

On Visualized Vision In The Early Photographic Work Of Warren Neidich

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Abstract

This article contains an analysis of Warren Neidich's early photographic work of 1997 until 2002. These works which are linked to the extensive theoretical production of the artists are contextualized with the concept of the *dispositif* and apparatus which was developed by Michel Foucault, Gilles Deleuze and recently Maurizio Lazzarato. The article provides a close description of the parameters of four pivotal work groups of Neidich's early practice, *Brain Wash* (1997), *Double Vision* (1997-2000), *Short Reverse Shot* (2001) and *Law of Loci* (1998-1999). These works were realized with the aid of low-tech devices stemming from neuro-ophthalmology, marking the interface between current neuro-philosophical discourses such as bio-politics, the plasticity of the brain, the apparatus of visual, i.e. analog and digital culture, and the philosophy of memory. It is suggested that Neidich, even though he intervenes and contributes importantly to these intermingling discourses in a broad manner, is particularly interested in the degraded and infirmed implementations of human vision in order to explore new sensations and habits of perception.

Key words

XXX ■ XXX ■ apparatus ■ Warren Neidich ■ perception

When one reads about Warren Neidich's early work of the 1990s, particularly about *American History Reinvented*,¹ most of the focus concerns an interpretation of the technical aspects of the production of his oeuvre through a media-philosophical scrim upon which an exploration of the cultural milieu is made possible. Foucault's notion of Apparatus² and the *dispositif*, developed further by French film theorist Jean-Louis Baudry in the mid-seventies (Baudry, 1975), are relevant to any exploration of Neidich's work.³ Having imported optical devices, mainly from the realm of neuro-ophthalmology, for the production of his art works one can utilize these aforementioned theoretical concepts in order to understand his projects more concisely especially those produced and discussed in this paper between 1997 and 2003. The apparatus as a technical term hints at the practical elements of the "machines of seeing" of our "scopic regimes" (Jay, 1988: 3-27) such as photo, film and video camera, projectors as well as the projection space of a cinema (or lecture hall), and finds its counterpart in the idea of the *dispositif* which supplements – in a more general way – these two closely aligned concepts of structuralism and early structuralist film theory and a more recent counterpart in Maurizio Lazzarato's media theoretical concept of Noopolitics. For him power establishes itself over the brains of the multitude from afar through the use of contemporary apparatus like the internet and particularly software agents which limit difference and create homogeny by administrating attention and memory (Lazzarato, 2003: 186).

However fascinating the mechanisms of seeing in modern times became when thinking of amateurish photo practice or visits to the movie theatre, the history of vision is above all a history of consumerism and paternalism one hand, and of eagerness for knowledge in the scientific domain on the other. Considering these complex interwoven territories, where vision (in the sense of perception) is subject to the power of knowledge, one can trace back in history its incredible power of infatuation, a danger that is embedded and reproduced more than ever in the digital image.

The idea of a ‘seduced vision’ through an analysis in time both backwards and forward as opposed to one that is simply linear and positivistic to produce, if you will, a-temporal machinic assemblages is inspiring. During the 19th century, scientific photography did not only bring to light until then unknown pictures such as Auguste-Adolphe Bertsch’s mites and other species which were unable to be seen with the naked eye or Josef Maria Eder and Eduard Valenta’s radiographs of animals. Fascination for micro-photography went so far that until the 1860s scientists still believed it possible to see more in a photographic detail when it was blown up. For instance, grains in the film emulsion became when blown-up proof of the existence sub-cellular particles and organelles. That was a tragic misinterpretation of the photographic ontology (Breidbach, 2002[1998]: 221-250). This also calls to mind the intricate investigations on Secondo Pias first photographic capturing of the Holy Shroud in 1898. Photography is, as it may seem, the medium *per se* to “search for something” (Geimer, 2002: 143-145) that is in flux in its state and hardly recognizable let alone visible.

That these misinterpretations were finally discussed tells one that vision and history cannot be understood separately from each other. Jonathan Crary’s *Techniques of the Observer. On Vision and Modernity in the Nineteenth Century* (1990) is considered to be an important reference in the delineation of the evolutionary history of modern vision linking it, as it does, to the use and forms of diverse optical devices invented and used during the century of the Industrial Revolution. Crary made clear that an optical machine as primitive as it may look for us today was a device of wonder, fascination and fantasy then. Notwithstanding, it is striking enough that even simple devices such as the stereoscope, which can be tested in many museums of film history these days, are still appealing to us.⁴ Stereoscopes, stroboscopes and zoetropes (and the photographic camera) – all pre-cinematic devices have not only been set up in amusement parks of the 19th and early 20th century (Maase, 1997), but were simultaneously used as objects to probe visual capacities such as “time-sense” and “space-sense” perception. Hugo Münsterberg, a German American pioneer in film theory and author of *The Photoplay: A Psychological Study* (1916), anticipated, as Giuliana Bruno in an extensive essay made strikingly clear, the “neuroaesthetic approach” (Bruno, 2009: 92) which has been developed by Neidich among others and which is being discussed widely in

Anglosaxon and German art criticism since the turn of the 21st century.⁵ Naming an example, Münsterberg investigated at Harvard Psychological Laboratory how film montage – motion – is able to affect emotion and empathy (Bruno, 2009: 102-103), i.e. in neuroaesthetic terms the shaping of the brain as it were.

This essay is not able to investigate how optical devices influence one's brain structure in the sense of its changing neuro-physiological states from a scientific neuro-psychological point of view, nor does it explore the artistically less interesting phenomenon of evocating certain visual stimuli in order to surprise or manipulate the viewer as one can see it in works using mirrors or light for example. It shall trace back Neidich's artistic interpretation of low-tech devices from neuro-ophthalmology such as the prism bar and Lancaster glass, which became adequate items with which to explore their possibilities as hybrid interfaces. These *Hybrid Dialectics*, as he calls them, are neither diagnostic devices used to determine abnormalities of the brain, nor are they meant to merely obtain particular artistic expressions, but a middle ground with which to "produce new kinds of images in the hope of enlisting in the viewer new sensations and habits of perception."⁶ In this context, the idea of the extended cognition plays a mediating role in Neidich's thinking as there is the "plastic brain" (Clark, 2008: 68) which is subject to constantly altering states, for instance in the man made milieu in which a series of designed and engineered apparatti are embedded in analogue and digital culture in order to make scopic regimes immediately usable. By linking the history of vision to processes such as cinematic suture, Neidich's interest lies interestingly enough less in extending the perceptual cognitive apparatus, but in discovering its degraded and infirmed margins.⁷ It is the field of rupture and manipulation of the institutionality of visual culture that Neidich intervenes pushing forward the discussion on the idea of the "distribution of the sensible" (Rancière, 2006)⁸ and the so-called "economy of attention", the economic concept of the cyberspace and its urge to bind attention (Mandel and Van der Leun, 1996).⁹ The focus of this essay lies therefore in this intriguing relationship between the exploration of a tool (the optical devices) as a metaphor for occidental cultural thinking and its literal use following self-conscious representational strategies. In this sense it can be seen that the exploration of technical and optical devices in the field of art practice is very often misleading viewer's attention to the wrong site most notably when visual phenomena evoke first of all sensational pleasure. In the case of Warren Neidich's early photographic pieces one can see how he oscillates between the *techné* of the artistic process and the realm of the artistic invention.

One of Warren Neidich's first artworks is a video called *Brain Wash* from 1997. A man sits at a table and focuses on a rotating black and white striped drum. It's a so-called "optokinetic drum"¹⁰

which is used as a simple device for stimulation and assessment of optokinetic nystagmus, an involuntary eye movement, respectively. *Brain Wash* was Neidich's first application of his *Hybrid Dialectics* and was closely aligned with the concept based on Marcel Duchamp's idea of the objet trouvé by which the double-sided, hybrid character of a work of art as dependent on its authoritative context is made strikingly clear for the first time in art history. The camera/viewer observes the man staring at the drum and a close-up of the eyes shows the particular eye movement of the protagonist. This kind of subtle vibration of the eyeballs is followed by a cut away shot of the eyes of the man at a distance which now move rhythmically to and fro, left and right. In the next scene the viewer visualizes a 180 degree pan of the horizon which is made to shake and tilt. The purposeful shaking of the hand held camera in this sequence is a direct reference to the type of unstable frame that characterizes Lars von Trier's aesthetics of *Dogma*. The notable linkage of the camera as apparatus connected to the apparatus of seeing was a nod to Duchamp's *Handmade Stereopticon Slide* (c. 1918-1919) which fuses geometry, projection and perception paradigmatically showing the horizon of the sea and an octahedron. As Neidich pointed out, this particular sequence depicts the "eratic spaces of a world in transition."¹¹ At the conclusion of the 180 degree camera pan movement there is a cut to the man again (revealing that it was apparently not he who was looking), followed by a close-up of the eyes again looking left and right, ending in a fade-out of the rotating optokinetic drum. The whole story is accompanied by a fast-paced sound track from the Japanese pop group *Pizzicato Five*.

Brainwash can be seen as sort of a comedy. Its narration is based on different filmic strategies such as the use of the linear arrangement of sequences at the beginning in which tracking shots, cutting in and away and the close-up are assembled together. This virtual movement is traditionally perceived as a stringent development of a simple time-space-relationship as can be observed in the early films of the Lumière brothers. The other strategy, the more elaborate one, is the shot reverse shot, a film technique that imitates throwing a glance at another person, often off-screen, in order to make clear to the spectator which protagonists are looking at each other. Simply said, each device which interrupts the traditional filmic eagerness to imitate human perception gives evidence to the factitiousness of the film. This happens in *Brainwash* in a quite tricky way when filmic conventions are broken up by juxtaposing sequences that give one the impression that they fit – nevertheless, they don't. The piece is therefore even more of a caricature in the sense of E. H. Gombrich's definition of identities that "do not depend on the imitation of individual features so much as on configurations of clues (...)" (Gombrich, 1986: 292). Similarly, Neidich does not seem to guide the perception of the viewer to clues just in order to communicate a content, but to the quite opposite, paradox direction. Having the optokinetic nystagmus caricatured by eyes

moving is one such paradox for from a neuro-scientific point of view one has nothing to do with the other. This example displays how two divergent concepts collide. Even more obviously is the tilting shore as a sequence which depicts the internalised vision of the protagonist. Again, it is neither nor. As the camera moves around and stops at the body of the man, the sequence of the shore is a “double-vision” film convention, unclear of course who is who and who sees what. Nevertheless, this is Neidich’s manipulation of the cinematic gaze and – above all – his engagement in the philosophy of perception.

Brainwash can be considered a relevant example to introduce Warren Neidich’s medium comprehensive practice. His practice is shaped by a thorough knowledge of the physiognomy of the eye and the brain, the psychology of perception and the history of art. He uses optical devices as a starting point from which he explores his core questions. As one can understand in seeing *Brainwash* he uses low-tech devices and, as in this case, filmic (that is perceptual) conventions, in order to visualize what effects and shapes the brain, but also deceives the eye. The optokinetic drum in the beginning and the end of the video serves as a parenthesis. If Neidich would have executed this image as a painting, it could have been something such as Bridget Rileys’ *Cataract 3* (1967) whose title, it is not without reason, is also a notion from ophthalmology. Strikingly, Riley’s and Neidich’s artistic expression is inspired by a negative connotation: the defect of vision. Working with the negative¹² Neidich reformulates what is considered a damage to or a loss in vision. Another series of work, his photographs *Double Vision* (1997-2000), among others, take up this idea and transfer it into a paradoxical but positive result. Double vision, or diplopia, is a dysfunction of one or both eyes, so to speak a misalignment of the eyes which results in seeing double. Interestingly enough the brain is able to correct and suppress the information of one eye because movement through space proves evolutionarily speaking difficult and even dangerous.

Double Vision, Louse Point (1997-1998) is a series of photographs that shows scenarios of bathing people at the beach of Louse Point on East Hampton, New York. The images are a reminder of the recreational gatherings of the well-known artists and writers Willem de Kooning, Jackson Pollock, Lee Krasner, Helen Frankenthaler, Clement Greenberg and others in the 1950s. Neidich’s images obtain a touch of nostalgia by equilibrating the photographic colours, mainly by reducing magenta that gives the impression as if the photographs had been exposed to too much sun.¹³ The images show an unusual element: translucent blue and red circles, reminding one of the strange phenomena of orbs.¹⁴ Unlike the opaque blobs on John Baldessari’s faces, Neidich’s spheres do not replace, mask or abstract, but float and shimmer translucently like extraordinary atmospheric phenomena – blue tinted lunar eclipses, red fireballs, but also the diaphanous coloured glass of a Claude’s glass. There is something mythical about them with their coronas, as they seem

to move “spot lighting” the outer world like a light ray either ignoring people in the image or aiming directly at them. By being translucent, the coloured circular surface marks undoubtedly an area between the viewer and the scenery.

The phenomenon of double vision is not seen here as a misalignment but as a movement into visual depth towards the vanishing point. Being created by placing a Lancaster glass in front of the camera lens,¹⁵ Neidich’s apparatus refers to the single point perspective construction as an expression of the outer world’s symbolic form in Erwin Panofsky’s sense (Panofsky, 1991). However, there is also the artist’s other interest in visual perception in a more physiological way than Panofsky. One can argue, that Neidich’s photographic work also marks a spot as an area of afterimage, pointing out unknown areas of the science of neurology with a hint to “cognitive ergonomics” as he calls it (Neidich, 2003: 21). The phenomenon of afterimage can serve here as a metaphor of what can be seen in this image production, an amalgam of remembrance, inner perception in the shape of visualized visual traces of the brain cortex, and most of all the result of an artistic process to break up the mimetic function of photographic representation.

Warren Neidich makes ample use of optical devices in his early art works. Another work, *Shot Reverse Shot* is a series of performances, resulting in a video and a series of photographs. Again, he is not reformulating the traditional filmic strategy of the shot reverse shot, but uses the technique literally in order to obtain not only unknown visual experiences but also distinct viewing structures. The prism bar, which is held in front of the protagonist’s eyes, fans out perception revealingly in both ways. The object is a neurological and ophthalmological device to measure an eye’s deviation after a stroke or a trauma for the later surgical reconstruction of the misalignment and reconstitution of single vision. In *Shot Reverse Shot* it is used as a cadenced glass to look through, a window which is in itself the traditional metaphor of vision since the picture pane depictions by Leon Battista Alberti in *De Pictura* (1435) and Albrecht Dürer in *Underweysung der Messung* (1538). Exploring the situation of the two protagonists – viewers, one of them filming the scene – who look through the prism bar standing in front of each other and experiencing a refracted view, one is immediately reminded of another concept of perception which is Jacques Lacan’s often cited three diagrams from *The Four Fundamental Concepts* (1981). As Martin Jay pointed out, Lacan was very much inspired by his friend of the Surrealist magazine *Minotaure*, Roger Caillois, who introduced a dihedron to “clarify the relation between eye and gaze (...) in his 1935 essay on ‘Mimétisme et psychasthénie légendaire’” (Jay, 1993: 365). Lacan developed the idea of the screen (*écran*) which is the site of correlation between one’s eye looking at an object and the gaze (marked as “light”) looking back. It is intriguing to see that Lacan is using the metaphor of the camera to come to the second diagram¹⁶ and to his understanding, that what “was looking at me

at the level of the point of light, the point of light, the point at which everything that looks at me is situated.” (Lacan, 1981: 95 and Jay, 1998: 365).¹⁷ In his concept the screen is the place of the subject who is not only “caught, manipulated, captured in the field of vision,” (Lacan, 1981: 92 and Jay, 1998: 364) but who also embodies the paradox of being in between light and the opaque simultaneously. With the screen concept the single focus of the God’s eye-view is clearly abandoned. Coming back to Neidich’s work *Shot Reverse Shot* one can trace back such concepts by understanding the prism bar as a place of interference. The viewing structure is antidromic, even equally administered between different protagonists who are all from mixed ethnical background. Each one embodies different historical conceptions using the analogue simple device of a prism bar or the digital video camera. One can even argue that the gaze of the protagonists, being documented on one side, experienced unmediated on the other, is a paradigm of an altering subjectivity in process by the aid of a prosthesis and a clue to the neo-liberal global world order governed by the WWW.¹⁸ This would also sync up with Lacan’s notion of the screen as a place of mediation. Kaja Silverman commenting on this relationship proposed that Lacan’s screen is also subject to social and historical interpretations “by describing it as that culturally generated image or repertoire of images through which subjects are not constituted, but differentiated in relation to class, race, sexuality, age and nationality,” (Silverman, 1989: 75-76) an observation which also possesses validity in Neidich’s work.

Using the prism bar in a direct way such as in the *Shot Reverse Shot* project one can also observe that in its playful use it instigates the dissolution of personal space and boundaries that determine personal interactions. Even though vision is refracted, the process of seeing not only more but above all unconventionally is, as mentioned above, crucial and is very much related to Neidich’s neuro-biopolitical interests. Whereas *Shot Reverse Shot* can be seen as part of Neidich’s interactive projects the last photographic series being discussed in this paper is dedicated to photography as a medium of guarding the past (actually the present in its moment of capturing) for the future. It is also part of Neidich’s extensive explorations into the “History of Consciousness”.

Law of Loci was undertaken by Neidich in a short time span of approximately fifteen months in 2002-2003 when the artist visited his ill father’s home outside New York City regularly. The term describes the main mind memory aid of the Antique world delineated by Cicero in *De Oratore*. Cicero himself employed the method to memorize his speeches by walking mentally through the area of the Forum romanum. Simonides of Ceos, the legendary inventor cited by Cicero, found out that by using the spatial relationship of the imagination of a house one is able to recall things better. Instead of walking mentally through the space of the house he grew up in he instead physically wandered from room to room as well as outside revisiting spaces of his

childhood and adolescence where things had happened to him. This physical component of the project became pivotal. By moving through his parents' house and its environments the artist explored and questioned what is one of the core functions of photography: capturing traces of actuality. As Roland Barthes has showed so poignantly in *Camera lucida* (1981) the photograph occupies the place of remembrance and mourning. It is still striking that capturing images of beloved persons and places, the present of that particular moment is inscribed into the surface of the filmic material as soon as it is taken and is turned into the past the very moment. Neidich's series of *Law of Loci* above all visualises this paradoxical nature of photography.

The photographs of *Law of Loci* were taken through a prism bar with positive-negative Polaroid film material. They depict a fragmentary vision of the house, selected views from its inside such as photographs hanging on a wall, curtains, and also Neidich's father. They also show its close surrounding, a lake, a shack, tables and chairs in a garden, and trees. The pictures are sometimes blurred, often tilted, and black and white. Having used Polaroid film material the idea was to capture a snapshot instantly, finding a visual analogy of an experience that cannot be caught in a picture without undergoing essential transformations. As Thierry de Duve argues, the "snapshot is a theft; it steals life. Intended to signify natural movement, it only produces a petrified analogue of it. It shows an unperformed movement that refers to an impossible posture. The paradox is that in reality the movement has indeed been performed, while in the image the posture is frozen." (De Duve, 1978: 114). Neidich's way to produce these images was not only to move physically through space in order to find views which represented his remembrances of the house at that particular moment. He also had to move the prism bar in order to split up his own vision and receive an aesthetic expression which in some ways mimics early movement studies of the history of photography. Therefore, the effect of instant photography was not based on capturing the fluidity of life, but on seeing the effects of the prism movement in the moment when the images were taken. As de Duve argues, not only the image is frozen, but in Neidich's case even movement is brought to a standstill. By using this unorthodox photographic practice Neidich found a way to match the physical world with an analogue of his mental vision of the non-depictable, arguing that memories are unable to be captured in a picture and can only be visualised by finding a metaphorical counterpart. Memory is considered non-representational, continual and performative, as Gerald Edelman and Giulio Tononi recently argued: "(...) memory in global mappings is not a store of fixed or coded attributes to be called up and assembled in a replicative fashion as in a computer. Instead, memory results from a process of continual recategorization (...) There is no prior set of determinant codes governing the categories of memory, only the previous population

structure of the network, the state of the value systems, and the physical acts carried out at a given moment.” (Edelmann and Tononi, 2000: 97-99).

This understanding of a performative mutating memory could be also seen in relation to the German film theorist Siegfried Kracauer’s concept of the photographed object or person as a ghost. In the early essay “The Photograph” (1927) Kracauer describes how capturing a photograph of an actuality is gradually sliding into the far past and that there is always a drifting away of the past from the present. As German film theorist Heide Schlüpmann pointed out, Kracauer’s concept of photography in the interwar times was very much influenced by Marcel Proust’s *A la recherche du temps perdu* where the French novelist delineates his encounter with a photograph of his grandmother (Schlüpmann, 1991: 115).¹⁹ The image of the grandmother plays an equivalent crucial role in Kracauer’s essay because he had recognised a sort of estrangement in it (Schlüpmann, 1991: 116)²⁰. Kracauer sees a dichotomy between the photograph and the memory arguing that memory “encompasses neither the entire spatial appearance of a state of affairs nor its entire temporal course. Compared to photography, memory’s records are full of gaps,” therefore “memory images retain what is given only insofar as it has significance. Since what is significant is not reducible to either merely spatial or merely temporal terms, memory images are at odds with photographic representation.” (Kracauer, 1995[1927]: 50). Kracauer’s understanding of photography is not primarily based on the ontological concept of the analogue print with a reference to positivist science as can exemplarily be seen in Roland Barthes’ concept of the referent. He recognises different temporal states of a photograph and made clear that even though temporality is written into the process of registering an image, the photographic image does not conserve the depicted but rather destroys it. This can be seen in his extensive exploration of the photographs of different women such as his grandmother. Most importantly his research is based on a present evaluation of the photographic effect and in distance to the various pasts which are trapped in the photographs.

Neidich’s *Law of Loci* is not only an example of photographic imagery which is not able to preserve the past in a constant way, even less as a visualization of personal memories. His conceptual approach is based on pivotal theories of photography and the mnemosyne dealing with the idea of capturing the personal and the present which is in flux of being lost, becoming the past immediately. Admittedly, the process of production is insofar technical and a re-evaluation of photographically registered movement as it is based on the structure of the apparatus. And even though the images of *Law of Loci* recall Etienne-Jules Marey’s geometric chronophotographs or Eliot Eliofson’s photograph of Marcel Duchamp descending a staircase,²¹ Neidich’s process is less conducted towards an exploration of the physical conditions of light exposure and film speed. The so obviously registered movement is produced on a third spot, namely with the help of an optical

device which is linked to the science of perception and, not to forget, the failure of human vision. Even though quintessentially analogue the pictures of *Law of Loci* have to be understood as unfathomably detached from the referential nature of its production. The question remains unanswered if an understanding of these works necessarily ask for a clarification of its production process, if one remembers the examples from the past when magnifying glasses made so far unknown worlds visible. Neidich's early photography serves both ways, and its conceptual nature makes a deep understanding of the metaphorical meaning of the artist's use of optical devices visible. However, despite the media-philosophical and the literal use of these objects, the photographic works also can be seen as a sort of enigmatic pictures that link the nature of these images not to the visible world, but to notions of the unreachable.

References

Barthes, R. (1981) *Camera lucid: reflections on photography*. New York: Hill and Wang.

Baudry, J.-L. (1975) 'Le *dispositif*: approches métapsychologiques de l'impression de réalité', *Communications* 23: 56-72.

Breidbach, O. (1998) 'Der sichtbare Mikrokosmos. Zur Geschichte der Mikrofotografie im 19. Jahrhundert', *Fotogeschichte, Beiträge zur Geschichte und Ästhetik der Fotografie* 68/69: 131-142; English reprinted in Breidbach, O. (2002) 'Representation of the microcosm - The claim for objectivity in 19th century scientific microphotography', *Journal of the History of Biology* 35: 221-250.

Breidbach O. and Clausberg K. (1999), *Video ergo sum: Repräsentation nach innen und aussen zwischen Kunst- und Neurowissenschaften*. Hamburg: Verlag Hans-Bredow-Institut.

Bruno, G. 'Film, Aesthetics, Science: Hugo Münsterberg's Laboratory of Moving Images', *Grey Room* 36 (Summer 2009): 88-113.

Clausberg K. (1999) *Neuronale Kunstgeschichte: Selbstdarstellung als Gestaltungsprinzip*. Wien, et al.: Springer, 1999.

Clark, A. (2008) *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*. Oxford, New York: Oxford University Press.

De Duve, T. (1978) 'Time Exposure and Snapshot: The Photograph as Paradox', *October* 5: 113-125.

Dietz, S. (1989) *American History Invented*. New York: Aperture.

Foucault, M. (1980) *Power/Knowledge: Selected Interviews and Other writings, 1972-1977*, ed. and trans. C. Gordon. Brighton: Harvester Press.

Geimer, P. (2002) 'Searching for Something. On Photographic Revelations', in *Iconoclash: beyond the image wars in science, religion and art*, ed. Bruno Latour, Peter Weibel. Cambridge, Mass., et al.: MIT Press.

Gombrich, E. H. (1986[1960]) *Art & Illusion. A study in the psychology of pictorial representation*. London: Phaidon.

Jay, M. (1988) 'Scopic Regime of Modernity', in *Vision and Visuality*, ed. Hal Foster. Seattle: Bay Press.

Jay, M. (1993) *Downcast Eyes: The Denigration of vision in Twentieth-Century French Thought*. Berkeley: University of California Press.

Kracauer, S., (1995 [1927]) 'Photography', in Kracauer, S. *The mass ornament: Weimer essays*, edited by Thomas Y. Levin. Massachusetts/London: Harvard University Press.

Lacan, J. (1981[1964]) *The Four Fundamental Concepts of Psycho-analysis*, ed. Jacques-Alain Miller. New York: W.W. Norton & Co.

Lazzarato, M. (2006) 'Life and the Living in the Societies of Control,' in Fuglsang, M. and Meier Sorensen, B. *Deleuze and the Social*. Edinburgh: Edinburgh University Press, 2006 page 186

Linke, D. B. (2001) *Kunst und Gehirn : Die Eroberung des Unsichtbaren*. Reinbek bei Hamburg: Rowohlt-Taschenb.-Verlag.

Livingstone, M. (2002) *Vision and art: the biology of seeing*. New York, NY: Abrams.

Maase, K. (1997) *Grenzenloses Vergnügen : der Aufstieg der Massenkultur 1850 – 1970*. Frankfurt am Main: Fischer-Taschenbuch-Verlag.

Maharaj, S. (2005-2007) 'From the Afterlife to the Atmospheric reassessing our basic assumption', in *Journal of Neuro-Aesthetic Theory* 4, <http://www.artbrain.org/from-the-afterlife-to-the-atmospherics-reassessing-our-basic-assumptions/> (accessed February 12, 2010).

Mandel, T. and Van der Leun, G. (1996), *Rules of the Net. On-Line Operating Instructions for Human Beings*. New York: Hyperion Books.

Neidich, W. (2003) *Blow-up: Photography, Cinema and the Brain*. New York: D.A.P./Distributed Art Publishers.

Neidich, W. (2008). *Earthling*, New York: Pointed Leaf Press.

Neidich, W., et al., (2009a) 'Some cursory comments on the nature of my diagrammatic drawing', in *Warren Neidich: Lost Between the Extensivity/Intensivity Exchange*. Eindhoven: Onomatopoe.

Neidich, W., et al. (2009b) "The Neuro-Aesthetic Library", in in *Warren Neidich: Lost Between the Extensivity/Intensivity Exchange*. Eindhoven: Onomatopoe: 114-119.

Panofsky, E. (1991[1927]) *Perspective as symbolic form*; transl. Christopher S. Wood. New York: Zone Books; Cambridge, Mass.: MIT Press.

Rancière, J. (2006) *The politics of aesthetics.:The distribution of the sensible*, ed. and trans. Gabriel Rockhill. London; New York: Continuum.

Schlüpmann, H. (1991), 'The Subject of Survival: On Kracauer's Theory of Film', *New German Critique* 54: 111-126.

Silverman, K. (1989) 'Fassbinder and Lacan: A Reconsideration of Gaze, Look, and Image', *Camera obscura* 7: 54-85.

Stafford, B. M. and Terpak, F. (2001) *Devices of wonder : from the world in a box to images on a screen*. Los Angeles, Calif.: Getty Publ..

Zeki S. (1999) *Inner vision : an exploration of art and the brain*. Oxford, et al.: Oxford University Press.

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¹ The work *American History Invented* from 1989 is a thoughtful use of different historical printing materials, camera lenses, and archival display methods. See (Dietz, 1989).

² "The apparatus is thus always linked to certain limits of knowledge that arise from it and, to an equal degree, condition it". See Michel Foucault's understanding of the apparatus which is of particular interest for Neidich: (Foucault, 1980: 194-196).

³ As are the works of Michael Snow, Stan Brakhage and Jean-Luc Godard. Neidich's interest lies above all in the unveiled processes of the cinematic production as can be seen in Snow's *Wavelength* (CAN, 1967), Brakhage *Prelude: Dog Star Man* (USA, 1961) and Godard's *Le mépris* (F, 1963).

⁴ The contrary case, I would suggest, is a walkable camera obscura where the projected image, depending on the weather outside, is usually not very well visible – and for your habits a disappointing matter.

⁵ Neidich began lecturing on Neuroaesthetics in 1995 at the School of Visual Arts New York. See on his take on neuroaesthetics and the concept of neural plasticity: *Journal of Neuro-Aesthetic Theory* (www.artbrain.org; founded by Warren Neidich), (Neidich, 2009b: 114-119), (Livingstone, 2002), (Stafford and Terpak, 2001), (Linke, 2001), (Zeki, 1999), (Breibach and Clausberg, 1999), (Clausberg, 1999).

⁶ Email to the author, April 19, 2010.

⁷ On the "intoxicated sight" see (Neidich, 2003).

⁸ Neidich has referred several times to the work of Jacques Rancière, claiming that particularly in the mutation of the so-called "distribution of the sensible" the power of art can be found. Reformulated as "redistribution of the sensible" Neidich's own theoretical writing links the concepts of power of Michel Foucault and Gilles Deleuze to Maurizio Lazarrato's concept of "noo-power." On this discussion see (Neidich, 2009a).

⁹ In the sense of Thomas Mandel and Gerade Van der Leun, "attention is the hard currency of cyberspace." (Mandel and Van der Leun, 1996).

¹⁰ I do not agree in seeing a zoetrope in this device as many other writers have referred to when explaining *Brainwash*, including the artist. A zoetrope is a precinematic device which is created by a round cylinder obtaining observation slits and a series of images such as a galloping horse which are attached in the inside. While looking at a turning zoetrope, one's eyes focus on the image(s) inside which causes the effect of the illusion of a moving image. There is no eye movement in itself which distinguishes the core function of a zoetrope from a optokinetic drum.

¹¹ "At the heart of this video is the notion of the cataclysmic shift of the viewer of the late 19th century as he or she transitioned into the early 20th century. A viewer in which cinema not photography would produce the conditions of perception and cognition." Email correspondence with the author, April 19, 2010.

¹² Stan Brakhage's experimental film *Prelude: Dog Star Man* (USA, 1961) where he scratches analogous film material or uses distorting lenses in order to receive unknown imagery to the eye is another example.

¹³ Photographs change their colors due to chemical instability of the photographic paper. Magenta and yellow is reduced when photographs receive too much light, cyan and yellow are more instable in darkness.

¹⁴ Some people believe that orbs are paranormal balls of light on photographs or video film.

¹⁵ Neidich's sculptural and photographic works, also the *Hybrid Dialectic Device*, were shown in the exhibition "The Mutated Observer, part 1" at California Museum of Photography in 2001.

¹⁶ On Lacan's use of the camera as metaphor or an "imaginary apparatus" see (Silverman 1989: 72).

¹⁷ In this passage Lacan offers an anecdote of a floating sardine can in water. Lacan explained that the can "was looking at me, all the same. It was looking at me at the level of the point of light, the point of light, the point at which everything that looks at me is situated – and I am not speaking metaphorically." (Lacan, 1981: 95), cited after (Jay, 1998: 365).

¹⁸ The exploration of this condition influenced Neidich's later work, *Earthling*. See (Neidich, 2008).

¹⁹ „I was in the room, or rather I was not yet in the room since she was not aware of my presence... Of myself... there was present only the witness, the observer with a hat and traveling coat, the stranger who does not belong to the house, the photographer who has called to take a photograph of places which one will never see again. The process that mechanically occurred in my eyes when I caught sight of my grandmother was indeed a photograph." Marcel Proust, *In Search of Lost Time. Swann's Way*, quoted by (Schlupmann, 1991, 115).

²⁰ Schlupmann argues that this photograph in the 1920s was retrospectively already part of film, as its concept represented "the repression of death, the continuation of life". (Schlupmann, 1991: 116).

²¹ Reproduced in *Life Magazine*, Nr. 284, New York,