Interactivity

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13   Obviously, these remarks refer to a model work which would fully respect the logic of interactivity. In the case of a realization influenced by both paradigms – the modernist and the postmodernist – the situation is more complex. In order to describe it adequately, one would be forced to combine the research tools specific to each of the indicated perspectives.

is becoming the essential and most representative property of contemporary culture. Both of its models affected very seriously the artistic practice of the twentieth century's last decade and the beginning of a new one, and there is no reason to suppose that either will disappear in the foreseeable future, since contemporary culture is becoming increasingly more, rather than less, diverse.

What this amounts to is not merely the coterminous functioning of a wide spectrum of interactive works, but also their coexistence with the works belonging to the non-interactive and proto-interactive culture. Among the latter, one may encounter numerous qualities, notions and structures which prefigure interactive art and culture. From the contemporary perspective, we may even observe a certain sui generis logic in the development of forms, attitudes, concepts and theories which comprise the process leading from the neo-avant-garde (the happening, Conceptualism, Fluxus, etc.) towards the current paradigm of electronic, digital, interactive, multimedia culture.

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William Moritz

THE ABSOLUTE FILM

The term 'Absolute Film' was coined by analogy with the expression 'Absolute Music', referring to music like Bach's Brandenburg Concertos which had no reference to a story, poetry, dance, ceremony or any other thing besides the essential elements - harmonies, rhythms, melodies, counterpoints, etc.-- of music itself. Cinema even more than music seems dominated by documentary and fiction functions, both of which relied on film recording human activities which had their primary existence and meaning outside the film theatre. Absolute Film, by contrast, would present things which could be expressed uniquely with cinematic means. Other terms for this film genre sprouted everywhere: 'Pure Cinema' (which was purely cinematic), 'Integral Cinema' (Germaine Dulac's phrase, using 'Integral' in the French sense of 'Wholly and completely') and finally the two socio-political terms 'Avant-Garde' and 'Experimental', the first of which unfortunately implies military scouts invading enemy territory and the second of which sadly implies the filmmaker groping for some unclear result.

The most unique thing that cinema could do is present a visual spectacle comparable to auditory music, with fluid, dynamic imagery rhythmically paced by editing, dissolving, superimposition, segmented screen, contrasts of positive and negative, color ambience and other cinematic devices. Already in the 1910s, the Italian Futurists Arnaldo Ginna and Bruno Corra made at least nine films, painting directly on the filmstrip not only non-objective pieces (the gradual takeover of the all-green screen by a red star, playing with afterimage) but also taking a divisionist painting by Segantini (a girl lying in a field of flowers) and re-painting it on frame after frame of the film to allow the colored dots to vibrate even more brilliantly than on the canvas. Unfortunately these films are all lost, as is the German Hans Stoltenberg's film painted directly on the filmstrip about the same time. Other artists made plans for abstract films that were never realized: Leopold Survage (Parisian-based friend of Picasso and Modigliani) painted several hundred sequential images, 'Colored Rhythm', in full color on paper, with the hope that they could be filmed, but he was unable to find an adequate color process before World War I put an end to his project. Likewise the Polish artist Mieczyslaw Szczuka drew numerous sequential images on scrolls of paper, and published two fascinating samples in 1924, just a couple of years before his death, but was apparently not able to get them filmed.

Walther Ruttmann was the first filmmaker to finish an Absolute Film and distribute it in public cinemas. A painter and musician by training, Ruttmann renounced his abstract oil painting in 1919, declaring film to be the art-medium of the future. He mastered the techniques of filmmaking, and prepared his first film 'Movie Opus I' with single-framed painting on glass and animated cutouts. The film was colored by three methods-- toning,

hand-tinting, and tinting of whole strips-- so there was no single negative, and each print had to be assembled scene by scene after the complex coloring had been done. An old college buddy Max Butting composed a musical score for the finished film, and Ruttmann himself played the cello in the string quintet that performed live with each screening at several German cities in the Spring of 1921. Ruttmann made three more Opus films, but used simpler tinting and did not prepare special music so that the films could be more easily and widely screened.

Oskar Fischinger saw the rehearsals that Ruttmann made with 'Opus I' in Frankfurt before going on tour. He decided to devote himself to making a comparable Visual Music, but carefully avoided using the type of painterly images that the elder Ruttmann had already used so well. Fischinger experimented with slicing wax and clay images, with models and silhouettes, and some drawn animation. Many of his earlier films were collaged in the 1926 multiple-projection performances that Fischinger prepared first for Alexander Laszlo's Colorlightmusic concerts, but then continued independently in Munich in 1927. Fischinger used five 35mm projectors, three of them forming a triptych, while the two additional projectors laid extra color effects over them. He also employed slide projectors to project painted geometrical images above and below the film triptych, and some ordinary stage lights to give changing color ambience to the proscenium.

The Swedish painter Viking Eggeling independently decided to make his non-objective paintings into films so that the musical qualities of time and interaction could be incorporated. He did not believe that the resulting film should have a musical sound played with it, but rather that the imagery should be built on the same principles of harmony and counterpoint that auditory music followed, and therefore would be a pure visual music that needed no sound to satisfy completely. In 1921, his first scroll drawings for a film called Horizontal-Vertical Orchestra were shot onto film by technicians at the UFA studios, but the results lasted less than 30 seconds, since his laborious, complex drawings were essentially what animators would call a 'storyboard', images of key changes without enough 'in between' drawings to give them a sense of true movement or transformation from one image to another. At that same time his friend Hans Richter also had a scroll drawing filmed, and it also made hardly half-a-minute of screen time, but Richter went ahead and showed it under the title 'Film is Rhythm' - once to a critic in Paris who took his glasses off to clean them, and found the film over before he got his glasses back on. Eggeling began making scroll drawings for a second film, 'Diagonal Symphony', adding many more images, but still not enough for genuine animation. A young Bauhaus student (who later became the celebrated photographer Re Soupault) met the ailing Eggeling in 1924 in Berlin, and figured out how to animate his imagery: she cut out the shapes from tin-foil, then snipped away tiny increments from the form, shooting a single-frame after each cut, making the shape appear or disappear by shooting forwards or backwards, or grow larger and smaller by moving the camera closer or farther from the artwork. She finished the film only weeks before Eggeling's death.

On May 3, 1925 the UFA Theatre on Kurfurstendamm in Berlin hosted an historic matinee screening THE ABSOLUTE FILM, which included a live

performance of three 'Color Sonatinas' by Ludwig Hirschfeld-Mack of the Bauhaus, using a 'color-organ' instrument he had constructed called the Reflectorial ColorPlay. Viking Eggeling's 'Diagonal Symphony' received its public premiere (Eggeling was unfortunately in the hospital, unable to attend). Walther Ruttmann screened his 'Opus 3' and 'Opus 4'. [Hans Richter's 30-second 'Film is Rhythm' had been listed on the program, but when Richter realized the scope and complexity of Ruttmann's and Eggeling's films, he withdrew his little test]. Rene Clair's film 'Intermission' had been shot as an intermission feature for the Dada ballet 'No Performance Today' designed by painter Francis Picabia with music by Eric Satie (both also appear in the film, along with Man Ray and Marcel Duchamp, and the lead dancers from the Swedish Ballet, who had given 'No Performance Today' its premiere in Paris in the fall of 1924). Rene Clair used every sort of cinematic device to give 'Intermission' a zany Surrealist improbable logic, and it certainly quali-

Viking Eggeling

Symphonie Diagonale

1924

Work on DVD

fies as absolutely a film - something that could only be done by cinematic means. Similarly the film 'Mechanical Ballet' used imagery in non-realistic fashion as rhythmic and satirical collisions of ideas. It also passed through a number of different hands before it was finished, also in the fall of 1924. Two Americans began it: Man Ray had produced the superb 'Return to Reason' (a witty collage of all things 'movie') which screened at a Dada happening 'An Evening with the Bearded Heart'. Dudley Murphy, who had filmed about 10 'Visual Symphony' live-action shorts synchronized with music, as well as a comedy feature and an animation film, saw Man Ray's film and proposed that they collaborate on a larger work. The title came from a Francis Picabia satirical artwork published in his magazine '391' while Picabia was living in New York in 1917- in an issue which also contained artwork and a poem by his friend Man Ray. Dudley Murphy and Man Ray set out to gather footage in the streets of Paris, animated stocking-model legs to do the Charleston, made

scenes of Murphy's lovely wife Katherine posed in greeting-card banalities, and set up scenes in a studio room where they filmed Man Ray's mistress Kiki (and various other things) through special beveled lenses that Murphy had developed, which gave an automatic 'cubist' quality to the image. They also shot footage of kitchen goods and plunging machine parts which were meant for an ironic intercutting with pornographic footage. Then they ran out of money. The painter Fernand Leger offered to finance the completion, but Man Ray dropped out and asked that his name not be used on the film. It is unclear what if any of the footage Leger had a part in filming (the Charlie Chaplin puppet is a Leger sculpture, though he would not know how to animate it), but the editing was accomplished by Murphy, since Leger had no actual filmmaking skills. The radical musical score (which included player-pianos, typewriters and an airplane motor among the instrumentation) by American composer George Antheil was commissioned by the wealthy American Natalie Barney whose notorious Parisian salon harbored many expatriate artists. Murphy returned to America (where he would direct a dozen features in Hollywood) after the completion of Mechanical Ballet, with the agreement that he would have American distribution rights and Leger could distribute in Europe. Leger had new titles made that omit Murphy's name from the credits, and he habitually pretended that he had made the film, even though he never mastered the fundamentals of filmmaking. In any case, 'Mechanical Ballet' remains an impressive (and oppressive) grand work of radical filmmaking. Germaine Dulac (who helped organize The League of Independent Film, which arranged for independent filmmakers to distribute their films and tour in all the European countries) saw 'Mechanical Ballet' one too many times. She prepared her own film 'Theme and Variations' as a Lesbian Feminist response, positing the traditional ballet dancer as a 'meat puppet', manipulated by male choreographers to perform repetitive mechanical actions of little meaning, not appreciably different from the (quite obscene from Dulac's viewpoint) violent gestures of machinery. Using duration as a expressive device, Dulac shows the dancer's momentary escape from this long mechanical slavery into a natural world of organic phenomena, where she can move in lithe, sensuous, joyous expressions-- but that lasts only a little while before the harsh clank of machinery recalls her to her slavery.

   The new fad for sound film in the late 1920s posed special problems for independent filmmakers. Shooting silent film had been relatively easy and not impossibly expensive, but sound required extra recording fees and further difficulties with editing and printing film copies. The New Zealand-born Len Lye, working in London, found support in the government film unit, where he was free to experiment with painting abstract imagery on the filmstrip and manipulating new color film processes to create layers of imagery surrealistically blended of abstract and everyday footage-- all disguised as promotional films for the post-office service or other government business. Most of these had musical scores devised by Australian composer Jack Ellit who had composed music for Lye's 'silent' absolute film 'Tusalava' as well as Francis Bruguiere's abstract 'Light Rhythms'. Oskar Fischinger similarly supported his absolute art films by making commercials and special effects, which gave him access to recording and printing facilities. Fischinger's

series of 16 'Studies' (drawn on white paper with charcoal, using the negative for positive to produce white figures moving through black space) became internationally popular in regular cinemas, and helped to inspire such diverse artists as British Norman McLaren, French-based Alexandre Alexeieff and Claire Parker, and American Mary Ellen Bute. Fischinger began making color films in 1933, when he helped the Gaspar brothers perfect the 3-color system Gasparcolor. Fischinger's lush 'Circles' and 'Composition in Blue' created a new sensation which led to a contract with Paramount in Hollywood. Relocated in America, Fischinger experienced many disappointing situations, including a frustrating episode working at the Disney Studios on 'Fantasia'. In 30 years, he only managed to complete four absolute films ('Allegretto', 'Optical Poem', 'Radio Dynamics', and 'Motion Painting No. 1') but each of them is superb. He relied more heavily on abstract oil-painting as an outlet for his artistic expressions. His presence in California, however, inspired a new generation of absolute film artists. John and James Whitney saw his films at an art gallery during a 1939 exhibit of Fischinger paintings. They did not think his choice of music was as good as his abstract imagery, and decided to make films of their own which would have fresh modern musical accompaniment. John Whitney immersed himself in technology, eventually becoming a pioneer of computer graphics. James Whitney, much influenced by Asian mysticism, believed in hand craftsmanship, and created extremely complex non-objective imagery with hand-drawn dot patterns, with occasional solarization of the film to give aleatory textures and colors. In 1946, the San Francisco Museum of Art began an annual series of Art in Cinema screenings. A young painter, Harry Smith, volunteered to visit Los Angeles to convince Fischinger and the Whitney Brothers to travel to San Francisco for the festival. Harry was thrilled by Fischinger's work and his kindred interest in spiritual philosophies. Smith immediately took up filmmaking, and since he had no filmmaking skills or equipment, drew his first films directly on the filmstrip-- with incredible complexity and fine detail. Smith painted abstract murals on the walls of a jazz club Bop City, and often played his films as a sort of 'light show' with the live jazz performances. He also created multiple-projector absolute performances, which he re-filmed from the screen during performance. In his later films, Smith collaged his pure non-objective imagery with representational images of mystical symbolism. Smith's friend Jordan Belson was similarly inspired by the Art in Cinema screenings to move from static painting to moving film imagery. Belson also shared a mystical bent, and his early films like the exquisite 'Mandala' of 1953 already exhibit a contemplative balance. Beginning in 1957, Belson curated Vortex Concerts which combined new and ethnic music (using innovative stereo tape recording) with large-scale projections of abstract imagery on the dome of a planetarium. Hy Hirsh's pioneer oscilloscope imagery, James Whitney's hand-drawn dot-pattern 'Yantra', and Belson's own abstract film footage were screened. Belson's 1961 film 'Allures' preserves some reminiscence of these spectacles, with their dynamic evocation of a kind of psychedelic experience. In a sequence of 15 subsequent films, including such titles as 'Chakra', 'Samadhi', and 'Light', Belson has rendered a complete portrait of

spiritual states from astonishment to ecstasy, using soft abstract imagery of remarkable beauty and subtleness.

The absolute film tradition continues to the present. Sara Petty still draws by hand a complex work like 'Preludes in Magical Time' while Larry Cuba's computer graphics brilliantly balance positive and negative in 'Two Space'. The Basque painter Jose Antonio Sistiaga paints directly on the filmstrip, not only a serene short like 'Impressions in the High Atmosphere', but also a feature-length absolute film! Austrian Barbel Neubauer and Canadian Richard Reeves, among others, also make direct film of high quality. A glimpse of the world of 'Light Shows' remains in John Stehura's 'Cibernetik 5.3', which hints at the layered live-action and computer graphic abstractions and liquid distortions characteristic of those spectacles.

Jarosław Kapuściński

NORMAN MCLAREN: SYNERGIST

Background:

Norman McLaren - (1913-1987) eminent Canadian animator of Scottish decent. Made over 50 films utilizing remarkable variety of techniques: from painting directly on film, through pastels and cut-outs, to pixilation and optically transformed ballet. For many films he also created the soundtrack by drawing it directly on the optical track. He was no stranger to abstraction and often remarked that music was the source of his interest in film. Recipient of over one hundred awards, he worked as a full-time employee of the National Film Board of Canada for over 40 years.

Synergy - the cooperative action of independent agents such that the total effect is greater than the sum of the two effects taken separately. To the basic sum the relationship BETWEEN agencies is added. This relationship is often more important than the agents themselves.

The heart of McLaren's creative interests was, as he put it, the expression of the spirit of music. Since childhood he would see forms in motion while listening to music. Once in art school, when he saw abstract films, among them 'Study #7' by Oskar Fishinger animated to Johannes Brahms' Hungarian 'Dance #5', he understood that he would become an animator. He admitted that if it was not for his shyness he might have become a dancer or a choreographer.

In his youth, McLaren played the violin a bit and learned to read in the treble clef. Later he read everything that was written about music by the German composer Paul Hindemith. As mentioned, he created music for numerous films by drawing it directly on the optical track. He did not consider himself a composer, though.

The concept of syncretic art was always dear to him. In art school, he invented projects that incorporated smells, images and sounds. He was also intrigued by synesthesia. As a teenager, he wrote a science fiction novel in which sounds and colors were equivalent. Soon enough though, he found that literal translation of one into another in film did not satisfy him. All quasi-scientific systems based on theories of equivalency seemed naive to him.

While searching for a visual language that could come close to the musical ideal, he became fascinated by films of Sergei Eisenstein. He was swept away by their new logic of editing, by the collisions of images and thoughts. A similar capacity to liberate film from the power of traditional narrative structure has drawn him to surrealism and mental process of dreaming. Early 20th century films by Émile Cohl that were based on continuous metamorphosis have shown to him how a similar fluidity of thought can be achieved

visually. McLaren's early film 'Love on the Wing' (1937-39) was a sequence of visual forms in constant metamorphosis associated with letter writing - the film was promoting air mail. The chain of images was so free, surrealist and Freudian that the film was withdrawn from distribution.

Another reason why McLaren felt attracted to surrealism was his preference for improvisation and strong trust in intuition. He disliked any restrictions or recipes to follow. He claimed to never know what was going to happen in 20 seconds. All artistic decisions were taken successively, one at a time from the beginning of the work. With every frame that followed, the possibilities got limited till at some point the end was clear.

Improvisation and intuition were to protect McLaren from making a boring film. To become boring was according to him the greatest fault in an author. No surprise then that modernism never accepted him. Modernists planned (not improvised) processes that not only had to be diligently followed but were also works' raison d'etre. Any fear of boredom or trace of intent to entertain was out of question. 'Rhythmetic' (1956), maybe the only film which was a consistent realization of a process and was given praise by modernists was judged by the artist as a failure. In it he used paper cut-outs to didactically, gaily and methodically animate pyramids of algebraic operations. All permutations are accounted for. In his criticism McLaren agreed with John Grierson, his boss and the creator of National Film Board, who asked: how long is a joke?

In 'Blinkity Blank' (1955) music was recorded before the animation and it was already composed by Maurice Blackburn as a controlled improvisation. The performers were given rhythm, register and dynamics but they could play freely chosen pitches. Conducted by the composer, it was recorded without rehearsal and later used as the basis for the film. As in several others, McLaren made it without a camera. This time the film was coated with black and McLaren improvised directly on it by scratching out forms. A particularity of this film is also that McLaren used the fact that human eye needs only a blink of a single frame separated by several blank frames to perceive a shape (thus the title). Drawings appear singularly or in sequences of few frames and forms that seem to coexist are often found on consecutive frames.

As a matter of principle McLaren avoided introduction of words. It seemed an intrusion of an alien kind and threatening to narrative freedom. The only text one can find in McLaren's work comes in the form of folklore songs and is already 'tamed' by music. The text in 'Le merle' (1958) must have seemed ideal for him. It is full of repeated phrases and tells a nonsense story about a bird who looses parts of his body one by one just to retrieve them in multiples.

Additional inconvenience of using text is due to the necessity of translation. Music seems to be much more immune to this problem. One may find funny that the credits for 'Begone Dull Care' (1949) or 'Neighbours' (1952) were animated in a dozen languages in parallel. McLaren loved his public and avoided anything that could separate him from it, either in Canada or anywhere in the world.

He was interested in art that was free from text narratives, free from traditional film drama, free from linear or material logic, but never free from the

logic of emotion. Pure abstraction was insufficient. Its dryness could tire the audience.

McLaren would say that a film may appear abstract in form but the fact that it moves puts a wealth of human implications (of suggestion) into the mobile shape. To animate a form, whether it is a hen in 'Hen Hop' (1942), or a line in 'Lines Vertical' (1960), McLaren tried to imagine himself moving like that form. When working on 'Lines Vertical' he found that even when working with a single line one can simulate and provoke the spectator's emotions with a whole gamut of movements - rapid, calm, precipitous or majestic. To displace a single line can astonish. For McLaren lines lived in a world of gravity. He got interested to turn 'Lines Vertical' on its side to create 'Lines Horizontal' (1962), because he was convinced that the result was to be completely different for gravity no longer existed when the lines were horizontal and one no longer knew what animated them. At the beginning of 'Mosaic' (1965), a film that was made by showing only points of intersection between 'Lines Vertical' and 'Lines Horizontal', McLaren appears on stage bringing the first point, positioning it manually on the screen and setting it motion by blowing on it. This creates a friendly bridge between abstract movement of points and the world of everyday experience. Little houses, birds and other representational object that appear in 'Begone Dull Care' serve the same purpose. They created a point of reference for those viewers who do not understand abstraction. McLaren would jokingly say that they are the dot in the "i" or an olive in a Martini. He did not attach great importance to them even if they jump out with a strength of signs. They were never meant symbolically and no esoteric message was ever intended.

For McLaren the most important was movement. He is famous for saying that animation is not the art of drawings-that-move but the art of movements-that-are-drawn. When animating he would see movement rather then specific images. He would add that the movement was his basic language and it was movement in music that captured his imagination first. In this way he liberated animated film from the laws of painting according to which every frame demanded stable balance of elements, visual depth and background. It was acknowledged by Picasso who after seeing 'Hen Hop', exclaimed: "finally something new in the art of drawing". McLaren could not be bothered with the beauty of each frame. It went well with his favourite technique of cameraless animation. When one draws on an area that is 35 mm wide there is hardly any space for refined detail. Everything must be achieved through motion, change of color and form. McLaren's virtuosity was in movement. As a graphic artist he was without pretension, simple and on verge of naiveté.

According to McLaren what makes film such a powerful medium is that motion can be spoken of as separate from the form that moves. Motion is independent and can be freely manipulated through difference between frames. In his films it is hard to find realistic movement of representational forms or abstract movement of abstract forms. The latter purely abstract approach we would often find in the work of his masters: Richter, Eggeling or Fischinger.

For a film without traditional narrative it is difficult to build a form. McLaren saw two dangers: excessive limitation of material leading to monotonous

permutations or continuous appearance of new material which brings chaos and dullness. At the outset 'Lines Vertical' was going to be a film done with a single line and no sound. During the experimental stage he found that he could not keep the attention of spectators for more than a minute. In consequence more lines and soundtrack were added and the animation was structured to a musical arch form (ABA).

Music has dealt with these issues for centuries and it is to music that McLaren gave credit for teaching him how to create variations in uniformity or unity in variety. Musical structures were often interesting to him as complex formal guidelines. In a didactic film 'Canon' (1964) three canons are presented. They can be experienced in parallel visually and aurally. First canon uses the 'Frère Jacques' tune but the other two were first created as visual canons and only later got their musical counterparts.

Jarosław Kapuściński,
Krzysztof Bąkowski
Audiovisual Synergy
Concert
WRO 99 Biennale

The unique close relationship between image and sound was possible among else due to the fact that from early on McLaren worked directly on film where he could almost jointly create image and music. It was a little like being a painter or sculptor - almost nothing stood between the artist and his medium. What seems to be a privilege of contemporary computer artist was McLaren's every day's bread. He treasured this extremely close, intimate relationship with audiovisual material. To some extent it was a fortuitous circumstance. In 1940, when he landed as a penniless immigrant in New York he was invited by the baroness Hilla Rebay von Ehrenweisen, a curator of the Museum of Non-Objective Painting of the Guggenheim Foundation to show her some new films in view of possible purchase. Without delay he produced them at home by drawing directly on film. Having no money for music he

painted it directly on the optical track. The films were 'Dots' (1948, originally with a musical title 'Scherzo') and 'Loops' (1939). To make them he would take strips of film, 60 frames in length, one at a time, and draw images and immediately after sounds. He thought in single visual events with single sound events associated with them. He would say later with a synesthetic kind of humor that the sounds had resonance of kisses with a shade of raspberry. The sound gives the abstract imagery a 'representational' ground. 'Loops' and 'Dots' are given mass and physical expression. Already then McLaren found his world of 'abstraction with gravity'.

In 'Begone Dull Care', possibly the most prominent example of his audiovisual virtuosity, the relationship between image and sound no longer depended merely on the level of single event correspondences but simultaneously on several formal levels. Motives, phrases and whole movements create audiovisual synergy. To achieve it he first very closely collaborated with Oscar Peterson. The famous jazz musician improvised on the piano while McLaren made comments, chose fragments and gave suggestions. The music that resulted was perfectly tailored for the film that he imagined. With the recording in hand, in collaboration with Evelyn Lambart McLaren created 5-6 visual counterparts for each 4-5 second phrase of music. In several 'fitting' sessions they selected those that worked best.

In 'Begone Dull Care' McLaren created a true audiovisual counterpoint. Music and animation enter in strong relationships while retaining a lot of independent development as well. Nothing can be easily predicted but when it happens it seems convincing and logical. As an example McLaren seems to thoroughly understand musical experience when he does not associate the same variant of visual images each time a musical theme returns. He knew that such a reprise is not perceived as an exact repetition as it is recognized by the listener and heard differently. In similar ways visual and musical phrases cross each other paths, tease each other, come closer and part. When asked about the art of achieving such audiovisual cohesiveness, McLaren would say that it is instinct and there are no rules. When pressed, he would naturally mention movement as the common denominator of music and image. He would admit that being sensitive to musical dynamics for softer music fragments he would draw sequences with less contrasting colors and less movement and the opposite for loud ones. He would also associate darker colors with lower pitches and brighter with higher ones.

The principle of McLaren's audiovisual thinking was temporal coincidence of musical and visual events. Even in films where animation was done before the music he would consciously structure the timing of events over a regular underlying pulse. As an example in 'Lines Vertical' he was drawing on stripes of film of equal length (48 cm). It made possible to the compose the music which would easily share the pulse of the image.

The most extreme example of synchronic sound and image was 'Synchromy' (1971). McLaren first composed for it a Boogie-Woogie. It was recorded directly on the optical track with the aid of a camera that could expose the soundtrack area and with specially prepared cards, one for each pitch. Then he copied the resulting images to the visible part of the frame. He multiplied them horizontally to fill the field and added color to enrich the experience. It resulted with a quasi-didactic film which shows how almost

literally music and sound is notated on film. Both music and image are putting each other in quotation marks. Unfortunately neither music nor image or even the relationship between them have shown anything truly interesting. It is not a synesthetic experience nor an interpretation of the spirit of music. It is more of a Narcissistic look of music into its mirror image. It is probably also the only film of McLaren that is purely abstract. After making it McLaren decided that if he did one more abstract film it would have been to the detriment of his spirit.

Was McLaren a synergist? He deeply cared about what was BETWEEN elements and in result he often achieved more than their simple sum. He was fascinated by movement, which meant a preoccupation with what was happening BETWEEN images not what was on each of them. He was interested in presenting correspondences BETWEEN music and animation. In his non-abstract films such as 'Chairy Tale' (1957), 'Neighbours', 'Pas de deux' (1967), or 'Narcissus' (1981-83), he would deal with relations BETWEEN people and their need for a synergy. People who worked with him agree that he seemed to have a unique capacity to get the best results out of contributions of all involved in a production, and what is rare for an artist, one could hardly feel his ego. In personal life, a relationship he created with Guy Glover lasted over 50 years (till McLaren's death). The work of McLaren was a conscious attempt to enter into a relationship with people, to be with them. Of all his films he was most satisfied with three which can be considered synergistic masterpieces: 'Begone Dull Care', 'Neighbours' and 'Pas de deux'.

(translated by author, proofreading David Meckler)

Piotr Krajewski

RECYCLED IMAGES. REMIX, SAMPLING, SCRATCHING... ABOUT FOUND FOOTAGE CINEMA

'Found footage' is a cinema of ready-made tapes, already recorded by someone else; created with images torn out from the communication circulation, found in a dustbin or in some archives, with recycled images. It is the cinema of 'recycling', re-using film tapes that come from someone else. A cinema made of film scraps picked up from the civilization scrap heap of images which were produced and then abandoned. A cinema of transformation. A cinema of form, intention and meaning.

It is a usual cinematographic practice to start with filming the images and scenes taking place in front of the camera lens, to start with exposing a clean tape and therefore with recording and production of one's own images.

Whereas all found footage films are characterized by one common feature: irrespective of their genre, subject, stylistics or applied techniques, they always make use of other films. 'Found footage' is a footage found and recreated form already existing 'alien' film tapes, made of images which have been already captured and recorded, ones that have been distributed or hidden by someone. Thus it is a cinema where there is no filming. The cinema of image pocketed from other films, whose source are all kinds of feature and documentary tapes, production waste, distributors' dustbins, family, army, scientific or historical archives, used up film copies from libraries or travelling cinemas.

Found footage is one of the most anarchistic, radical, independent and formalistic, but at the same time critical and creative film practices. It consists in ripping and deconstruction of already created forms, tearing images out of sequences, concocting them out of the contexts and meanings they used to function within, or - on the contrary, it consists in expanding, exploring and processing a sequence so as to elicit new appearances, meanings or hidden intentions which are veiled and escaping.

All this is achieved by the 'found footage' creator with his own inventions – through diverse techniques of montage and mixage, collage and compilation, slowing and accelerating, deforming, polluting, scratching, cutting and plucking, adding drawings and colouring; through affecting the lotion with chemicals, bacteria and moulds, distorting by multiple copying, zooming in and out, changing textures and granularity of the

image. Found footage is always a kind of technique of one's own, starting with the way of obtaining someone else's tapes to the technique of their further processing.

Considering the infinity in the iconographic reservoir of ready-made images that offers the possibility of everlasting deriving of form, the artist gives up creating new images. The material he uses is not 'recording reality' as is usually ascribed to cinema; the material is a tape made by someone else. Therefore, the impulse here is 'medial' in its essence – the artist refers to the existing medium both as to a dictionary (an existing resource) as well as to procedures characteristic of his medium. Thus, he is the inventor of procedures, searching for new grammar and new organization.

While mass cinema is a parasite on mass stereotypes, 'found footage' is a parasite on all kinds of ready-made films as providers of images. The amount of subjects, genres and reasons why someone has already reached out for a camera is inconceivable. Hollywood, scientific, documentary, and training films, recordings of military tests, family, amateur, porn and sport films, commercials... Diverse are also the reasons why artists used and use 'somebody else's footage'. It would be an exaggeration to state that the history of recycling film materials is as old as the history of cinema. Yet, 'found footage' practice has been accompanying the 'regular' cinematography since 1920s. In different cinema epochs and then in the epoch of cinema, TV and newer media coexistence, successive generations of artists have yielded to the attraction of decomposing ready-made image sequences. Yet we can risk the statement that the root cause is always a certain combination of fascination and distrust of increasing and gradually overwhelming world of industry generated image on one hand, and doubts towards the way of recording the reality of appearances on the other.

At times, fascination prevails. The film 'Rose Hobart' (1936–39) by Joseph Cornell is mostly a remix of the Hollywood feature film 'East of Borneo' (1931) attempted as a tribute to the actress Rose Hobart who played the main part in it; the tribute was to be paid through the disposal of all conventional and redundant elements present in the original. Similarly, 'Her Fragrant Emulsion' (1987) is a collage of scenes from various 1960s feature films with the phenomenal participation of a starlet Mimsy Farmer.

However, 'found footage' is more often an expression of mistrust and anarchistic criticism concerning the dominating function of image culture as a product than the manifestation of fascination and adoration. In the pioneer political footage film 'Fall of the Romanov Dynasty' (1972) Esfir Schub transformed the panegyric and dull material shot by the last emperor's personal cinematographer and by other anonymous operators made during official court ceremonies into a scathing discourse on the evil of the emperor's regime. This example of using one material to express a thing which is completely different is characteristic of the political 'found footage' trend. It is to be found in numerous later work: the pacifist 'L'histoire du soldat inconnu' by Henri Storck (1931) or Wolf Vostell's 'Vietnam' (1969) where images are sourced from TV news reporting on the Vietnam war; in Poland it is present in Zygmunt Rytka's

'Rebroadcast' (1981/82) featuring TV news from the martial war period. The dependencies between war aggressiveness, sexual desire, naked body, military accessories and media power were included in 'A movie' (1958) by one of the most significant artists Bruce Conner. The title is ambiguous: an A class film (the best one according to Hollywood classification) and A-bomb.

In the time of iconosphere mass production, overproduction and inflation of meanings expressed by the image, in the time of corporate-owned media that had lost their innocence when subjected to the influence of capital and politics, in the time of uncertainty regarding the intentions behind the production and distribution of images – the artist negates joyful and uncritical creation of new images.

Uncertainty if these new conditions will allow the artist to remain a joyful creator of images or if the artist should rather become a critic of them, a careful observer and, when necessary, their denouncer and mocker, is probably the most tenacious attitude of this movement. In found footage the modern awareness of the artist in the time of mass communication, media and medialization of landscape was very early manifested. We can observe the birth of the 'media artist' not only as a creator reaching out for new techniques – film, video, TV broadcasting, but also as someone who speaks both through media and about it. Someone who observes and carefully examines media from a totally subjective and independent point of view, at the same time being aware of the fact that he is a consumer of mass culture himself.

It is an expression of extreme criticism and distrust of the omnipresent images as well as distrust of the mechanisms of perception formed by the mediatized transmission. Most 'found footage' artists treat the world as a garbage of images edited to form light products – 'performances' – providing ready-made forms which are full of meanings, emotions and intentions concocted for collective consumption; providing images which shall be released and presented in their full meaning.

'Found footage' was perceived in diverse ways; it was derived from the Dadaist techniques of photographic or painting collage; afterwards it was associated with Duchamp's idea of adopting 'ready made objects' by art; nowadays we discover in it the archetype of the basic computer practices of sampling, remix, looping, digital deformation and transformation of images as well as the post-modern method of quotations and borrowings.

There is something very important about the fact that the images are ready made and that it is the artist's job to take them from the place they are and let them in circulation again. The prototype model of participation in culture. The artist shows that the transmission he receives does not necessarily have to be just a product to be consumed but also the ground for further creation and and material for it.

In found footage artist is the receiver and the creator at the same time, announcing the participating model of communication, interactivity and co-moulding of the content by the audience.

Found footage creators became masters of editing in a very short time, sometimes being ahead of the whole era of regular cinematography

practices. It is the status of the pioneer in editing, experiences with shaping the perception through cooperation of image and sound, the speed of editing, appealing to after-image perception that made found footage become the technique of TV artists in the 'music video' era, similarly to abstract animation marking 'absolute cinema'. Video clip makers found the whole arsenal of ready patterns and strategies which they would never come across in feature film.

It is some kind of a paradox that found footage, being for decades a marginal fringe of official cinematography, advertising, propaganda and television treated by 'found footage' artists as a wasteful and mindless image provider, has become the basis of modern 'industry of the spectacle' itself.

(translated by Sebastian A. Kumoś)
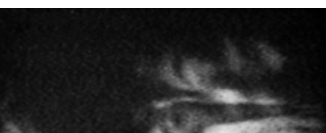
FOUND FOOTAGE: EXAMPLES

A movie
Bruce Conner
12:00, 16mm, USA 1958

6 000 000 Work on DVD
Józef Robakowski
5:00, 16mm, Poland 1962

Sun in Your Head
Wolf Vostell
7:00, 16mm, Germany 1963

Vietnam
Wolf Vostell
7:00, 16mm (transferred to videotape), Germany 1968/71

Berlin Horse Work on DVD
Malcolm Le Grice, Music: Brian Eno
7:00, 16mm, UK 1970

Variations on a Cellophane Wrapper
David Rimmer; Music: Don Druick
8:30, 16mm, Canada 1970

Motion Pictures (La sortie des des ouvriers de l'usine Lumiere a Lyon)
Peter Tscherkassky
12:00, 16mm, silent, Austria 1984

Her Fragrant Emulsion Work on DVD
Lewis Klahr
10:00, 16mm, USA 1987

Pièce touchée   Work on DVD
Martin Arnold
16:00, 16mm, Austria 1988/89

Alone. Life Wastes Andy Hardy
Martin Arnold
15:00, 16mm, Austria 1998

Home Stories
Matthias Müller
5:00, 16mm, Germany 1990

Tractatus   Work on DVD
Péter Forgács, music: Tibor Szemzö
35:00, betacam, Hungary 1992

Platos Schatten / Plato Shadows   Work on DVD
Frank Den Oudsten
Video sculptures, The Netherlands 1995

Erhard Schön, 1538
**Underweissung der Proportzion
unnd Stellung der Posssen**

Happy End
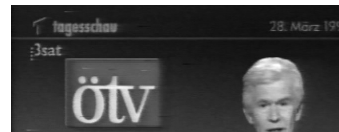Peter Tscherkassky
12:00, 16mm, Austria 1996

Good Evening   Work on DVD
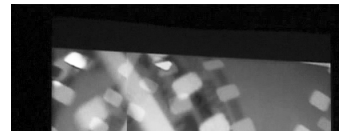Apsolutno
8:00, betacam, Serbia 1996

ResonanCITY   Work on DVD
Sara Kolster i Derek Holzer
Audiovisual performance, The Netherlands/USA 2004

Le Point Aveugle   Work on DVD
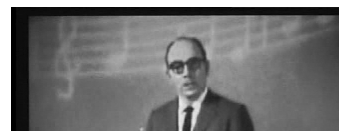Burstscratch
Film/performance, France 2007

(((.living.stereo.)))   Work on DVD
Brian Mackern
Performance, Urugway 2006

Lev Manovich

SEVEN OR EVEN EIGHT THINGS WE CAN LEARN FROM DZIGA VERTOV...

LECTURE BY LEV MANOVICH AT WRO 97 BIENNALE

I'm very happy to be here, and I want to warn you that this talk is not going to be very good.

It's interesting coincidence that I'm going to talk about digital media on May first, the day which has special relevance to early revolution in the century, the consequences of which we are still living through. Well, it all happens that many art works which were inspired by revolutionary developments in the beginning of the century, seem to have a special relevance to new media. So today on this May the first, I'm going to talk about and let you see one of these films: "A Man with a Movie Camera" completed in 1929 by Dziga Vertov. So the title of my talk is: Seven things we can learn from Dziga Verto, and how to make new media more interesting.

When people discuss new media, very often they say: we are still waiting for a digital Griffith.

Although these filmmakers have made their films without the computer, their films are truly computer films because they embedded a kind of computer logic, a computer consciousness in them. These filmmakers include Zbigniew Rybczyński who develops poetics of montage between different spaces. They also include Chris Marker and Jean-Luc Godard who both show us in visual forms the process of thinking which seems to be very relevant to the computer, which from the beginning was referred to as a "Giant Brain", as a model of human mind. Another of these computer filmmakers is Peter Greenaway who tries to explore what multimedia would mean in a film screen. Yet another computer filmmaker is of course Sergey Eisenstein who articulates very complex and very detailed theories of montage between different media channels, something which seems to be very relevant to multimedia. However, in thinking about new media again and again I come to conclusion, that the most computer filmmaker of all in a history of cinema was Russian filmmaker Dziga Vertov. So what are the seven or maybe even eight things we can learn from Dziga Vertov so we can make new media more interesting?

Number one: Dziga Vertov is a very good example of somebody who is trying to negotiate, who is trying to combine a narrative and a catalog, a narrative and a database. In looking at both commercial multimedia and at artistic multimedia, it seems to me that most of works are structured as

catalogs, libraries or to use more precise computer term as databases. The examples would be the work by George Lagrady, which is exhibited at this festival. Or for example "The Data Bank of Everyday" by Natalie Bookchin on with I cooperated or "The Data Base of Experience" by Troy Innocent and many other examples. So can we say that perhaps data base is essential new genre of new media? In 1970s in New York art historian Rosalind Krauss have written the article which sort of defines video art as an art of narcissism. Well, following the same logic I would say that the computer art is the art of the database, the art of catalog, and the art of encyclopedia. We don't have time, but it would be very interesting to think historically about the differences between a library, an encyclopedia, a catalog and a database. Now, we can say that the database, what I would call a database imagination or imagination of a catalog seems to be opposed to the narrative imagination. When new recording media comes to exist in the XIX century, I'm referring to photography, some of the earliest uses of photography are to make a kind of databases or catalogs of different objects, people's faces and so on. So photography in the beginning was very much the art of the catalog, the art of the database. However when new recording media of film comes to be established in the end of XIX century it corresponds to certain try of, you know, beginning of the narrative imagination, because commercial film with a help of Griffith, is very much about the narrative, the story.

I should note in passing that of course a database has a very important advantage over a narrative because you don't have to tell a story, but you just go through records one by one. If you don't run out of time, and you don't access other records it's O.K., that's why I structured my talk also as a kind of database.

So mostly film was the art of narrative, yet there are certain films or certain filmmakers which seems to very much represent more of what I would call data base imagination. They are more concern to catalog, something to make a list than to tell a story. For example Peter Greenaway speaks about resisting narrative and therefore using different systems to order his films, such as the list of numbers which appear in many of his films. There are number of other films but I think one of essential database films is "A Man with the Movie Camera". There is an important shot which is going to appear a few times in this film which shows an editing room. And in this editing room we see the editor, Vertov's wife, ordering and reordering different reels of film. So this editing film with a many, many reels of film, are the kind of data base of recorded material. And we see in the shots how she is organizing and reordering this database, retrieving some reels, returning used ones, adding new one and so on. Now I'm going to suggest that my comparison between working on the film, editing the film, and ordering a database is not accidental, but this is indeed the epistemological method of "A Man with a Movie Camera".

The subject of the film is the struggle of a filmmaker to reveal social structure among the multitude over absorbed phenomena the multitude of a visible reality. Vertov's project can be called visual epistemology, an attempt to reveal the structure of world through its visible surfaces. Therefore, if traditional film editing consist in selecting and ordering previously shot material, according to pre-existing script, in this case, the process of relating

shots to each other, ordering and reordering them, organizing this data-base records is essential to discover the hidden order, invisible reality. So the process of working with the shots, organizing them, connecting them is what the method is all about. I can make a comparison with a search engine which goes around on the ultimate database, word wide web, catalogs or sites according to certain categories.

So was Vertov successful? No, he completely failed. Because I think if you actually look at the film it looks like nothing more and nothing else than a linear print out, so to speak, of its database. Vertov simply dumps all the records in film, one after one. So we see number of shots, showing machines, than we see numbers of shots showing work, than we see numbers of shots showing leisure and so on. The result is mechanical, almost banal catalog of subjects, which one would find in the provincial city in the 1920s. Yet, despite this failure the film still looks very fresh, very inspiring and very relevant, and very moving. Why is that? Well, this is because this film is also

Dziga Vertov
Man with Movie Camera
1924

a catalog of other kind of material. It's also second type of catalog, because it's a catalog of film techniques. Vertov uses fades, superimpositions, freeze frame, acceleration, split screens, various type of rythm, and various types of intercutting. And of course he also uses a multitude of unusual constructivist points of view. So he places camera in every possible position. As the film develops these different techniques are put together with such density that the film can't simply be labeled a "the typical avant-garde film". This is something else.

A normal avant-garde film while refusing the grammar of traditional film language still proposes an alternative coherent language. I.e. small set of techniques which are repeatedly used.

But Man with a Moving Camera has never arrives at anything which can be called a finished language. Rather it proposes a new way of speaking, an untamed, unmotivated and apparently endless unwinding of techniques or,

to use contemporary language, effects. And this is the second way in which Vertov is more advanced and more relevant to new media than many of the artists working with the new media today.

So first way was his attempt to combine narrative and a database, and the second, trying to establish a kind of a language of effects. Because in the age of new media we constantly have arrival of new software, upgrades, new standards, new plug-ins, endless and endless effects, new possibilities to manipulate images, sounds and other media types. In fact most programs, you know: PhotoShop, Premiere, Director and others come with already huge libraries of different effects, different apparitions you can do even before you put any images into them. So if effects used to be supplemental to movie making, now this is the default operation. Of course MTV videos use these effects very well, but if they want a little bit more meaning, they don't really know what to do with all these new opportunities. I think Vertov hints that it is possible to have a kind of language of effects. It is possible to create meanings from nothing but effects. This is the second way in which Vertov is very relevant to new media poetics.

O.K. So, I'm running out of time so what I'll do is just quickly name the remaining six ways in which Vertov is relevant, and then you can ask me, you can buy me a beer, and I'll be happy to go into detail.

Number three: in one of the sequences of the film Vertov demonstrates how narrative film emerges out of loops. Of course all XIX th century movie image devices were based on loops.

So loop as opposed to narrative was the main kind of form of the 19th century imagination of a moving image. And loops make a return in new media because if you look at CD-ROMs, art CD-ROMs or computer games, you find endless loops, small number of images which are repeated. So in this way, new media kind of returns to this poetics of XIX century.

O.K. Next, number four: Vertov film contains some of the earliest scenes of compositing, combining a number of different shots to create a photo-graph of something which never took place in reality. Vertov makes his com-positing in camera: he covers part of the lens, records something then re-winds films and than, you know, records a different scene. Today everybody is using digital compositing for example such films as "Jurasic Park" where the dinosaurs are composited over shots of landscapes. But in Hollywood's use of compositing traditional realism is preserved, whereas Vertov in his composites often creates a kind of impossible and more dramatic expres-sionist images, something which we can learn from him.

O.K. Number five: virtual camera. Vertov really anticipates a kind of vir-tual eye of computer graphics. The eye which is separate from human body, which travels very free and can be anywhere.

Again I can prove to you that Vertov, really anticipates computer anima-tion because he writes that he would like to be a "kino pilot". You know, he would like to fly, he would like actually, he would like to put the camera on the plane and control it over the distance – he writes it in early 1920s. And of

course, you know, computer animation and the technique to have a virtual camera is developed in 1960s and 1970s in the context of flight simulators.

O.K. Next one, number six. Vertov identifies with the camera, but even so he identifies with the machine. He says in his writings: 'I'm a mechanical eye.' So here again he anticipates electronic subject-less visions of a computer, the computer which can see without us.

O.K Next one, number seven. Vertov also anticipates window interface, the use of over lapping windows in current computer software. He speeds up temporal montage so much that at some point his images start to overlap. This is his attempt to make perception as economical as possible. So you can perceive things very quickly. So this is exactly what computer software, designers are doing since 1970s when we hit upon the idea of using a number of overlapping windows. So you can work with a number of different pieces of information one by one at the same time, so the user becomes a kind of editor, editing these different streams of information. And finally, the last, but I'm sure that if I come again next year I can probably discover more, but for now the last: number eight, what we can learn from Dziga Vertov. Vertov participates in the ideology of 1920s which thinks of the film as the new visual Esperanto, a new universal language which can unite all mankind. In the beginning titles of the film he actually says: 'This is the attempt at a visual Esperanto, a universal language, language of images without sound and without text. Well, in a paradoxical way new media realizes Vertov's dream. We don't have universal language of images, but what we do have are the universal tools to access all information, for example Windows 95 by Microsoft or Netscape Navigator browser used by millions and millions of people. So in paradoxical way Vertov dream became realized. This last example points also at the difference between 1920s and now. What used to be a radical aesthetic vision became a standard computer technology, the way of working for millions of people. What was developed to liberate us from the world of capital is now used to expand this world even further, because in work we use all these principles of Dziga Vertov in the work with computers. We use universal visual language of a interface, we use windows, so you know, which go on, which can be traced back to his superimpositions, and we use the electronic mobile eye of virtual camera. Yet, as I try to point out if Vertov anticipates our oppression he also points a way towards certain liberation. As I try to indicate, he points towards some new aesthetic possibilities for new media which can expand our imagination. The art of a database, the language of effects, the aesthetics of loops and non-realistic use of compositing, these are all the things we can learn from Dziga Vertov. Thank you.
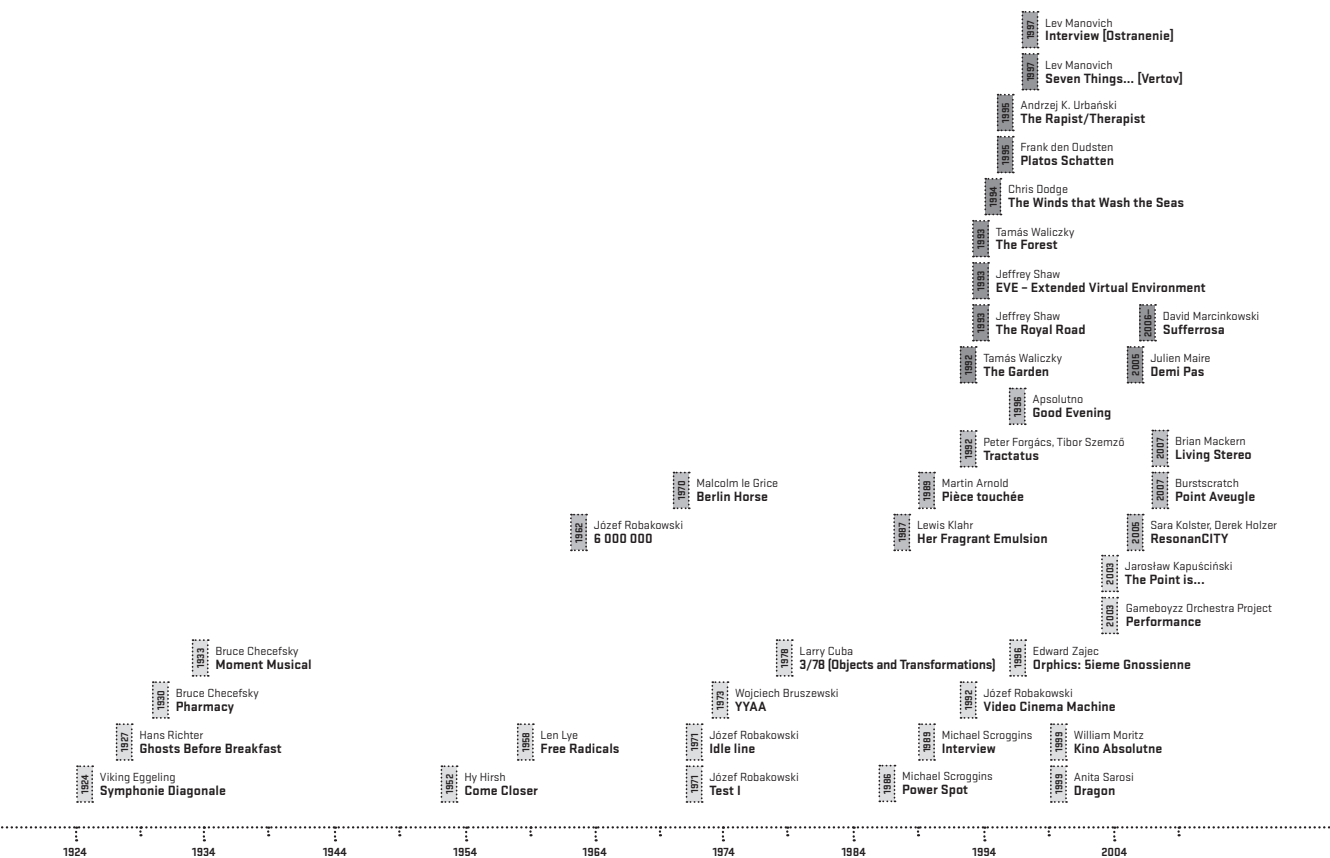
DVD

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- 1995 — Frank den Oudsten — **Platos Schatten**
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- 1924 — Viking Eggeling — **Symphonie Diagonale**
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1924   1934   1944   1954   1964   1974   1984   1994   2004

ABSOLUTE CINEMA

Viking Eggeling	**Symphonie Diagonale** 35mm,b/w, silent, 7'08''	1924
Hans Richter	**Ghosts Before Breakfast** 35mm,b/w, silent, 6'23''	1927-1928
Bruce Checefsky	**Pharmacy** 35mm,b/w, silent, 4'55'' Reconstruction of film by Franciszka and Stefan Themerson *Apteka*	2001 (1930)
	Moment Musical 16mm,b/w, 6'04'' Reconstruction of film by Franciszka and Stefan Themerson *Drobiazg Melodyjny*	2006 (1933)
Hy Hirsh	**Come Closer** 16mm, color, 5'49''	1952
Len Lye	**Free Radicals** 16mm,b/w, 4'23'', fragment 0'30''	1958
Józef Robakowski	**Test I** 35mm,b/w, 2'10'' **Idle line** video, color, 3'00'' **Video Cinema Machine** installation documentation, 1'00''	1971 1971-1972 1992
Wojciech Bruszewski	**YYAA** 35mm,b/w, 2'57''	1973
Larry Cuba	**3/78 (Objects and Transformations)** 16mm,b/w, 5'31''	1978
Michael Scroggins	**Power Spot** video, color, 8'12'' **Interview** 1'15''	1986 1989-1990
Edward Zajec	**Orphics: 5ieme Gnossienne** computer animation, color, 4'00''	1996
Anita Sarosi	**Dragon** video, color, 3'35''	1999
Gameboyzz Orchestra Project	**Performance** fragments, 1'43''	2003
Jarosław Kapuściński	**The Point is...** performance + artist's statement fragments, 2'38''	2003
William Moritz	**Absolute Cinema** Lecture, parts 1 and 2.	1999

Józef Robakowski	**6 000 000** 16mm, b/w, 5'00"	1962
Malcolm le Grice	**Berlin Horse** 16mm, color, 9'00", fragment 0'30"	1970
Lewis Klahr	**Her Fragrant Emulsion** 16mm, color, 10'00", fragment 2'00"	1987
Martin Arnold	**Pièce touchée** 16mm, b/w, 16'00", fragment 2'00"	1989
Peter Forgács	**Tractatus** part 4 of 7: video, color, 4'50"	1992
Apsolutno	**Good Evening** video, color, 8'05"	1996
Sara Kolster, Derek Holzer	**ResonanCITY** performance, fragments, 2'39"	2005
Burstscratch	**Le Point Aveugle** performance, fragments, 1'32"	2007
Brian Mackern	**Living Stereo** performance, fragments, 2'24"	2007

Tamás Waliczky	**Studies for The Garden** animation, color, 2'23"	1992
Tamás Waliczky	**The Garden** video / computer animation color, 4'31"	1992
Tamás Waliczky	**About "The Garden"** lecture, 2'21"	1997
Tamás Waliczky	**Der Wald** computer animation, kolor, 4'59"	1993
Tamás Waliczky, Sebastian Egner, Jeffrey Shaw	**The Forest** Flight simulation based interactive installation, documentation, 5'49"	1993
Tamás Waliczky	**About "The Forest"** wykład, 6'02"	1997
Jeffrey Shaw	**The Royal Road** installation documentation, 2'05"	1993
Jeffrey Shaw	**EVE – Extended Virtual Environment** installation documentation, 6'04"	1993
Chris Dodge	**The Winds that Wash the Seas** installation documentation, 3'45"	1994-1995
Andrzej K. Urbański	**The Rapist/Therapist** installation documentation, 7'28"	1995
Frank den Oudsten	**Platos Schatten** installation documentation, 5'08"	1995
Lev Manovich	**Ostranenie** interview, 10'00"	1997
Lev Manovich	**Seven or even eight things we can learn from Dziga Vertov...** interview, 19'12"	1997
Julien Maire	**Demi Pas** performance, fragments, 5'13"	2005
David Marcinkowski	**Sufferrosa teaser** interactive neo-noir narrative space color, 4'43"	2005-2006

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Martin Arnold **Pièce touchée**
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Sixpackfilm, Vien | www.sixpackfilm.com
Index | www.index-dvd.at
Re:Voir | www.re-voir.com

Apsolutno **Good Evening**
Dzięki uprzejmości / Courtesy of:
Zoran Pantelic / Apsolutno | www.apsolutno.org
Museum of Contemporary Art Belgrade | www.msub.org.yu

Wojciech Bruszewski **YYAA**
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Burstscratch **Le Point Aveugle**
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Burstscratch
archiwum Fundacji WRO Centrum Sztuki Mediów | www.wrocenter.pl

Bruce Chechefsky **Pharmacy**
Dzięki uprzejmości / Courtesy of:
Bruce Checefsky, See/Saw Pictures | www.seesawpictures.com

Bruce Checefsky **Moment Musical**
Dzięki uprzejmości / Courtesy of:
Bruce Checefsky, See/Saw Pictures | www.seesawpictures.com

Larry Cuba **3/78 (Objects and Transformations)**
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Larry Cuba, The iotaCenter | www.iotacenter.org

Frank den Oudsten **Platos Schatten**
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO
Chris Dodge **The Winds that Wash the Seas**
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

Viking Eggeling **Symphonie Diagonale**
Utwór w domenie publicznej / Film in the public domain

Viking Eggeling ***Komposition I – storyboard***
Dokumentacja wystawy Sound and Vision w Deutsches Filmmuseum we
Frankfurcie nad Menem; wystawa zorganizowana we współpracy z Long
Beach Museum of Art
Documentation of Sound and Vision exhibition, Deutsches Filmmuseum,
Franfurt am Main; in collaboration with Long Beach Museum of Art

Peter Forgács, Tibor Szemző ***Tractatus***
Dzięki uprzejmości / Courtesy of: Péter Forgács | www.forgacspeter.hu

Gameboyzz Orchestra Project ***Performance***
Dzięki uprzejmości / Courtesy of:
Jarosław Kujda
archiwum Fundacji WRO Centrum Sztuki Mediów | www.wrocenter.pl

Hy Hirsh ***Come Closer***
Dzięki uprzejmości / Courtesy of: Angeline Pike

Jarosław Kapuściński ***The Point is...***
Dzięki uprzejmości / Courtesy of:
Jarosław Kapuścinski | www.jaroslawkapuscinski.com
archiwum Fundacji WRO Centrum Sztuki Mediów | www.wrocenter.pl

Lewis Klahr ***Her Fragrant Emulsion***
Dzięki uprzejmości / Courtesy of:
Lewis Klahr, Luxonline | www.luxonline.org.uk

Sara Kolster, Derek Holzer ***ResonanCity***
Dzięki uprzejmości / Courtesy of:
Sara Kolster and Derek Holzer
archiwum Fundacji WRO Centrum Sztuki Mediów | www.wrocenter.pl

Brian Mackern ***Living Stereo***
Dzięki uprzejmości / Courtesy of:
Brian Mackern
archiwum Fundacji WRO Centrum Sztuki Mediów | www.wrocenter.pl

Malcolm Le Grice ***Berlin Horse***
Dzięki uprzejmości / Courtesy of:
Malcolm Le Grice, Luxonline | www.luxonline.org.uk

Len Lye ***Free Radicals***
Dzięki uprzejmości / Courtesy of:
New Zealand Film Archive | www.filmarchive.org.nz

Julien Maire ***Demi Pas***
Dzięki uprzejmości / Courtesy of:
Julien Maire
Fundacja WRO Centrum Sztuki Mediów | www.wrocenter.pl

Lev Manovich *Seven or even eight things we can learn from Dziga Vertov...*
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

Lev Manovich, statement at Ostranenie festival
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

David Marcinkowski *Sufferrosa*
Dzięki uprzejmości / Courtesy of: Dawid Marcinkowski | www.sufferrosa.com

William Moritz *Absolute Cinema (1), (2)*
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Hans Richter *Ghosts Before Breakfast*
Film in the public domain / Utwór w domenie publicznej

Józef Robakowski *6 000 000*
Dzięki uprzejmości / Courtesy of:
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Galeria Wymiany / Exchange Gallery | www.exchange-gallery.pl

Józef Robakowski *Test I*
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Galeria Wymiany / Exchange Gallery | www.exchange-gallery.pl

Józef Robakowski *Idle Line*
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Józef Robakowski *Video Cinema Machine*
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Anita Sarosi *Dragon*
Dzięki uprzejmości / Courtesy of: Anita Sarosi

Michael Scroggins *Power Spot*
Dzięki uprzejmości / Courtesy of: Michael Scroggins

Michael Scroggins, statement
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

Jeffrey Shaw *The Royal Road*
Dzięki uprzejmości / Courtesy of:
Jeffrey Shaw | www.jeffrey-shaw.net | www.icinema.unsw.edu.au
ZKM Karlsruhe | www.zkm.de

Jeffrey Shaw *EVE – Extended Virtual Environment*
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Andrzej K. Urbański *The Rapist/Therapist*
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Tamás Waliczky *Studies for The Garden*
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Tamás Waliczky *The Garden (21st Century Amateur Film)*
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ZKM Karlsruhe | www.zkm.de

Tamás Waliczky *about The Garden*
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

Tamás Waliczky *Der Wald*
Dzięki uprzejmości / Courtesy of:
Tamás Waliczky | www.waliczky.com
ZKM Karlsruhe | www.zkm.de

Tamás Waliczky, Sebastian Egner, Jeffrey Shaw *The Forest*. *Interactive
flight simulation platform application, the interactive version of Der Wald*
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Tamás Waliczky | www.waliczky.com
Jeffrey Shaw | www.jeffrey-shaw.net | www.icinema.unsw.edu.au
Sebastian Egner | ZKM Karlsruhe | www.zkm.de

Tamás Waliczky *about The Forest*
Dzięki uprzejmości / Courtesy of: OPEN STUDIO/WRO

Edward Zajec *Orphics: 5ieme Gnossienne*
Dzięki uprzejmości / Courtesy of: Edward Zajec

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