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Hacking the Vision Machine: Farocki's and Paglen's detourning of control images

*Hackeando la máquina visual:
la deconstrucción de las imágenes de control
en las obras de Farocki y Paglen*

*Hackeando a máquina visual:
a desconstrução das imagens de controle
no trabalho de Paglen y Farocki*

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ABSTRACT

This paper argues that photographer Trevor Paglen and filmmaker Harun Farocki engage in a form of hacking of control images of surveillance organizations. Paglen's photo series follow the traces of secret military bases and unregistered spy satellites, while Farocki accompanies in his films the transition of prisons from disciplinary institutions to institutions of control. Both artists expose in their works not only the process of surveillance itself, but

the necessary blind spots that every attempt to survey has. This is achieved by aesthetic practices that detourn and dismantle the protocols of surveillance institutions. Engaging in the creation and maintenance of counter-knowledge, Paglen's and Farocki's works open faultlines for political imagination. Uncovering the technocratic rationality that governs control images enables them to develop new forms of counter-surveillance that undermine the principle of control.

KEYWORDS

Art, film, photography, resistance, surveillance.

RESUMEN

Este artículo argumenta que el fotógrafo Trevor Paglen y el cinematógrafo Harun Farocki realizan una suerte de hackeo de las imágenes producidas por los sistemas de vigilancia. Las series fotográficas de Paglen siguen la pista de bases militares y de satélites espía, mientras que Farocki retrata en sus películas la transición de las prisiones desde instituciones disciplinarias a instituciones de control. Ambos artistas exponen a la luz pública, no solo el proceso de vigilancia en sí mismo, sino también los puntos ciegos presentes en todo sistema de vigilancia. Logran esto a través de prácticas estéticas que deconstruyen y desmantelan los protocolos de las instituciones de vigilancia. A través de la creación y el mantenimiento de un contra-conocimiento, los trabajos de Paglen y de Farocki abren el camino hacia la imaginación política. Descubriendo la racionalidad tecnocrática que gobierna los sistemas de control, utilizan las imágenes producidas para desarrollar nuevas formas de contra-vigilancia que debiliten el principio y la justificación de dichos sistemas.

PALABRAS CLAVE

Arte, cine, fotografía, resistencia, vigilancia.

RESUMO

Este artigo argumenta que o fotógrafo Trevor Paglen e o cineasta Harun Farocki realizam um tipo de hacking das imagens produzidas pelos sistemas de vigilância. As séries fotográficas de Paglen seguem as bases militares e satélites espíões, enquanto que Farocki retrata nos seus filmes a transição das prisões das instituições disciplinares a instituições de controle. Ambos artistas expõe à luz pública, não apenas o processo de vigilância em si mesmo, mas também os pintos cegos presentes em todo sistema de vigilância. Conseguem isso através de práticas estéticas que desconstruem e desmantelam os protocolos das instituições de vigilância. Através da criação e a manutenção de um contra-conhecimento, os trabalhos de Paglen e De Farocki abrem o caminho à imaginação política. Desvelando a racionalidade tecnocrática que governa os sistemas de controle, utilizam as imagens produzidas para desenvolver novas formas de contra-vigilância que enfraquecem o princípio e a justificação de controle.

PALAVRAS-CHAVE

Arte, cinema, fotografia, resistência, vigilância.

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Introduction

Paul Virilio (1994) introduces in his book *The vision machine* a metaphor for what he sees as the paradigmatic image technology of late-modernity:

After all, aren't they talking about producing a 'vision machine' in the near future, a machine that would be capable not only of recognizing the contours of shapes, but also of completely interpreting the visual field [...]? Aren't they talking about the new technology of "visionics": the possibility of achieving sightless vision whereby the video camera would be controlled by a computer?

(Virilio, 1994, p. 59).

For Virilio, this fantasy of a vision machine "completely interpreting the visual field" is the latest development in a history of "industrialization of vision": the alteration of human perception through machines and an increasing delegation of perception to them. Virilio argues that these alterations affect what can be seen and what cannot be seen. In epistemological terms: the instruments we use render certain aspects of reality visible, while covering others. As every age has its own vision machines, every age has its particular capacities to see and its particular blind spots.

Thus, the above described "vision machine" is an expression and at the same time a source of a late-modern technocratic rationality, reflecting the fantasy of a totally transparent society, autonomously interpretable by an objective machine. I propose to understand Virilio's descriptions of a vision machine as closely related to Deleuze's (1989) ideas on control in his essay *Postscript on Societies of Control*. Deleuze writes of control: "enclosures are molds, distinct castings, but controls are a modulation, like a self-deforming cast that will continuously change from one moment to the other" (p. 4). While the analogue cinematic camera literally molds a piece of reality on its chemical surface, the digital "vision machine" rather filters reality in ever-changing flows. Accordingly, the analogue camera is an instrument of panoptic enclosing surveillance, while the "vision machine" exercises totalizing control, as its promise is to interpret independently. Deleuze concludes his observations on control with the call for

an emancipatory struggle against the modulating powers of control systems with new means: "there is no need for fear or hope, but only to look for new weapons" (p. 4).

I propose to read the photographic works *Limit Telephotography* (2006) and *The Other Night Sky* (2010) by Trevor Paglen and the essay film *Gefängnisbilder* (2003) by Harun Farocki as such ways of looking for new weapons. Both artists aim to expose the structures of late-modern technocratic rationality in these pieces. Paglen's works make the traces of secret military bases and unregistered spy satellites visible and by that engage in a form of second order surveillance. Farocki accompanies in his film essay the transition of prisons from disciplinary institutions to institutions of control. Though looking at different domains and applying different medial tactics, both artists share a common impulse: to expose the technocratic rationality that governs the (in)visibilities at the institutions they look at. Their works render visible the visual asymmetries of a society of control and create faultlines for political imagination.

Both artists share further a strategy that I call the hacking of control images. McKenzie Wark (2004) writes on the act of hacking: "to hack is to release the virtual into the actual, to express the difference of the real" (p. 74). Like hackers, Farocki and Paglen use images produced by control institutions and manipulate them. They make the virtual confinements of control structures palpable through the disturbance of actual procedures: by mimicking and repurposing control images, Farocki's and Paglen's works make visible the presumptions and blind spots of the technocratic rationality that governs the particular structures that produce those images. This detouring¹ of control images enables to decipher the "source code", the procedures and presumptions, of this technocratic rationality. Both artists point self-referentially in their works to and exploit what Christian Katti (2002) calls the "systemic blind spot" that is the condition for any form of surveillance. One could say they are fighting the phantasm of the objective, totalizing "vision machine" with its own principles. As Andrew Ross (1991) writes: "a hacker's knowledge, [is] capable of penetrating existing systems of rationality that might otherwise seem infallible; a hacker's knowledge [is], capable of reskilling, and therefore rewriting, the cultural programs and reprogramming the social values that make room for new technologies" (p. 11). Therefore both works can be regarded as models for visual resistance and critical image practice in societies of control. I suggest further that

¹ Detouring is used here in reference to Wolman's (1956) translation of Guy Debord's concept of *détournement* as "deflection, diversion, rerouting, distortion, misuse, misappropriation, hijacking, or otherwise turning something aside from its normal course or purpose".

Paglen and Farocki stand for two different but sometimes overlapping strands of hacking. While Paglen's approach of imitating control images resembles the strategy of creating Trojan horse viruses infiltrating a system, Farocki's repetitive re-contextualization and disruptive re-purposing of control images can be read as the practice of "cracking", the decryption of a source code in order to find weak spots for manipulation in a software structure.

I would like to contribute with my reading of Paglen's and Farocki's works to a theorization of hacking as a documentary practice and extend thereby Liu's (2004) idea of "hacking as a paradigm for a renewed creative arts and cultural criticism" (p. 397). How do the documentarians Paglen and Farocki embrace notions of hacking? And how does their hacking generate new visual forms overcoming the obstacles of depicting institutions of control? Farocki and Paglen have both an activist past inspiring their work as documentarians of oppositional knowledge. Farocki was a prominent image of the German student protests in 1968 and made films explaining the manufacturing of Molotov cocktails. Paglen is a trained geographer, who has worked as a journalist on various themes such as the American military, the Californian prison system or the development of drones. By embracing hacking, "the penetration of systems of rationality that seem infallible", they adapt their activist strategies to oppose modulating systems of control: not through plain resistance or counter-surveillance, but through the creation of navigational tools that enable us to see the procedures and limits of control systems.

Limit Telephotography: landscapes of control and political semi-opacity

Trevor Paglen's photo series *Limit Telephotography* (2010) is a collection of attempts to photograph classified military bases in the United States. Most of those bases are surrounded by a vast amount of open land (from 1700-4600 square miles around each of them) to which access is highly restricted. This vastness of their surroundings renders the actual facilities invisible for outsiders. By using optics originally developed for astronomy, Paglen was able to take pictures of military buildings from extremely long distance and without violating existing laws. The series falls into two parts regarding its aesthetics and technique. While one sequence of photos from comparatively short distances (1 mile) resembles snapshots from surveillance cameras (Image 1), the rest of the series shows photos shot from larger distances. These longer distance pictures suggest military aerial photography (Image 2).

IMAGE 1: MIDDLE RANGE SHOT, *LIMIT TELEPHOTOGRAPHY*, TREVOR PAGLEN, 2006



Source: Trevor Paglen, 2006 - <http://www.paglen.com/?l=work&s=limit>
Courtesy of the artist, Metro Pictures, Altman Siegel and Galerie Thomas Zander.

IMAGE 2: LONG RANGE SHOT, *LIMIT TELEPHOTOGRAPHY*, TREVOR PAGLEN, 2006



Source: Trevor Paglen, 2006 - <http://www.paglen.com/?l=work&s=limit>
Courtesy of the artist, Metro Pictures, Altman Siegel and Galerie Thomas Zander.

I argue that this self-referential use of CCTV aesthetics and military aerial photography is an appropriation of the practices of the surveillance organizations in focus. However, while mimicking control images of CCTV cameras and areal photography (Image 2), Paglen's photography does not show evidence of anything beyond the mere existence of what is photographed. The interventional gesture of surveilling the surveillants seemingly fails and must fail in order for the images to come into existence. We do not get any idea about the secret operations that are taking place at those classified places. This is due to the legal and geographical "shield of invisibility"² that surrounds the military bases, which is inscribed in the photos through the complete absence of depth of field. We merely see blurring shapes of objects that can only be deciphered with effort as buildings, planes or radar stations. Obviously, this blurring is a result of the enormous distance from which the photos were shot and the unusually long exposure times necessary to shoot them. The confining limits of the production of these improbable images are therefore deeply inscribed into the photos. We are confronted with a resisting landscape in front of Paglen's camera: Objects that only reveal their material surfaces and deny any visual access to or interpretation of their internal proceedings. Rather than revealing facts, the photos make palpable the existence of an invisible infrastructure that resists the gaze of the public. Paglen's photographs show us that the enclosed and enclosing panopticons that have structured disciplinary societies are transformed into modulating landscapes and infrastructures of control. While the Foucaultian prisons, barracks and asylums expressed their power through their enclosing walls, that is to say through the strong division between outside and inside, the landscapes of control aim to avoid any grasp: they are designed to merge with the vastness of their surroundings and thus remain invisible.

Although aesthetically in the domain of control images, and therefore directed towards the generation of evidence and the reduction of uncertainty, the photos of *Limit Telephotography* create an opposite effect: they leave the viewer with a feeling of uncanny uncertainty as to what they actually depict. In a society where transparency is a value itself the idea that an organization is powerful enough to prevent visibility (through its architecture or otherwise) is uncanny. Thus our own inability to prevent being surveyed becomes palpable. What we experience in front of Paglen's photos can be described with Vivian Sobchak's (2004) concept of the "charge of the real": "[the image] engages our awareness not only of the existential consequences of representation, but also of our own ethical implication in representation. It

² Solnit (2010) writes in the introduction to Paglen's book *Invisible*: "invisibility is in military terms a shield, and to breach secrecy is to make vulnerable as well as visible" (p. 10).

remands us reflexively to ourselves as embodied, culturally knowledgeable, and socially invested viewers” (p. 284). By seeing these uncanny secret infrastructures of surveillance we become aware of our own vulnerability as individuals looking at this overwhelming surveillance infrastructure. The fundamental asymmetry between a surveillant infrastructure and the surveying individual becomes clear. I suggest that Paglen’s images create this uncanny uncertainty, because of their visible limitations. Roland Barthes (1981) has referred to this quality of images as the punctum: “it is the element which rises from the scene, shoots out of it like an arrow and pierces me. It is what I add to the photograph and what nonetheless is already there” (p. 26). The inaccessibility of the images thus paradoxically unveils the power of a clandestine surveillance infrastructure.

The visible limitations of *Limit Telephotography* have, however, a second revelatory quality: Paglen’s photos also point to the necessary “systemic blind spot” inherent to every surveillance technology. Christian Katti (2002, p. 54) argues that “every act of surveillance necessarily produces its opposite. Surveillance and observation result in something that one can call a “blind spot” analogous to that of the eye”. Wark’s (2004) definition of hacking helps to understand this paradoxical and self-referential quality of surveillance and in particular of Paglen’s series. Interestingly, Wark extends the common understanding of hacking as the mere “unauthorized access to and subsequent use of other people’s computer systems” or “the imaginative and unorthodox use of any artifact” (Taylor, 1999, p. xii). More than this, for Wark, hacking is the operation “to release the virtual into the actual, to express the difference of the real” (Wark, p. 74). I propose to read *Limit Telephotography* as such a hack that aims to create difference in the real by generating new forms in the virtual. The apparent uselessness of Paglen’s photos under the paradigm of control, is then the central element of hacking: Paglen’s photos challenge the principle of control by reminding us of the semi-opacity that is inherent to every surveillance technology and that every surveillance technology tries to systematically suppress as “noise”, “outlier” or “glitch”. In contrast to the revelatory images of the Abu Ghraib prison that oppose control systems with control images, Paglen’s work attacks the hegemony of the “vision machine” rationality through semi-opacity. Thus the photos are directed to expose and resist a system of rationality that claims to approach “objective” and “total” transparency. Paglen’s art is then a penetration of the technocratic rationality of the “vision machine”. As Andrew Ross (1991) rightly writes about hacking:

A hacker’s knowledge, [is] capable of penetrating existing systems of rationality that might otherwise seem infallible; a hacker’s knowledge [is], capable of reskilling, and therefore re-

writing, the cultural programs and reprogramming the social values that make room for new technologies

(Ross, 1991, p. 11)

By generating semi-opacity within control images, Paglen opens up the possibility of criticizing asymmetrical allocations of (in)visibility. The apparently failing interventional gesture of *Limit Telephotography* can be regarded as a practice of visual resistance against the logic of the control image. Thereby Paglen's practice of creating faulty control images through imitation resembles the creation of Trojan Horse viruses. As a Trojan Horse virus the images of *Limit Photography* enter the system of our visual habits as control images just to function as backdoors that are able to expose its systemic blindness.

The Other Night Sky: the traces of surveillance

Trevor Paglen's ongoing project *The Other Night Sky* (2010) is a collection of photographs of classified satellites and spacecraft in the Earth's orbit. While some of these secret satellites are known to be operated by secret services or military agencies, others are not publicly claimed by any organization. Paglen uses a database by amateur astrologists that keep record of unregistered spacecraft and their positions in the Earth's orbit as a point of departure. He then researches the affiliation of the satellites and takes photos of their positions in the nightly sky. The photos are presented next to short texts explaining technological details about the satellites and if known the organization operating it.

The series consists of two different types of images, alternating between photographs that resemble spacescapes (Image 3) and others that depict the movements of satellites in the sky in the background of panoramic landscapes (Image 4). Because of the hyper-long exposures of up to four hours, the satellites become white lines in a dark sky (Image 3 and Image 4). While in some of the photos it is rather easy to find the depicted satellites (Image 4), in others it is impossible to distinguish the satellites from other objects in the sky (Image 3).

IMAGE 3: "MILSTAR 3 IN SAGITTARIUS", *THE OTHER NIGHT SKY*, TREVOR PAGLEN, 2008



Source: Trevor Paglen, 2008 - <http://www.paglen.com/?l=work&s=othernightsky>
Courtesy of the artist, Metro Pictures, Altman Siegel and Galerie Thomas Zander.

IMAGE 4: "DMSP 5B /FA", *THE OTHER NIGHT SKY*, TREVOR PAGLEN, 2009



Source: Trevor Paglen, 2009 - <http://www.paglen.com/?l=work&s=othernightsky&i=3>
Courtesy of the artist, Metro Pictures, Altman Siegel and Galerie Thomas Zander.

Many of the aspects discussed in the section on *Limit Telephotography* also apply to *The Other Night Sky*. Again Paglen's photos are engaged in exposing the asymmetries of (in)visibility between surveillance infrastructure (the satellites) and the gaze of the individual. While *Limit Telephotography* imitates the aesthetics and practices of CCTV footage and military aerial photography, *The Other Night Sky* can be read as a mimicking of satellite photography and geophysical photography. The self-reflexive appropriation of these visual aesthetics of spacescapes is as pronounced as in the former series. Further, Paglen's panoramic surveillance landscapes are reminiscent of the early work of the Geological Survey of California that took pictures of landscapes to map new territories. Like the geographers mapping uncharted territory, Paglen depicts a classified landscape within the landscape. The material inscription of invisibility in the photos, however differs in the two series: while the former is characterized by a lack of depth of field, *The Other Night Sky* creates the inaccessibility of its subjects through the merging of landscape/spacescape and the object of reference: in many photos it is impossible to distinguish the surveillance satellite from its background (Image 4). *The Other Night Sky* shows how omnipresent the scientific-military surveillance complex as an officially secret infrastructure is. The apparently natural sky appears to be populated by the instrumental network of foreign gazes. Thus, Paglen's photos are redefining the sky from an open limitless space to one that is colonized by surveillance infrastructure. Again the research leading to the images is as important as the image itself. We realize that although surveillance is mostly impalpable, it does leave traces. Not only does every system has blind spots, but every system is traceable and therefore vulnerable to counter-surveillance. The sky becomes a sphere in which one can reveal and expose traces of military activity.

Interestingly, both photo series by Paglen also hint self-reflexively at the crisis of depiction of structuring organizations in societies of control. Photography as a medium of enclosure is deeply rooted in disciplinary societies. Quite similar to much of the classical disciplinary institutions, photography is in a representational crisis. As Deleuze writes:

we are in a generalized crisis in relation to all the environments of enclosure – prison, hospital, factory, school, family. The administrators never cease announcing supposedly necessary reforms... But everyone knows that these institutions are finished, whatever the length of their expiration periods.

(Deleuze, 1989, p. 4).

Paglen's art brilliantly reflects and embraces this crisis of photography productively. This is particularly expressed in the use of temporality in both series. In contrast to the real time processing of CCTV cameras, but also of Virilio's "vision machine" Paglen's photos make their revelations through temporal duration and long exposures. They thus make use of the apparently anachronistic slowness of photography in order to mount resistance to control images. Furthermore, the referential value in Paglen's works lies in his research of data and not so much in the photos themselves. In contrast to the database, the photo is not able to depict the totality of the infrastructure of control. This is why I would call Paglen's works with Wolf (1999) a "subjunctive documentary" practice drawing upon "a shift that underscores a willingness to exchange direct experience for abstractions that open up the wide vistas not directly available to the senses" (p. 289) in documentary practice. The photos reflect this shift from perceptual to conceptual images that is necessary in order to be able to depict late-modern institutions of control. Bruno Latour (1999) has rightly called this the practice of the "circulating reference" where complex relationships can only be expressed between media that mutually refer to each other. This observation also advances the idea of Paglen's photographic works as Trojan Horse viruses hacking the logic of contemporary prototypes of the "vision machine". By denying a concrete visible reference, the photos open backdoors for new (in)visibilities.

Uneasy Hacks: Re-viewing control images in *Gefängnisbilder*

Gefängnisbilder (2003) by Harun Farocki³ is a collage of found footage from film archives, CCTV images from American prisons and scenes from prison-themed movies like Jean Genet's *Un chant d'amour* (1950). This variety of fragments is assembled through an authorial voiceover by the filmmaker. Juxtaposing, stopping, repeating and commenting upon these different materials, Farocki engages in critical "re-viewing" of the material. This "re-view" carves out the principles that structure the social situations, the architecture and the lives of subjects in prisons. Accordingly, *Gefängnisbilder* is as much a work of historical analysis as of contemporary critique: in the course of the film the viewer learns how the disciplinary principle is changing with newly introduced technologies. We observe a computerization,

³ Interestingly, Farocki and Paglen share their interest in prisons as spaces of control. Paglen's work *Recording Carceral Landscapes* (2006) is a sound installation that consists of covert recordings he made in Californian prisons.

militarization and marketization of the prison. The film meticulously shows how the disciplinary principle (to educate and correct prisoners) is replaced by a control principle treating the prisoners as commodities in a modulating market system. It is a shift from a Benthamite internalization of discipline to a Marxian alienation of the prisoner as material in the production of an industrial complex.

Farocki's strategy to uncover this shift of technocratic rationality is a détournement of images from, but also of the prison. His voiceover exposes the problematic gazes that the found footage and archive materials inhabit. This practice becomes particularly clear during the first scene of *Gefängnisbilder*, where images from the documentary film fragment *Abseits des Weges* (1926) are shown (00:00:00 – 00:02:36). The silent film depicts disabled children in an asylum and prisoners in apparently daily routines. Farocki comments upon these images as follows:

In this series human beings are placed in front of the camera like objects for investigation. Further you see the obsession of putting those human beings into motion. These children are incapable of adhering to the order that is imposed upon them. After the asylum comes the prison. Marching assembly of the convicts. It recalls of the cortege, the parade, the triumphal procession. The camera that the convicts go past has replaced God or the king or the commander.

(Farocki, 2003,00:01:13 – 00:02:36)

Juxtaposing and repeating different fragments of the film in this sequence makes the paternalizing and disciplining position of the camera visible. When Farocki states: “the camera has replaced God or the king”, the sovereign gaze, we see in a split screen the images of marching prisoners and the empty field of vision of a CCTV camera in prison. The viewer becomes complicit with the gaze of the fragment, while at the same time distancing herself from it. This uneasy distance is created by two means: firstly, Farocki's montage assembles repeating and repeated images that create an uncanny distance. Secondly, by analysing and scrutinizing the images with his voice-over, Farocki disrupts the immersion into the archival images. His voice-overs serve to disrupt the colonial and paternalizing gaze of the found footage.

IMAGE 5: JUXTAPOSITION, 00:02:29, *GEFÄNGNISBILDER*, DIR. HARUN FAROCKI, 2003



Source: Harun Farocki, 2003 - <http://farocki-film.de/flash/2000.htm>
Courtesy of the artist.

Several times Farocki compares the prison gaze to the classic ethnological gaze rendering its subjects exotic or eroticizing them. He points to two kinds of shots that are repeated in the material over and over again:

Two different kinds of shots: firstly, the here attempted, ordered walk, expression of the order of the prison. Secondly, the portrait, the observation of the individual or the group. In movement appearance it is looked for, in the stillness the essence it is looked for. In the faces something indefinable is looked for. This is what attracts the camera gaze: frenzy and madness.

(Farocki, 2003, 00:04:013- 00:05:24)

Again we catch ourselves being fascinated by the indefinable expressions on the faces of the inmates and at the same time we realize that we become complicit with a problematic and unsettling gaze. The relationship between image and word in these scenes, but also in *Gefängnisbilder* in general is very different from classic documentary conventions. While images usually illustrate the voice-over or conversely, the voice-over explains the images, Farocki's image-text relationship creates ruptures. Through the voice-over, the archival images take on the role of texts that must be deciphered in a linear manner. At the same time, Farocki's voice-over is not merely explanatory, but rather takes on image-like qualities. When he associates the march of the prisoners with parades, a superimposition of two "images" takes place. This recalls Farocki's famous filmed interview with philosopher Vilem Flusser *Schlagworte-Schlagbilder* (1986), where Flusser explains to Farocki that the demystifying quality of language and the enchanting quality of the image can be inverted. I argue that *Gefängnisbilder* creates such demystifying images.

Farocki's detouring of control images however becomes even clearer in a more dramatic scene, which yields insights into the increasing militarization and marketization of the prison system. We see a fight between two prisoners in the yard of a prison through a CCTV camera (00:42:20 – 00:45:05). All the other prisoners in the yard begin to hide. The fight becomes more violent and, after three warnings to stop fighting the guards shoot. One of the fighting prisoners is hit and lies bleeding on the ground. One inmate after another is requested to leave the yard, until the guards can safely help the shot prisoner. He dies in front of their eyes and in front of the camera.

The CCTV camera that films this sequence seems to be a rather early model, as we do not see a stable stream of images but an intermittent sequence of stills. Farocki's usually associative and superimposing voice-over is reduced to the minimum in this scene. The few sentences that explain what happens are embedded in a pondering silence. The duration of the sequence thus becomes impossible to bear. We see the shot prisoner dying in front of our eyes. Like Paglen, Farocki plays out the temporality of control images in this scene. The real time recording of the CCTV camera is exposed as a "machine temporality" similar to Virilio's "machine vision" in that it is completely indifferent to what is depicted. The completely non-dramatic representation of death by the CCTV images is startling and at the same time a revelatory moment: a life does not seem to be of any value in the prison structured by the principle of control. Farocki describes earlier how the angle of the CCTV camera is the same angle from which the shooting usually takes place. His film thus points to the complicity of

the control images with a prison complex that is calculatingly indifferent to the death of inmates. The system, whose images Farocki detourns, has revealed itself through its dramatically non-dramatic control images.

Farocki's film points therefore to an interesting tension between the overlapping and yet different strands of hacking. While Paglen imitates control images and engages in the creation of counter-images to infiltrate a system in a way that is akin to Trojan Horse viruses, Farocki literally rips control images out of their context and by reassembling them, exposes their weak spots: their colonial gazes and their dramatic calculating indifference. In this manner, I would suggest that his artistic practice resembles software cracking. Software cracking means to extract or to disable parts of a program that are usually responsible for its protection. This is done by a reverse engineering of binary files, which interrupts the originally intended execution of the source code. Farocki's disruptive repurposing of control images can thus be seen as analogous to the decryption of a source code in order to interrupt the execution of a software. The point of view of the camera, that is to say the ideological and social space in which the particular control images become possible, is made visible. I argue that this is a form of visual reverse engineering that puts the system that is operating the camera, and wishes to remain invisible, in the focus of the film.

Conclusion

The analysis of Paglen's and Farocki's practices as hacking has shown that the détournement of control images can yield insights into the technocratic rationality of late-modern societies of control. With their detouring of control images, both artists open up new ways to perceive the asymmetric (in)visibilities that govern both contemporary prisons and the military-surveillance complex. They thereby destabilize the totalizing logic of the "vision machine" that is inherent to control images as described by Virilio. The exposure of the visual asymmetries and their underlying principles, however, requires particular visual forms, forms that operate in the manner of hacks.

By reading Wark's extended concept of hacking as documentary method it becomes clear that both artists understand documentary practice as an aesthetic intervention. The strength of the intervention is that we can only gain knowledge about control images by resisting their logic. Paglen's hacking points to the structural and material blind spots of surveillance technologies through the creation of visual Trojan Horse viruses by mimicking the aesthetics and

logic of control image. In contrast to this, Farocki's practice is closer to cracking: the decryption of a "source code" or ideology structuring the production control images. This is reflected in the repetitive repurposing of CCTV footage and archival films that carves out their ideological undertones and thus casts light on the institution in and for which they come into existence. Therefore both practices can be seen as prototypes for a praxis of intervention that goes beyond a mere inversion of surveillance. Both artistic practices share what Andrew Ross (1991) describes, illuminatingly as "hacking as guerilla know-how, [that] is essential to the task of maintaining fronts of cultural resistance and stocks of oppositional knowledge as a hedge against technofascist future" (p. 114). Deleuze's call for an emancipatory struggle with new means thus also embraces the sorts of a struggle for oppositional cultures of (in)visibility that we see in the works of Paglen and Farocki.

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