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The magic of projection : augmentation and immersion in media art
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## 2.　Image Projection in Contemporary Art
　　Almost Realities and Expanded Reality

Filmmaking is still dependent on the tradition of the panel painting, and film-praxis shows little of the fact that in film the material is light, not pigment, and that film should push for mobile spatial projection, instead, as happens today, projecting animated "stills" onto a flat surface."[154]

László Moholy-Nagy, 1932

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154　(Translation S.E.) Moholy-Nagy (1932) p. 155.
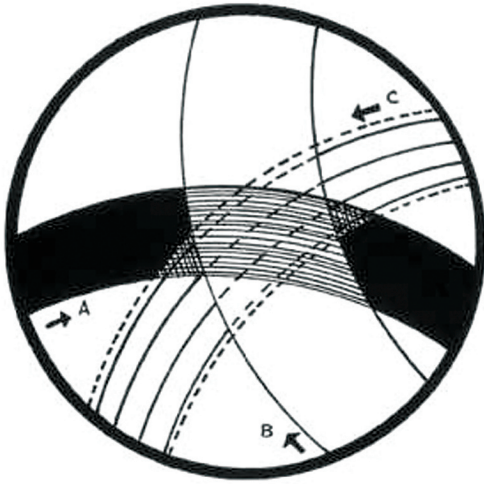
In 1927 Moholy-Nagy published a drawing of the *Poly-cinema*.[155] He sketched simultaneous moving projections floating in space. What he seems to have imagined was a layered cinematic experience in the gallery. As museum visitors we have grown quite used to dark galleries displaying projections. However, these *black boxes* rarely have the layered complexity Moholy described in his book, they tend to become quasi cinemas: in a dark room one or two large projections are 'beamed' onto one end, and seating is arranged at the other. A film is projected in a loop or at announced times. As practitioner I am often faced with the black box as a standard setup. In the recent past, on several occasions I have been invited by curators to install my work in such a black box.[156] The exhibitions were designed as a series of dark booths.[157] Sometimes however, curators go along with the request of artists for a cinematic setup.[158] These display choices may have practical reasons: the museum architecture, to prevent sound- and light-spill or other distractions of the surroundings. By and large, the black boxes work best for cinematic projections. And I agree with artist Catherine Elwes when she says these black box installations rarely do better than a screening at the cinema, as it often matters little from which position in the gallery we look at the projection on the wall. She repeats Moholy-Nagy's observation that the cinemascope illusionism is merely an 'electronic mural painting' and fails to affect space.[159]

Projections were introduced to the gallery in the 1960s when artists aimed at exposing the workings of mass media illusionism. The dominant art-historic narrative

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155   Moholy-Nagy (1967) p.41.

156   The black box is a darkened exhibition room and can be seen in opposition to the 'white cube' gallery.

157   Sharjah Biennial 9, *Provisions*, Sharjah, UAE, Asia Triennial Manchester, Imperial War Museum, Manchester, UK, *Our Land / Alien Territory*, special program of the 6th Moscow Biennale of Contemporary Art, Manege, Moscow, RU.

158   For instance, *Lines of Control*, Johnson Museum of Art, Ithaca and Nasher Museum, Duke University, USA.

159   Elwes (2005) p. 153.

says that early media art had a phenomenological approach and *dismantled* or *stripped away* the elements of the projection mechanisms offering an analytical distanced form of viewing. By bringing the cinematic experience into the gallery, film or video installations favoured a conscious experience of the structures of projective illusionism.[160]

Alternative to this analytical mode, one could look at early media installations as a *layering of space* creating an augmented viewing experience. Every contemporary art project has a particular notion of space; a layering of space happens when projected space merges with material space. This comes close to the principles assigned to *Expanded Cinema*, a field of projection art that has, for a long time, been neglected in art history.[161] Expanded Cinema is an fuzzy term for various experiments with projection and is often linked to the conceptual art practices of the 1960s and 1970s.[162] There is a strong similitude to the above mentioned *Poly-cinema* and other synaesthetic concepts of the 1920s.

In this chapter, I want to look at contemporary projection art and its art historic renderings. Undoubtedly, cinema and the cinematic play an important role in the practice and theory of projection art.[163] However, my curiosity is aroused by works that abandon the division of space into on- and off-screen, and instead attempt a mixing of realities. I will look at projection art from the perspective of an expanded projection practice. I make the distinction between a *stripping away* or a *layering* of projection into space, thus highlighting those works or aspects of works that blur the separation between the reality of the material space and the illusionary space common in traditional cinematic projections. I find some evidence of this in Moholy-Nagy's experiments with projection as well as in certain works of Expanded Cinema. I will conclude the chapter with for me one of the most convincing mixed reality practices, that of Krzysztof Wodiczko.

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160   Iles (2000).

161   Some recent publications that engage this omission are Leighton (2008), Rees (2011), Uroskie (2014), Sutton (2015) and Hatfield (2006).

162   Often cited in relation to Expanded Cinema is the text of Gene Youngblood of the same name. Youngblood (1970).

163   The relation to cinema was highlighted in exhibitions such as: '*Expanded Cinema*', Eye, Amsterdam, 2012, '*The Cinema Effect*', Hirshhorn Museum, Washington, 2008, '*Beyond Cinema*', Hamburger Bahnhof, Berlin, 2007, '*cinéma cinéma*', Van Abbemuseum, Eindhoven, 1999, and publications like: Eamon, Bal, Colomina (2009), Trodd (2011), Balsom (2013). Emphasis on the technical development of the medium and technological developement: Meigh-Andrews (2014), Spielmann (2005). A recent publication by Helen Westgeest gives an exhaustive overview of the different strands in video art theory. Westgeest (2015).

According to curator Chrissie Iles, projective installations underwent three phases.[164] Firstly, a *phenomenological phase* in the 1960s to 1970s, which brought the black box of the cinema into the gallery. She observes how "[b]uilding on minimalism's phenomenological approach, the darkened gallery's space invites participation, movement, the sharing of multiple viewpoints, the *dismantling* of the single frontal screen, and an analytical distanced form of viewing. The spectator's attention turns from the illusion on the screen to the surrounding space, and to the physical mechanism and properties of the moving image" [italics S.E.].[165] Artists challenged the static viewing perspectives of the cinema hall and stripped away the illusionism of the screen, the structure of the film frame, the physical mechanisms of projection, and the relation between the screen and its surrounding space. The viewer was given an active role, which Iles calls 'a wakeful state of perception'.[166] She illustrates this phase with the film and video works by artists such as Dan Graham, Michael Snow or Bruce Nauman.

Secondly, Iles mentions a *sculptural phase* of the 1980s, which she does not include in her study. The term video-sculpture emerged in the 1980s and is generally referring to sculptures in which TV monitors are incorporated.[167] Catherine Elwes claims "that a video displayed on a monitor is

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164   Iles (2000) p. 252.

165   Iles (2001) p. 33.

166   Iles (2001) p. 33-34.

167   Exhibitions like 'The Luminous Image', Stedelijk Museum 1984 or 'Video-Skulptur', Kunstverein Köln, 1989 mainly showed video-installations and video-sculptures using monitors.

Image 30: Bruce Nauman, *Live-Taped Video Corridor*, 1970.
IImage 31.: Nam June Paik *Dog*, Video sculpture, laser disc player, 1995.

already and always a sculpture".[168] The objectness of the TV monitor is a given, but I do not agree that it makes the video image sculptural by default. The TV became an (often awkward) unit displaying a moving image frame in space. In an exhibition catalogue from 1989, curators Wulf Herzogenrath and Edith Decker observed a boom of video-sculpture, -objects and -installations, which, according to them, started in the 1960s when artists critically interrogated the mass-medium television. Works by artists such as Marie Jo Lafontaine, Ulrike Rosenbach, Stansfield/ Hooykaas, Nan Hoover, Wolf Vostel, and Nam June Paik come to mind. The term sculpture, so Herzogenrath and Decker in the introduction to their book on video-sculpture, would also include those works that incorporate video technology into an autonomous sculptural form. They did not see the necessity for a new category of video-sculpture.[169]

Lastly, Iles mentions a *cinematic phase* starting from the mid-1990s.[170] Film historian Catherine Fowler speaks rather of *gallery films* in which artists since the 1990s incorporate cinematographic techniques. Fowler says "[t]ypically, gallery films situate themselves in relation to the cinema and cinema films".[171]

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168   Elwes (2005) p. 146. Although technically a TV image is a projection, we do experience the monitor as an object.

169   Herzogenrath and Decker (1989) p. 9-10.

170   Iles (2000) p. 252.

171   Fowler (2004) p. 329.

Art historian Claire Bishop observes a veritable nostalgia for celluloid in the late 1990s.[172] Gallery films are often produced like movies, they use and reinterpret mainstream cinema in order to *dismantle* its mechanisms. Fowler gives examples from works of artists like Sam Taylor Wood, Pierre Huyghe, Steve McQueen and Douglas Gordon.[173] She stresses that the gallery films distinguish themselves from cinema films by their 'vertical expansion': a viewer experiences the images in a more physical sense through *breaking them up* in time and space by means of split screens or multiple screens.[174]

This chronology emphasises the important role projection art played in post-minimalist art-making. Space was *stripped down* by measuring, mirroring, documenting, or abstracting.[175] The majority of works mentioned by Iles have in common a fundamental interpretation of the screen: it is the place where the projection is '*staged*'. In cinematic works the screen is the space of suspension of disbelief. The phenomenological approach addresses the screen as a material object, the projection apparatus as mechanism of illusion are made visible, and the viewer's relation to the projected image is questioned. But, rarely do the two spaces, the virtual and the actual, blend and throw "our *demarcation* of reality and illusion into doubt" [italics S.E.].[176] We as viewers may well become aware of the mechanisms of the illusions at play, yet, the projection does not leave the foursquare screen and enter into our space. What I am trying to describe here is the distinction I see between a dismantling and a layering of space. What gets largely overlooked in the three phases of projection art are those works that address the possibility of layering projections into space. This approach could be grouped under the label of Expanded Cinema, or forms of augmenting projections. What is equally neglected in many theories of video art are influences on projection art from vaudeville culture, spectacle cinema, and pre-cinematic forms of projection, to which I will turn in chapter 4.[177] Recently, there has been a revived

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172   Bishop (2012) p. 436.

173   Fowler (2004) p. 329.

174   Fowler (2004) p. 338.

175   Iles (2001) p. 33.

176   I borrow this phrase from art historian Andrew Uroskie. Uroskie (2014) p. 4.

177   Herzogenrath and Decker (1989) p. 9-10. Some exceptions to this are Hatfield (2006), Douglas/ Eamon (2009).

attention for Expanded Cinema.[178] People like artist Jacky Hatfield and art historian Andrew Uroskie have questioned the chronology and medium specific narratives of art history relating to experimental film, video art, and 'new media' installations.[179]

Almost realities and *expanded reality*

Laszlo Moholy-Nagy wrote in 1932 "Projection itself is still an unresolved problem. The rectangular screen of our cinema theatre is nothing more than a substitute for easel or flat mural painting. Our conception of space and of the relations of space and light are still absurdly primitive, being restricted to the everyday phenomenon of light rays entering a room through an aperture. It would already be possible to enrich our spatial experience by projecting light on semi-transparent screens, planes, nets, trellis-work, suspended behind each other. ... [T]he morphology of light and film will gain by the general installation of three-dimensional projection."[180] Moholy-Nagy had ideas on moving projectors and wrapped screen surfaces to layer projections in space beyond the rectangular cinema screen.[181] Unfortunately, he lacked financial backing to put these ideas to the test. The *light modulator*, which Moholy-Nagy completed and showed in 1930, seems to have been intended as a projection machine creating an three-dimensional collage of light and shadow. The film *ein lichtspiel: schwarz weiss grau* gives a sense of Moholy-Nagy's vision; close-up shots, double exposure, solarised, prism, and repetitions produce intricate abstract patterns that appear like an architecture of shadows on the screen. This and Moholy-Nagy's writings tickle the imagination of what could have followed; the light modulator potentially is a revolving projector of film images with a randomising effect.

Moholy-Nagy and other avant-garde artists were exploring the potential of film beyond the standard cinema hall projection (see insert 2). In Bauhaus tradition, Moholy-Nagy saw this also as *basic research* for the film industry. Unfortunately, film studios showed little interest in the *light modulator* or Moholy-Nagy's unconventional film script *Dynamik der Gross-Stadt* and he did not find funding to

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178   Curtis et al. (2011), Uroskie (2014), Elwes (2015).

179   Uroskie (2014), (2011), Hatfield (2006).

180   The original German text was published in '*Die Form*', 1932, no 5. I am quoting curator Jaap Guldemond's translation. Guldemond (1999) p. 14.

181   Moholy-Nagy (1967) p.41.

pursue his research.[182] However, the film industry did invest into applied research pushing the boundaries of immersive illusion. Early on, the Lumière brothers, among others, worked on 3D technology enhancing depth perception. Even before that, inventor Raoul Grimoin-Sanson installed a sensational combination of ballooning and immersive film technology. At the Paris Exposition Universelle of 1900, he projected ten simultaneously recorded films, stitching a panoramic image of a balloon flight over Paris.[183] The various universal exhibitions offered a (financial) infrastructure for experimentations with immersive projection.[184] Each succeeding world exhibition showcased some sorts of multiple screen film


spectacles. At the Moscow National Exhibition in 1959, Charles and Ray Eames produced *Glimpses of the U.S.A.*, a large scale multiple screen installation inside the Buckminster Fuller Dome. They gave the Muscovites a peek at the lives (and consumption) of the American people. A decade later, a *Time* review, titled *Magic in Montreal,* dubbed the Montreal *Expo 67* 'Celluloid City'. The world exhibition 1967 showed an exceptional number of immersive film installations, although the bulk of the 3.000 films were "straightforward sales-promotion pitches, done with all the imagination of a headache-pill TV commercial".[185] The corporate spectacles at the world fairs pushed technical boundaries and pursued perfect immersion.

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182   Moholy-Nagy (1967) p.41, Sibyl Moholy-Nagy (1969) p. 58, Sahli (2006) p. 84-85.

183   Apparently, the Cineorama of Grimoin-Sanson never really worked because of the enormous heat the projectors generated.

184   Industrial exhibitions became popular in the 19th and early 20th century, names vary from world exhibition, world's fair, world exposition, universal exposition, or simply Expo.

185   Anon. (1967).
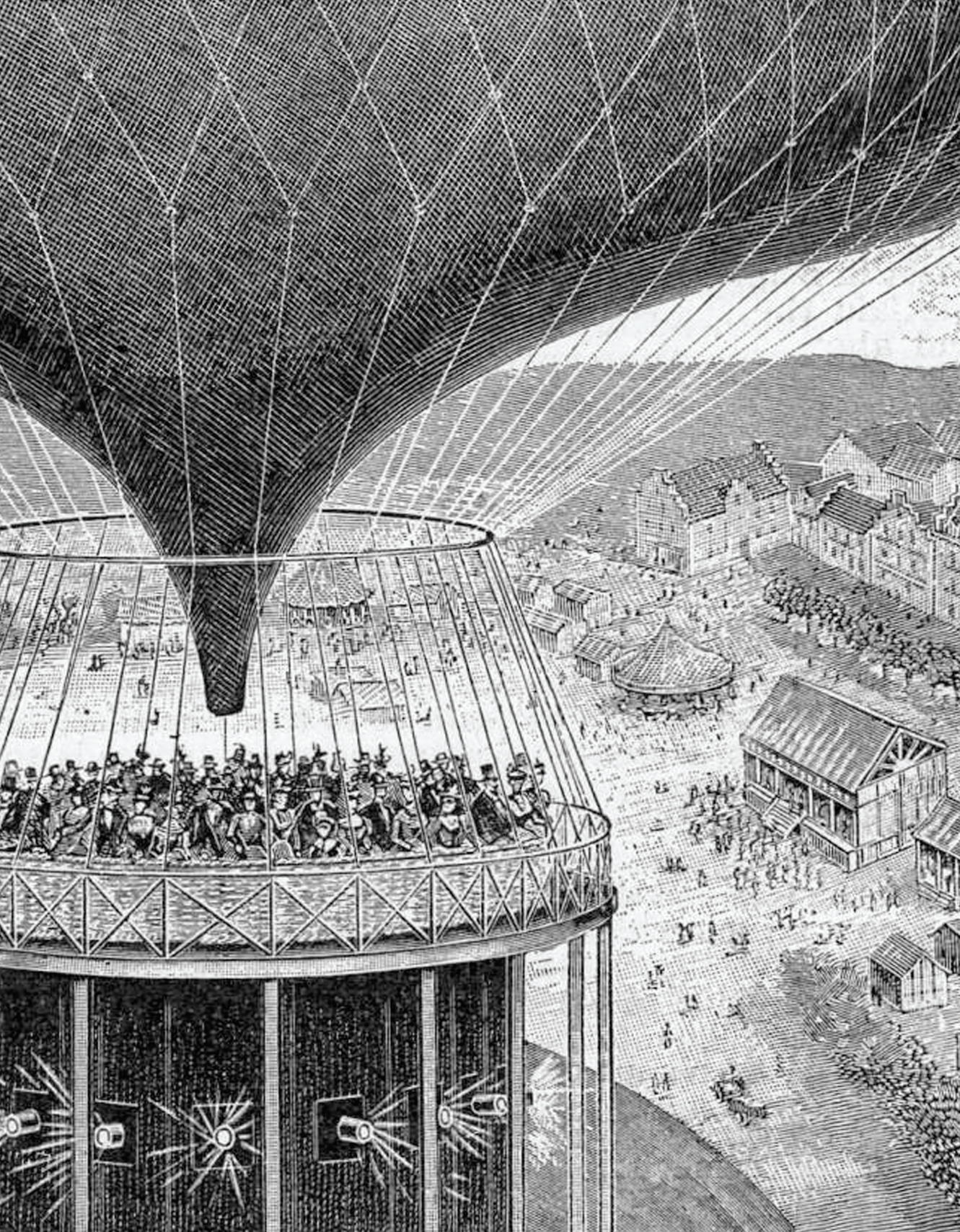
It resulted in commercial immersive technologies such as the IMAX.[186] However, the world exhibitions were not the place for *architectures of light* creating an awareness in the viewer stimulating *New Vision (*Moholy-Nagy's pedagogical theory of a holistic enhanced vision).[187]

Experiments with projections layered into space, initiated by the avant-garde in the 1920s, were picked up again in the 1960s by people such as Valie EXPORT, Joan Jonas, Stan VanDerBeek, and Al Robbins. These artists were less interested in 3D or immersive illusion, but attempted to 'expand' two-dimensional projections.

For instance, Valie EXPORT developed a practice of 'other cinema' exposing the conditions of communication of mainstream cinema. Expanded Cinema was an extended collage layering several levels of space, media, and time. EXPORT's notion of Expanded Cinema was developed out of the protest movement of the 1960s and was aimed at a redefinition of art and other forms of communication.[188] In the *Tapp und Tast Kino* (1968) she replaced the cinema screen with her skin. She built a miniature cinema hall fitted in front of her chest, where only the hands of the viewers could enter. By expanding the cinematic experience with the sense of touch, she critiqued mainstream cinema's projections of the female body.

Expanded Cinema brings together works in a vast variety of media and a number of different approaches to projection. In Expanded Cinema, reality is enlarged by panoramic projections that have an absorbing effect. In a theatrical approach Expanded Cinema was used as architecture of light, or as part of performance projecting images onto bodies or objects. Like Valie EXPORT, some protagonists incorporated projections into performance (Joan Jonas, Robert Whitman, Carolee

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186   For instance *The Labyrinth,* which was advertised with references to the vastness of gothic architecture. This multiple screen immersive experience was co-directed by filmmaker and later co-inventor of the IMAX Roman Kroitor. Richman Kenneally, Sloan (2010) p.159.

187   Sahli (2006) p.23.

188   EXPORT (undated) A slightly altered version of this text was published in English translation. EXPORT (2011).

Schneemann) and projected images in public space, onto people and buildings (Peter Weibel, Werner Nekes, Malcolm Le Grice, Anthony McCall).[189] Generally, however, Expanded Cinema has been associated with encompassing and panoramic projections like John Cage and Lejaren Hiller's *HPSCHD* (1969), a composition for harpsichord and computer-generated sounds performed as an immersive multi-media event at the University of Illinois; the *Joshua Light Shows* of the same period; *Art and Technology (E.A.T.) Pepsi Pavilion,* Robert Whitman's contribution to the 1970 Osaka World Exposition and, most prominently, the *Moviedrome* of Stan VanDerBeek (1963-65).[190]

For me the performative works, film and video installations of the 1960s and 1970s exist mainly as black and white photographs or in the written accounts of others, and it is difficult to truly imagine their effect.[191] Only rarely are installation works by first generation video artists, like Robert Whitman, Al Robbins, Steina and Woody Vasulka, Valie EXPORT, Shigeko Kubotaor, Wolf Vostell, David Hall, Tina Keane or casual practices like the *TP Videospace Troupe* exhibited or restaged (Andy Warhol being an exception in this).[192] There are multiple reasons for this, not the least because, many works of the time were difficult to archive or simply not made for keeping.[193] Furthermore, some works may have been more design and myth than reality, like the *Moviedrome*. VanDerBeek intended to create what we now might call an internet resource centre: a projection space where the viewer could access

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189   White (2011) p. 24-37, EXPORT (2011) p.293.

190   On Robert Whitman see Joseph (2006) p. 64-91, on Joshua Light Show see Zinman (2008) p. 17-21, on Cage and Nameth see Iles (2000) p. 253, on VanDerBeek see Bartlett (2011) p. 52.

191   I realize any historian will tell me this is common to all history writing. For witness accounts see recent publication '*Expanded Cinema: Art, Performance, Film*,' Rees et al. (2011).

192   The Tate modern recently restaged some works of Expanded Cinema in Tate Tanks to a limited audience (2012).

193   Author Alexander Keefe asked the question why certain early video works got lost and was told by Andrew Gurian (a member of the 1970s TP Videospace Troupe of filmmaker Shirley Clarke) "Single channel is the easy way to write video history". Keefe (2012).

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Image 37: Stan VanDerBeek in front of the *Movie-Drome*, Stony Point, New York, 1965. Photograph by Lenny Lipton.

cinema, theatre, dance, drama, electronic sound, video tape, and libraries of film.[194] Technically it never really worked and VanDerBeek eventually abandoned the idea.

Expanded Cinema

The term *Expanded Cinema* emerged in the late 1960s, most prominently in Gene Youngblood's book of the same name. However, the book leaves the term ill defined. This may well be one of the reasons why Expanded Cinema ended up in the 'dustbin of art history'.[195] Some saw Expanded Cinema as psychedelic environments, a fad of its time, or as too slick and implicated by its corporate sponsorship.[196] Some define it as multiple screen celluloid-film installations, or film projection in combination with objects or performers, predominantly associated with the structural film movement.[197] Others dismiss Expanded Cinema as the tail of abstract expressionism, which would be overturned by video art and video installations with a conceptual approach towards social space.[198]

Expanded Cinema lacked media specificity, both Jacky Hatfield and Andrew Uroskie assert this is one of the reasons why it has been difficult to position Expanded Cinema within histories of experimental film and video.[199] Both also emphasise the importance of pre-cinematic history – the 'cinema of attractions'.[200] In a 2014 study, Uroskie explains how Expanded Cinema was addressing the situation and norms of spectatorship of the moving image industry. Expanded Cinema did so "by returning to forgotten models of early and pre-cinematic history, locating the cinematic event somewhere between the immersive tradition of the movie theatre's black box and

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194   Dayal (2011) http://www.frieze.com/issue/review/stan-vanderbeek/ (accessed on 6.11.2015).

195   So writes Uroskie in his abstract to '*Between the Black Box and the White Cube: Rhetorics of Expansion*' (2014). DOI:10.7208/chicago/9780226109022.003.0002 (accessed on 6.11.2015).

196   Geeta Dayal writes in Freeze how in retrospect Stan VanDer Beek's 'Movie-Drome' "seems like a quaint, trippy historical curiosity". Dayal (2011) Branden Joseph quotes Jonas Mekas's responses to Whitman's Expanded Cinema event at 1964 New York World's Fair: "perfectly timed, slick advertisement ... with no art pretensions, pure Madison Avenue". Joseph (2006) p. 64-91. See also Mekas (2011) p. 72.

197   O'Pray (2011) p. 62.

198   Iles (2000) p. 253.

199   Hatfield (2003), (2005), (2006), Uroskie (2011).

200   The notion of a '*cinema of attractions*' used by Hatfield (2006) p. 238 was coined by Tom Gunning describing early film spectacle that grew from the vaudeville entertainment. These early film spectacles lacked concerns "with creating a self sufficient [immersive] narrative world upon the screen." Gunning (1986) p. 65.

the more distanced perception characteristic of the gallery's white cube".[201] Jackie Hatfield defines Expanded Cinema as a cinematic spectacle extending conventional filmic language. She includes a broad history of projection practices and does not apply restrictions of form or material.[202] The 'cinema' in Expanded Cinema, Hatfield points out to us, could be misunderstood to mean film.[203] The 'historical trajectory' of Expanded Cinema runs from proto-cinema ('cinema of attractions') to computer augmentations. She writes: "[E]xpanded cinema in art includes the performative and synaesthetic spectacles of the Futurists; Bauhaus; the happenings of Fluxus; technological experiment (e.g. Experiments in Art and Technology 5 etc.); expanded film of the 1960s and 1970s, and closed-circuit multi-channel participatory video of the 1970s and 1980s."[204] Hatfield's sequence points at contemporary participatory projection practices as the direct descendants and she shows the importance of pre-film forms of spectacle (like the Vaudeville entertainments, Phantasmagoria e.g.).

The perspective Hatfield and Uroskie offer onto the early foundations of contemporary projection installation contrasts with the prevalent narrative of a discipline and medium specific development of projection art with roots in experimental film and conceptual video practices. Without precluding the impact of phenomenological, post-minimalist projection practices, I approve of the emphasis they give to Expanded Cinema and pre-film forms of spectacle. As I see it, Constructivism, 'cinema of attractions' and Expanded Cinema were pivotal moments in the development of projection art. These movements articulated projection as a material layering levels of space, media, and time. By emphasising a layering instead of a dismantling of space when looking at the history of projection practice, those works or aspects of works come into view which are exploring projection as a sculptural material, expanding or augmenting space. To me it offers the possibility of thinking of projection away from the cinematic single screen and is reflected in those projection practices that play with the boundaries of reality and illusion. I am thinking of disparate works such as the slide- and later video-projections in public space by Krzysztof Wodiczko, Tony Oursler's speaking dolls, but also the video-installations by Aernout Mik with their distinct architecture, or the sound and video

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201   Uroskie (2014) p. 16.

202   Hatfield (2006) p. 237.

203   Ibid.

204   Hatfield (2006) p. 237-238.

works by Janet Cardiff and Georges Bures Miller. What unites these artists, in my mind, is that their works do not dismantle the effects of projection in a critique of illusion; rather, they blur the borders of reality and illusion by creating a *situation* where a layering of space happens.[205] Let me illustrate this with an analysis of the work of Wodiczko.

Wodiczko has projected image slides in public space since the 1980s. Often his works take place on public buildings or monuments using high powered slide projectors (and later video). The projected images remain largely static, thus merging with the architecture or object. He layers vantage points, references, and recollections onto a three-dimensional screen. Film vocabulary, like fades, panning, cuts, and zoom, would disturb rather than enhance the projections, because they refer to a discontinuity of space and time. In a film projection we accept a break in chronology because we understand the projection as an elsewhere. Wodiczko inserts an image that connects to the continuity of the specific place. However, he does not apply projections as entertainments 'bringing life to' a monument. He calls his projections 'slide warfare' and attacks on sites of bureaucratic self-representation.[206] Wodiczko developed several public projects that give a voice to those marginalised in Western democracies like the homeless, border communities, returning war veterans, or migrants. For instance, the head mounted *Porte-parole* (1993-1997) is a video extension onto the body of an immigrant or refugee. On the video screen, the mouth of the wearer is doubled and tells a pre-recorded story created by the wearer. The head-gear works in the opposite direction as a augmented reality helmet. It does not extend vision of the wearer rather it extends the vision of the onlooker. The *Porte-parole* works as a 'democratic artifice' which allows the wearer to interject
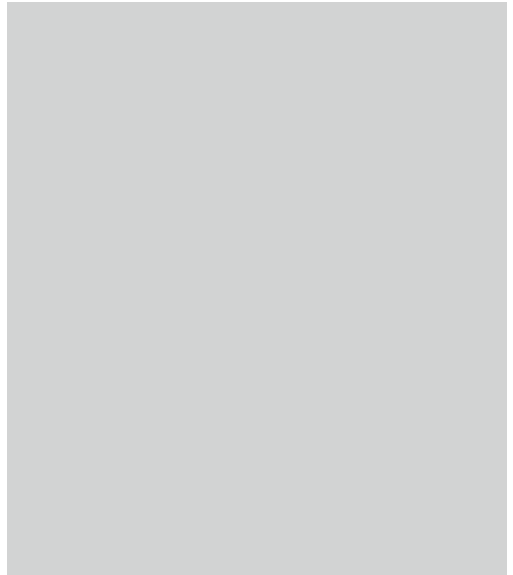
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205   Uroskie's evocative description of work of Janet Cardiff and Georges Bures Miller shows how the lines between reality and illusion become blurred. Uroskie (2014) p. 3-5.

206   Wodiczko (1999) p. 51-52.

"what must be said" in public.[207] In a later project Wodiczko also used a head-worn instrument to amplify the wearer's stories, yet the resulting audience interaction is far from intimate. For the *The Tijuana Projection* (2001), Wodiczko filmed local women with a head-mounted camera. The footage was projected live onto the dome of the El Centro Cultural in Tijuana in Mexico. In a performative speech act, women working in cheap-labour factories on the Mexican-US border voice their grievances that otherwise go unheard in the community or media. Wodiczko described the effect as "the skin of the architecture and the skin of the person will be background and foreground at the same time", thus blurring the boundary between the projected body and its three-dimensional screen, the architecture.[208] There is a disturbing element of fiction in seeing the sky-high faces of the women.

Wodiczko's projections are inserting something fictitious yet very real that unbalances our world. The projection works last only for a short moment in time, however, the images change the onlookers understanding of the building space or monument; the images in combination with their screens continue to exist in our memory. As the work of Wodiczko shows, augmentation of the object, architecture, or body emphasises the situation of projection. The screen is not neutral, it is socially and historically specific. The object, architecture, or body is not 'invisible' as a screen; rather it gives the projected image a shape and material presence. The projection inserts something virtual that may unbalance material reality by appearing momentary present yet being materially absent. In Wodiczko's works a layering of space happens where he alters our momentary perception of material space.

Wodiczko's work and the tradition I placed it in is an important point of reference for me. His projection works are sculptural in the sense of 'architectures of light'. My entry into the art world happened at the moment when video technology became digitised. This technical shift was important because technology somewhat retreated into the background.[209] At the same time, video projectors became easily available. They triggered a host of cinematic projection works, as mentioned earlier. Nonlinear digital editing let me bypass complicated video production processes necessitated by the hardware, and the cheap video projectors allowed a sculptural

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207   Wodiczko (1999) p. 118-124.

208   Power – Art:21, *Art in the 21st Century*, Season 3, 2005, Public Broadcasting Service, USA.

209   I am not trying to play down the importance of technology, but am referring to the big difference of the technically specialised production process of analogue video from the 1960's to 1980's and the consumer level video production tools available to us today.

approach to projection. It also may be significant that I have studied with Expanded Cinema and performance artists like Jim Dine, Joan Jonas, and Valie EXPORT.[210]

I see my own practice of spatial projections in extension to 'the cinema of attractions', film- and light-installations of the 1920s, Expanded Cinema, and projection-art of the 1980s and 1990s. Rather than *stripping away* or dismantling the mechanisms of illusion, I am interested in this blurring of boundaries between the reality of material space and illusionary space of projections. Media historian Tom Gunning observes how contemporary artists challenge the traditional audience-screen configuration as well as the analytical form of viewing, and draws a connection to the pre-history of cinema.[211] He asks: can the *phantasmagoria* "inspire anything other than vague nostalgia?" His reply follows: phantasmagoria is reflected in contemporary art "dealing less with the established formal paradigms of frame and screen and audience, and playing with ambiguities of space, motion, and ontology."[212] And it is in that sense I am interested in the pre-history of cinema. As already shown above, if we were to enlarge the canon of projection art, it could include 'the cinema of attractions' and practices of spatial projections from fields such as the industrial fairs, vaudeville, fairground entertainment, and magic lantern shows.[213] The magic lantern is often cited as pre-history of cinema emphasising its potential as an immersive screen-based medium.[214] I am interested in the history of the magic lantern and other vaudeville entertainment with the *layering of space* and augmentation in mind. In the next two chapters, I will address examples from the long pre-history of projection in art, looking at how projection practices approach reality, and what experiences of reality image projections invite.

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210   Joan Jonas was an advisor at the Rijksakademie van beeldende kunsten in Amsterdam. I did a course with Jime Dine in 1991 and Valie EXPORT in 1998 at the Sommerakademie Salzburg.

211   Gunning (2009) p. 34.

212   Ibid.

213   Elsaesser talks of a "need to enlarge the canon of *film history*" and suggests to include installation art of the 1920s and 1970s "that deploy the moving image as a spatial dispositif". Elsaesser (2013b) p. 878.

214   Kittler (1999), Liesegang (1926), Mannoni (1995), Zielinski (2002), Mannoni and Pesenti-Campagnoni (2009).

Image 39: Krzysztof Wodiczko, *The Homeless Projection*, public projection, 1986.

The DEMON in the machine:

Tony Oursler and Karl von Eckartshausen

Magic is dressed in the frock of a sorceress. She drives a chariot, drawn by ignorance, deceit and stupidity. In her hand she holds a magic lantern and with it throws a false light onto the world.[215] These are the first lines of an 18th century book on magic and wondrous things. The author, Karl von Eckartshausen, was widely read in his time. In *Aufschlüsse zur Magie aus geprüften Erfahrungen*
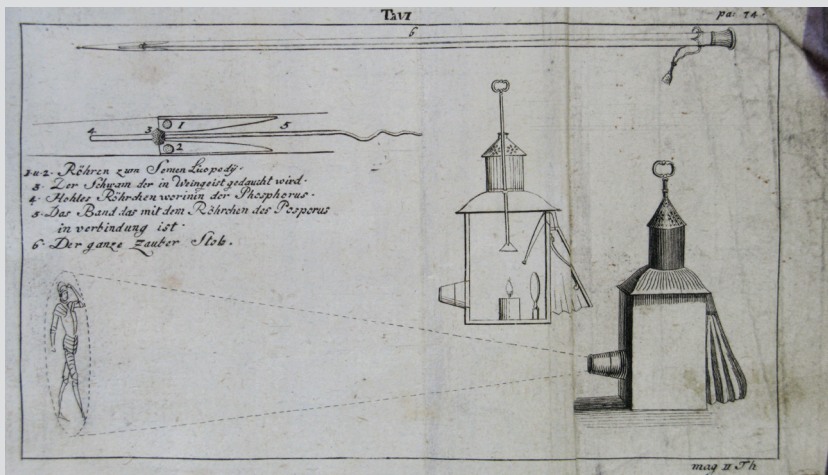
(1789-90), he explains the psychology of lantern induced magic, and gives solid descriptions of how to summon ghosts. He lists novel electric machines (stunning the attendants with electrical shocks), sound effects (amplifying and directing sound reflectors), drugs (intoxicated viewers were more receptive to the supernatural), and magically extinguishing lights (thin glass balls filled with spirits which exploded in a flash when heated in a candle).[216] In the first volume he advertised a pocket lantern fitted for a coat pocket as well as a hollow cane prepped with phosphorus made to order. Eckartshausen described how he used the cane and pocket projector for impromptu performances:

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215   Eckartshausen (1788) p. a5.

216   Ibid., p. 134.

"One day I went for a walk with several people. It was around dusk ... I remarked: This would be an auspicious setting to summon a ghost. Immediately I struck my cane on the ground and a large flame shot up. A white ghost rose from the earth and disappeared again when I hit the ground a second time. The impression of this unexpected phenomenon was too much for my companions and they all fled. It was incomprehensible to them: they saw that there could not have been any preparation, and what they experienced was all beyond reason." [217]

Eckartshausen wrote several other books on magic, Enlightenment, ethics and theosophy. His intention was to proof that we should not believe all, yet also not reject all, when it came to magic.[218] He argued that if humans managed to build ships and came into contact with a before unimaginable world and people across oceans, why would it be impossible to cross the boundaries to the spirit world? Too little was known of human imagination or the power of dreams and what triggered and shaped them.[219] Eckartshausen experiments with magic lanterns seem proof of a layered reality that references back to dreams, memories, believes, deceptions and projections.

Judy is a small rag-doll in a flowery dress. She is jammed between a sofa and the floor and curses softly between her teeth then louder: "Fuck you, hey fuck you". She is also a bunch of flowers yelling. In author Billy Rubin's interpretation of Oursler's work, Judy is a horror doll asking god to stop.[220] Oursler is best know for his aggressively talking dummies. The handmade rag-dolls are placed in awkward positions addressing the passing viewer. Oursler appears to have inverted the settings of his early video-tapes; turning the interior of the screen outside into the gallery space and displacing the screen onto the rag-dolls and other objects. According to Oursler the dummies take the space of the TV screen and displace it. He says "[v]ideo no longer acts as a window to look through but is somehow made physical."[221] Recently, during an interview he placed his head next to one of his sculptures and showed how the work

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217   [translation S.E.] Eckartshausen (1788) p.136.

218   Ibid., p.13.

219   Ibid., p. 116.

220   Rubin (2013) p. 183.

221   Janus (2010) pdf.

had brain size; "stages of the brain" he said.[222] The works come across as small autonomous entities that address the fractured compositions of our interior worlds. Oursler says: "My work is designed to work *with* the way we really see, which has to do with a very complicated referencing system full of memory, conjecture, and multi-voxed narratives" and "[t]his is in opposition to a film grammar, which is about looking outward and attempting to replace the eye."[223]

What does reading Oursler work in conjunction to Eckartshausen reveal? Their motivations appear distinctly different, one a 21st century artist, the other a 18th century philosopher. Eckartshausen used magic lantern projections partly as entertainment and partly in scientific proof of arguments that Enlightenment is not entirely a matter of human reason. Oursler equally engages his audience and provokes empathetic responses. To both, Eckartshausen and Oursler, projections seem extensions of the human psyche. Oursler is highly aware of pre-cinematic traditions of projection practices. He documented a history of projection in an 'optical timeline'.[224] The timeline gives an overview of horror and fear in relation to developments of optical technologies. Oursler says "the demonic has been and remains associated with technology'".[225] Oursler's 2013 work-anthology mentions the timeline as "nurturing [Oursler's] conviction that optical machines ... are an extension of the psyche and as such are haunted by demons, phobias, fantasies and obsessions similar to those which haunt the human soul."[226] Oursler's objective is not to prove arguments, rather to give form to a contemporary condition of a fractured viewer in front of a disintegrating screen.

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222   https://www.youtube.com/watch?v=NyiFmZmV4lY (accessed on 6.5.2014).

223   Janus (2010) pdf.

224   https://tonyoursler.com/~tonyours/files/opticaltimeline_2008.pdf (accessed on 6.5.2014).

225   Gielen (2013) p.12.

226   Ibid.

FIGURA XXIII.

Sic quasi membranæ volitant similaëra per auras
Quaque patet quocunque licet coniuncta feruntur.