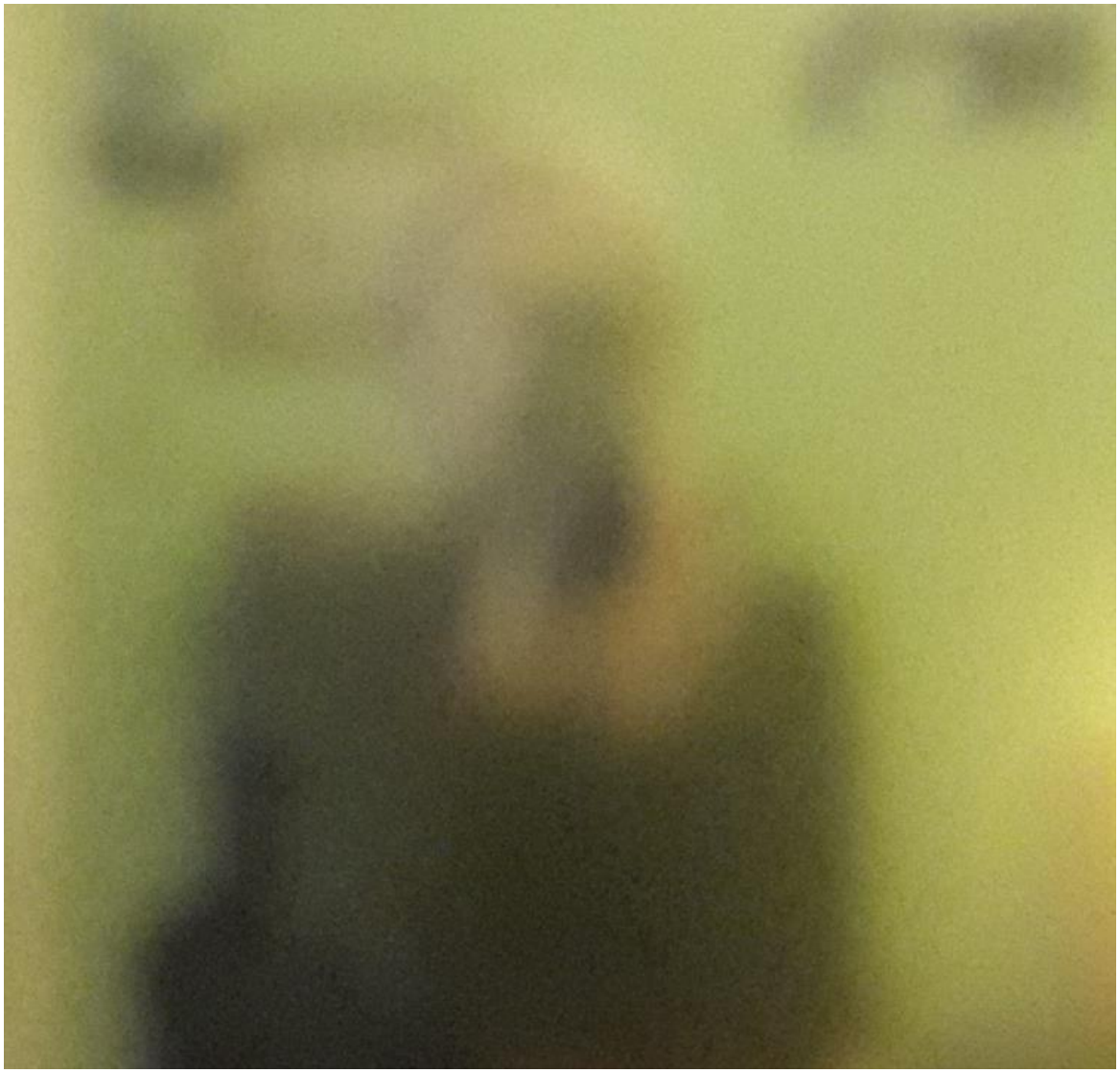
UNIVERSITY OF COPENHAGEN
FACULTY OF HUMANITIES



Atmospheres of Surveillance

PhD Thesis

Karen Louise Grova Søilen

Name of department:	Department of Communication, Faculty of Humanities, University of Copenhagen
Author:	Karen Louise Grova Søilen
Title and subtitle:	Atmospheres of Surveillance
Supervisor:	Laura Skouvig, Department of Communication
Co-supervisor:	Kristin Veel, Department of Arts and Cultural Studies
Submitted on:	04 February 2021
Number of words:	68.160
Cover Image:	*Anna Akhmatova's home, St. Petersburg*. Photograph by Karen Louise Grova Søilen

Summary

This dissertation is a contribution to the 'cultural turn' in the multidisciplinary field of surveillance studies. Its objective is to advance knowledge about how surveillance is perceived as bodily, emotional, and multisensory experiences - explored and conceptualized here as 'atmospheres of surveillance'. The overarching argument is that *surveillance contains and co-produces atmospheres*. The study is informed by the following research question: *in what ways may the concept 'atmospheres of surveillance' contribute to our understanding of the embodied, multisensory experience of contemporary surveillance culture?*

The dissertation provides a new theoretical vocabulary and a methodological reflection on the articulation of the 'felt' in order to grasp different aspects of the emotional and embodied experiences of surveillance, and how they influence us. The inquiry is informed by theories of atmosphere based in phenomenology, aesthetics, and affect studies, taking the German phenomenologist Gernot Böhme's philosophy of atmosphere as its main point of departure. Atmospheres are understood as something which can be sensed in our surroundings through the body, and this dissertation argues that there is a need to move beyond the predominance of visual metaphors in surveillance studies in order to encompass multisensory experience. The concept of atmospheres gives prominence to the body as the site of lived experience for which surveillance generates a more or less subtle emotional and behavioral 'repertoire' (Morrison 2016). Specifically, the theoretical framework of 'atmospheres of surveillance' is explored, nuanced, and further expanded through readings of a selection of works of contemporary installation art: Ed Atkins' *Safe Conduct* (2016), Hanne Nielsen & Birgit Johnsen's *Modern Escape* (2018), and Hito Steyerl's *Factory of the Sun* (2015). Moreover, this dissertation offers an experimental methodology of written vignettes as a form of *atmospheric writing* for absorbing and performing the atmospheres of surveillance perceived in the artworks. Through the readings of the artworks, I supplement and nuance the initial conceptual formulation of 'atmospheres of surveillance' by employing Avery Gordon's notion of 'haunting' (Gordon 2008) and Raymond Williams' notion of 'structures of feeling' (Williams 1977), and develop a notion of 'ambient entrapment' as a way of articulating emergent sensibilities towards surveillance. The dissertation concludes that being more attentive to the atmospheres of surveillance in our environment enables us to think critically about how they affect us, how they are absorbed bodily, and how they attune our being: how surveillance is 'in the air'.

Resumé

Nærværende afhandling er et bidrag til 'den kulturelle vending' inden for det tværfaglige felt overvågningsstudier. Dens formål er at fremme viden om, hvordan overvågning fornemmes som kropslige, emotionelle og multisensoriske erfaringer, hvilket her bliver undersøgt og begrebsliggjort som 'overvågningens atmosfærer' ('atmospheres of surveillance'). Det overordnede argument er, at *overvågning rummer og medvirker til frembringelse af atmosfærer*. Studiet har følgende forskningsspørgsmål: *På hvilke måder kan begrebet 'overvågningens atmosfærer' bidrage til forståelsen af den kropslige og multisensoriske erfaring af vor tids overvågningskultur?*

Afhandlingen tilvejebringer et teoretisk begrebsapparat og en metodisk refleksion over, hvordan vi kan artikulere 'det følte' for at danne en mere præcis forståelse af de emotionelle og kropslige erfaringer af overvågning og hvordan de påvirker os. Undersøgelsen er inspireret af atmosfæreteorier inden for fænomenologi, æstetik og affektstudier med den tyske fænomenolog Gernot Böhmes atmosfærefilosofi som det primære udgangspunkt. Atmosfærer forstås som noget, der kan sanses i vores omgivelser gennem kroppen og denne afhandling pointerer, at der er behov for at se ud over det dominerende fokus på visuelle metaforer i overvågningsstudier for at omfatte multisensoriske erfaringer. Atmosfærebegrebet tilskriver kroppen en særlig betydning som sted for en levet erfaring, som overvågning skaber et mere eller mindre subtilt emotionelt og adfærdsmæssigt 'repertoire' for (Morrison 2016). Specifikt bliver den teoretiske ramme, 'overvågningens atmosfærer', undersøgt, nuanceret og videre uddybet gennem fortolkning af et udvalg af moderne installationskunstværker: Ed Atkins' *Safe Conduct* (2016), Hanne Nielsen & Birgit Johnsens *Modern Escape* (2018) og Hito Steyerls *Factory of the Sun* (2015). Desuden eksperimenterer studiet med en metode, der består af skrevne vignetter som en form for performativ *atmosfærisk skrivning*, og som søger at absorbere og udtrykke overvågningens atmosfærer, der opleves i kunstværkerne. Gennem fortolkningen af kunstværkerne supplerer og nuancerer jeg den indledende begrebsformulering 'overvågningens atmosfærer' ved at anvende Avery Gordons begreb om 'haunting' (Gordon 2008) samt Raymond Williams sit begreb om 'structures of feeling' (Williams 1977), og jeg udvikler idéen om 'a sense of ambient entrapment' med det formål at kunne artikulere en gryende følsomhed overfor overvågning i det tidlige 21. århundrede. Afhandlingen konkluderer, at vi ved at være mere opmærksomme på overvågningens atmosfærer i vores omgivelser vil blive i stand til at tænke kritisk over, hvordan de optages kropsligt og indvirker på den måde vi er i verden på. Kort sagt: hvordan overvågning ligger i luften.

Acknowledgements

A heartfelt thank you to everyone who has contributed to this dissertation during the past years. First and foremost, I would like to thank my supervisors Laura Skouvig and Kristin Veel, whose encouragement, caring support, and sharp eyes have contributed to the improvement of this dissertation from its inception. Thank you to my main supervisor Laura for always keeping your office door open, and for your many critical insights. Thank you Kristin, for your engaged readings and not least for encouraging me to apply for the Ph.D. in the first place. It is difficult to imagine better supervisors than the two of you.

I have been so fortunate to work in an environment of inspiring colleagues who have generously read and engaged with parts of this dissertation in various ways, including Gry Hasselbalch, Jens-Erik Mai, Johan Lau Munkholm, and Sille Obelitz Søe from the Surveillance, Information Ethics and Privacy Research group at the Department of Communication, University of Copenhagen, and Daniela Agostinho, Bjarki Valtýsson, Kassandra Wellendorf, and Tanja Wiehn (my Ph.D. double!) from the Digital Culture Research Group at the Department of Arts and Cultural Studies at the University of Copenhagen.

I have also greatly benefited from insightful comments and suggestions from Mikkel Bille, Torin Monahan, and Trine Schreiber. Thank you to Jan Lazardzig, who hosted my research stay at Freie Universität Berlin, and who generously read and commented upon my work while I was there.

I would also like to thank my fellow Ph.D.-students at the former Department of Information Studies, now Department of Communication, University of Copenhagen, for all the lunches, coffees, and writing sessions, and for creating such an inclusive everyday working environment.

I am grateful to the artists Ed Atkins, Hanne Nielsen and Birgit Johnsen, and Hito Steyerl, who have kindly granted me permission to access and reprint their work. I am particularly grateful to Hanne Nielsen and Birgit Johnsen for welcoming me in their studio in Aarhus.

Thank you to my brilliant friends who have read and discussed my work along the way, always enriching it with their disciplinary perspectives and critical insights: Andrea Homann, Mette Jungersen, Linda Lapina, and Helene Nilsen.

I would like to thank my mother Bjørg Grova who spent her Christmas in Copenhagen reading my (not quite) final draft before returning to Oslo for 10 days of quarantine, and the rest of my family for their encouragement and support.

Special thanks to Oda Tvedt, for sharing the everyday home-office from a distance during the past year, and for the joint project of keeping up the Ph.D.-spirit.

Thank you to Jakob Lorentzen, for thinking things through along with me and for sharing the atmosphere.

Contents

Introduction: Surveillance is *in the air*

Training Humans

Please call Stella
ask her to bring these things with her from the store: six spoons of fresh snow peas, five thick slabs of blue cheese
and maybe a snack for her brother Bob
we also need a small plastic snake and a big toy frog for the kids
she can scoop these things into three red bags, and we will go meet her Wednesday at the train station

As I move through the two floors of the Osservatorio, the sounds of recorded human voices follow. Strange phrases repeated by different voices in a loop. The audio installation is based on the work of the *speech accent archive* (1985 -), an online project collecting different accents of native and non-native English speakers from all over the world for purposes of research, teaching, and machine learning. The end goal: *collect it all*.[1] Commanding voices make up the backdrop of a photography exhibition displaying training sets – images of humans used for teaching artificial intelligence (AI) how to "see", classify, and recognize humans and their emotions. A grey, rainy November afternoon at the Osservatorio Fondazione Prada in Milan. I am here to see AI researcher Kate Crawford and artist Trevor Paglen's exhibition *Training Humans*, because I am interested in how it speaks of a contemporary surveillance culture driven by desires to collect, detect, decipher, compute, classify, and penetrate *everything*.[2] Displays, walls, and screens show datasets of hand gestures, human gait, faces, irises, fingerprints, gaze tracking, mug shots of second offenders used in training systems to recognize human aging. A stale breath from the nineteenth century: the positivist classifications of the criminal man by Cesare Lombroso. On the second floor, the walls are crowded with datasets scraped from social media and other online sources, an excess of selfies, everyday snapshots, and celebrities. The exhibition documents the development of facial recognition technologies from CIA's experiments in the 1960s up until today. Here is *Image-Net* (2009-); a major training set developed by researchers at

[1] https://www.theguardian.com/education/2010/jun/01/english-accents-research. "Collect it all" also evokes the mission of the former director of the NSA, Keith Alexander, whose push for mass surveillance programs where revealed by Edward Snowden in June 2013, https://www.theguardian.com/commentisfree/2013/jul/15/crux-nsa-collect-it-all.
[2] The exhibition *Training Humans*, curated by Kate Crawford and Trevor Paglen, was the first major exhibition to focus on training images for AI (Fondazione Prada 2019). It was on display at Osservatorio Fondazione Prada in Milan, Italy, from September 12, 2019 to February 24, 2020.

Stanford and Princeton universities. Its objective: to map out *the entire world of objects.*[3] The dataset currently includes more than 14 million labelled images of more than 20.000 categories, including large amounts of photographs of humans (Crawford and Paglen 2019b, 12). Images voluntarily uploaded by users to various social media sites, later to be harvested and included in a database controversial for crowdsourcing image annotations, allowing human biases to transfer into the seemingly objective technology (Crawford and Paglen 2019a). On the wall I find "appropriator" – an elderly white man in a shirt and a tie; "scholar" – another elderly white man with a mild, distinguished appearance; "bombshell" – a young white woman with a swelling cleavage and inviting smile; "accused" – a younger black male with a serious expression. Another whiff from the past: the myth of photographic truth.

In the introductory text to the exhibition, Crawford and Paglen write: "Algorithmic systems are everywhere: from schools and hospitals to airports and law enforcement. Faces and gestures are recognized and tracked, people are automatically classified into categories such as age, race, gender, and their emotional state and mental health is assessed" (Crawford and Paglen 2019a, n.p.n.). I pause at the *JAFFE* – Japanese Female Facial Expression – data training set (1998), made to teach computers how to detect human emotions. Affective computing – "computing that relates to, arises from, or influences emotions" (Picard 1995, 1) – follows the dream of penetrating and mapping inner emotional states and moods. These technologies are frequently tinted by questionable ideas of the correspondence between emotions and facial expressions originating from the theory of basic or universal emotions, which was suggested by Charles Darwin in his *The Expression of the Emotions in Man and Animals* (1872), and more recently developed further in the work of, for example, the disputed American psychologist Paul Ekman (Bjørnsten and Zacher-Sørensen 2017; Crawford and Paglen 2019b).[4] The displayed *JAFFE* dataset is built on Ekman's theory of the six basic human emotional states: fear, anger, sadness, happiness, disgust and surprise, supplemented with the category 'neutral' (Crawford and Paglen 2019b). Lately, Ekman's theories on the correspondence between human emotions and facial expressions have resurfaced to inform airport security programs aimed at identifying suspicious behavior.

[3] Indeed, this was the initial ambitions for *Image-Net* as described by founder and computer science professor Fei-Fei Li (Gershgorn 2017).

[4] For a critique of Ekman's theories of correspondence between facial expressions and emotions, see e.g. psychologist James A. Russel, 1995. "Facial Expression: What lies beyond minimal universality?" *Psychological Bulletin*, 118, no. 3. Russel points out that "Anger, sadness, and other semantic categories for emotions are not pancultural and are not the precise messages conveyed by facial expressions". Russel 1995, 381, quoted in Magnet 2016, 240.

Ekman himself served as an informal advisor in the development of the much-criticized U.S. Transportation Security Administration's (TSA) "Screening Passengers by Observation Techniques" (SPOT) program (Magnet 2016). Launched in 2007, the SPOT program has faced considerable criticism for its use of theories for behavioral detection which are lacking scientific validated evidence, such as Ekman's (ibid). The program has also been criticized for racial and religious profiling. In 2013, after reviewing meta-analyses which included more than 400 studies, the U.S. Government Accountability Office concluded that "the human ability to accurately identify deceptive behavior based on behavioral indicators is the same as or slightly better than chance" (GAO 2013).

Central to the SPOT program was Ekman's theories on 'micro expressions', which, according to Ekman, are "facial expressions that occur within a fraction of a second. This involuntary emotional leakage exposes a person's true emotions" (paulekman.com).[5] Accordingly, at the core of this theory is the idea that deception and a person's 'true emotions' can be revealed by the body through involuntary 'emotional leakage', if scrutinized properly (ibid). As far as I am aware, there are few reasons to believe that computer vision systems programmed and trained on these invalidated scientific theories would lead to more accurate results than those achieved by the human TSA officers working at the airport (GAO 2013). The use of biometric behavioral technology to make transparent bodies, emotions, and intentions has troubling implications. Despite the claims of objectivity advocated by its supporters, feminist surveillance scholar Shoshana Magnet argues that "[r]ather than removing existing forms of racial and gender profiling, programmes aimed at biometrically scrutinizing behaviour only intensify contemporary forms of discriminatory surveillance" (Magnet 2016, 242).

I try Trevor Paglen Studio's facial recognition installation *Age, Gender and Emotions in the Wild* (2019), where visitors are invited to experience how these technologies work. According to the description of the work, it builds on "models developed by researchers at Facebook and Amazon to estimate the age, gender, and the emotional state of the faces it detects" (*Training Humans* exhibition leaflet, 2019 n.p.n.) The installation classifies me as "sad". Alternatively, my emotional state is designated as "fear".

[5] On his website, Ekman refutes the criticism against TSA's use of micro-expression training. https://www.paulekman.com/blog/ineffectively-testing-the-effectiveness-of-tsa/

Through the glass windows of the observatory, I catch a glimpse of a cityscape enveloped by fog. Here, inside the exhibition space, immersed in the repeating commands of the sound installation, the mass images of babies, celebrities, and everyday people sorted and classified closes in on me. This is troublesome: a seemingly purely technical classification of humans. The exhibition speaks to the re-birth of the positivist idea of the body as the site of truth and the establishment of identity based on essentialist categories such as race and gender. It speaks to the desire to map and classify our inner states and moods, our minds. What is present in this space is the desire of measuring and computing everything: every little facial gesture, every little twitch and tick, mood, human emotion, human feature – humanity ordered, chartered, classified. However, as Crawford and Paglen remind us, the classification of humans comes with great risk: "[d]espite the common mythos that AI and the data it draws on are objectively and scientifically classifying the world, everywhere there is politics, ideologies, prejudices, and all of the subjective stuff of history." (Crawford and Paglen 2019b, 8).

Fig.1. *A November afternoon at the Osservatorio*, 2019. Photograph: Karen Louise Grova Søilen

Surveillance Culture

The above narrative of a visit to the photography exhibition *Training Humans* provides an entry to think about how lived experience increasingly takes place in a *surveillance environment*, characterized by the presence of technologies of information gathering, surveillance, biometrics, and artificial intelligence, designed to gather, share, sort, and classify data and bodies. Importantly, while surveillance technologies are rapidly evolving and thus often discussed in the contemporary context, the desires to penetrate the unseen, to see, to sort, gather, and classify are deeply tied to the emergence of modernity and thus to discipline, modern science, colonialism, and imperialism. Indeed, according to sociologist Hartmund Rosa, the driving cultural force of the 'modern' world is the idea and desire to make the world *controllable* (Rosa 2020, 2). Yet, alongside the historical continuities of surveillance logics rooted in the emergence of modernity (roughly considered to designate the second half of the eighteenth century onwards) – such as the imperatives to know, to master, to conquer, to control, to calculate and to make useful – new digital technologies not only expand, but also transform the aims and experiences of surveillance. In addition, digital technologies enable increasing areas of life to be tracked and monitored, which is a reminder that "[t]he digital age is also a surveillance age" (Klauser 2017, 1). Consequently, new questions arise. How does increased surveillance and dataveillance practices influence everyday life? How does an awareness of facial recognition systems embedded in the CCTV cameras in public space add to our embodied experience of those places? Of our willingness or not to participate in protests and demonstration, for example? In other words, how does contemporary surveillance influence emotions and shape behavior?

Since the turn of the twenty-first century, contemporary surveillance has gradually expanded from being a form of governmental and bureaucratic control and emerging corporate commercial adventure, to becoming embedded in our everyday lives in new ways and on numerous levels ranging from the infrastructural to the emotional. Surveillance by governments and private corporations blends with our own desires to track and trace our bodies, moods, movements, friends, and families. Surveillance has become participatory (Albrechtslund 2008). Likewise, surveillance is increasingly associated with positive capacities like care, safety, health, playfulness, and entertainment (Lyon 2007, 2018a). The progressively positive connotations of surveillance are well illustrated in the current Scandinavian context, where surveillance technologies are now sometimes referred to as "welfare-technologies" (Kamp et al. 2019). Since the arrival of web 2.0, the Internet of

Things (IoT), smart technologies, and recent improvements in artificial intelligence (AI), new questions arise as to how surveillance shape our lived experience. Indeed, in the participatory surveillance culture, surveillance co-produces our experiences, imaginaries, and feelings. Sociologist and surveillance scholar David Lyon recently observed that we have now become active and participating subjects in the 'culture of surveillance', where "not only being watched but watching itself has become a way of life" (Lyon 2018a, 2).

However, it is worth remembering that the surveillance technologies and practices which are increasingly becoming a part of everyday life and normalized, often originate from the military sphere. This is the case with Global Positioning systems (GPS), close-circuit television (CCTV) cameras, locative media, the Internet, drones, and facial recognition technology, to name the most prominent examples (Morrison 2016, 3).

Media and surveillance scholar Mark Andrejevic argues that,

> If in the physical environment the pressing issue of the next several decades (and beyond) is likely to be the dramatic transformation of the global climate, in the social realm (to the extent that it can be distinguished from the physical environment), the main issue will be the shifting surveillance climate. […] in the areas of politics, economics, commerce, policing, finance, warfare, and beyond, social practices are being transformed by dramatic developments in information collection, storage, and processing, as well as by various techniques of watching, broadly construed (Andrejevic 2015, ix).

While I to a great extent agree with Andrejevic's observation above, it is a central objective in this dissertation to examine how the social, affective, and physical environment of surveillance interact and intertwine.

Returning to the example of facial recognition and emotion detection technologies from *Training Humans* which introduced this section: not only are these systems progressively more and more at work in public spaces, train stations, and airports, they are often voluntarily brought into private and intimate spaces. A recent example to illustrate this is smart home surveillance systems. *Google Nest*, for example, features 'familiar face alerts', which notifies the user's smart phone whether a camera detects a family member or a stranger (Google 2020). The promise: "Your home, safe and sound. Google helps you look out for your family, day and night".[6] A more widespread example from everyday life is facial recognition

[6] https://store.google.com/product/nest_aware, accessed December 15, 2020. There are, however, different restrictions on the use of these functionalities in e.g. the U.S. and EU, where in the latter case GDPR regulations ensures higher privacy protection.

technologies which work discreetly in the background on smartphone apps, such as the kind familiar to Facebook users, where names are suggested for the faces on pictures uploaded so that users can 'tag' them. These examples illustrate the degree to which surveillance has become embedded in everyday life. Furthermore, surveillance scholars Torin Monahan and David Murakami Wood identify how 'surveillance logics' are becoming normalized, such as for instance how it is considered "reasonable", "responsible", and "rational" for organizations to gather data on people by default and use such data as basis for decisions (Monahan and Murakami Wood 2018, xviiii). Yet, where surveillance is present, power is present too. Thus, the ambivalent entanglements of everyday practices with surveillance and control is a pressing matter that requires ongoing questioning and analysis.

Furthermore – and this is a fundamental premise of this dissertation – despite the immense proliferation and significance of 'dataveillance', which broadly refers to surveillance through the application of information technologies (Clarke 1988) such as digital surveillance of online activities, surveillance is still a set of practices linked to, and experienced by, the human *body*. Crucially, the body in its spatial environment, and thus our embodied, situated experience of the world, is shaped by and shapes surveillance. The airport security checkpoint is a key instantiating site illustrating this point, considering how it envelopes and conjoins digital, physical, bodily, behavioral and affective ordinances of surveillance and control. However, in less obvious ways than what is the case at the airport, surveillance technologies and practices increasingly permeate public and private spaces of everyday life, which is an important reminder that surveillance is spatial, infrastructural, emotional, and bodily. I will elaborate upon this theme throughout the dissertation.

Yet, as historians of surveillance remind us, surveillance is a historical phenomenon that by far predates the digital age, and as such it should be approached as a historically *situated* phenomenon, with particular aims, scopes, and methods (Marklund and Skouvig, forthcoming). This insight points to the necessity of an ongoing examination of the changing features and specificities of surveillance logics. Crucially, moreover, there is a need for an ongoing examination of the emerging sensibilities towards surveillance as shared social and affective experiences specific to a given historical and cultural moment. Thus, this dissertation is motivated by the need to examine and understand the experience of surveillance in the early decades of the twenty-first century. On this basis, I find that there is

a need for a continuing development of conceptual frameworks through which to grasp current experiences of surveillance.

In the remaining sections of this introduction, I begin with an outline of the overall argument, research questions and contributions of this dissertation, which I situate within the research field of surveillance studies. Next, I introduce and discuss the central concepts and theoretical insights in the shared conceptual conversation of surveillance studies which constitute the foundation upon which this dissertation rests. Following this, I consider the 'cultural turn' in surveillance studies (Monahan and Murakami Wood 2018) more closely and elaborate on the need for aesthetic perspectives on surveillance culture. Here I also introduce and define 'surveillance art'. In closing, I present an overview of the chapters of the dissertation.

Atmospheres of Surveillance

The purpose of this study is to expand knowledge about how surveillance may be perceived as bodily, emotional, and multisensory encounters – what I explore and conceptualize as 'atmospheres of surveillance'. Based in the above-mentioned observation that surveillance is necessarily experienced by the lived body, the investigations in this dissertation rest on and develops the argument that *surveillance contains and co-produces atmospheres*. I draw on the German phenomenologist Gernot Böhme's philosophy of atmosphere as a starting point for understanding atmospheres as something which can be sensed in our surroundings through the body (Böhme 2017, 2). According to Böhme, the concept of atmosphere belongs to the field of the "in-between": in-between subject and object; dependent on both the subject sensing and perceiving the atmosphere, and on the object(s), other persons, and environments from which the atmosphere radiates. Accordingly, atmospheres are "the common reality of the perceiver and the perceived" (Böhme 1993, 122). Atmospheres, then, can be considered as something we perceive bodily, as being "in the air". The conceptualization of 'atmospheres of surveillance', first outlined in this introduction and developed comprehensively throughout the dissertation, offers a new theoretical vocabulary and a methodological reflection on the articulation of the 'felt' to grasp different aspects of the emotional and embodied experiences produced by surveillance, and how they influence us.[7]

[7] Throughout the dissertation, I refer to 'emotions', 'feelings', and 'affective experience' interchangeably. While much effort has been put down in affects studies in recent years to distinguish between 'affects' and 'emotions', and scholarship within the field of psychology similarly distinguish between 'emotions' and 'feelings', strict differentiations do not serve any purpose for the present study. The main reason for this is that the concept of

Research Questions and Contribution

Specifically, the theoretical considerations will be explored, nuanced, and further developed through readings of a selection of works of contemporary installation art: Ed Atkins' *Safe Conduct* (2016), Hanne Nielsen & Birgit Johnsen's *Modern Escape* (2018), and Hito Steyerl's *Factory of the Sun* (2015). Accordingly, art will serve as a prism through which to explore, expand, and further develop the nuances and dimensions of the theoretical vocabulary. The study investigates how the combined perspective of contemporary art and the notion of atmosphere offer alternative angles on our physical and emotional encounters with places and practices of surveillance. It is informed by the following research question: *in what ways may the concept 'atmospheres of surveillance' contribute to our understanding of the embodied, multisensory experience of contemporary surveillance culture?*

The study approaches the overarching research question through three closely integrated sub-questions:

I. What bodily, emotional, and sensory experiences of surveillance surface through the prism of contemporary art, and how can 'atmospheres of surveillance' be explored methodologically?
II. How can the notion of 'atmospheres of surveillance' illuminate traces of the violence and power relations of surveillance?
III. How can 'atmospheres of surveillance' articulate affective and social experiences distinct to the present cultural and historical moment of the early decades of the twenty-first century?

I situate this dissertation primarily as a contribution to the multidisciplinary field of surveillance studies, and more specifically to the current 'cultural turn' in surveillance studies. Within the cultural turn in surveillance studies (which I will elaborate on towards the end of the introduction), the advocacy for the role of culture in understanding contemporary surveillance ranges from attention to cultural practices and social imaginaries to studies of popular culture, surveillance art, film, literary imaginaries, the performative dimensions of

atmosphere focuses on the existential in-betweenness of subject and object, and consequently a clear distinction between 'affect' and 'emotion', for example, does not make sense (Bille et al. 2015). Moreover, translations from German to English of theories of atmosphere, will variously use either 'emotion' or 'feeling' with reference to the same concepts (see e.g. Schmitz et al. 2011; Böhme 1993; Frølund 2018).

surveillance, and cultural theories of the archive (see, for instance, Agostinho et al. 2019; Brighenti 2010; Falkenhayner 2019; Flynn and Mackay 2018; Harding 2018; Levin et. al. 2002; Lyon 2017, 2018a,b; Marx 2008; Monahan 2011, 2018; McGrath 2004, 2012; Morrison 2016; Nellis 2009; Kammerer 2008, 2018; Ring 2015; Veel 2013; Wasihun 2019; Wolthers et. al. 2016; Zimmer 2015).

The theoretical vocabulary of this dissertation draws on and develops the notion of atmosphere as developed in phenomenology, aesthetics, and affect studies. A small number of studies in other disciplines have previously linked the notion of 'atmosphere' to surveillance, such as particularly the work of human geographer Peter Adey on 'security atmospheres', and work on the engineering of 'affective atmospheres' within spaces of aeromobility originating from the fields of cultural geography and security studies (Adey 2008, 2014; Adey et al. 2013; Bissel et. al 2012). Moreover, the notion of 'affective atmospheres of surveillance' produced by CCTV has been introduced from the perspective of social psychology (Ellis et al. 2013); and analysis of the strategic and aesthetic production of atmospheres of surveillance has emerged from the perspective of rhetorical and security studies (Ott et al. 2016). This dissertation offers a different take on this theme by developing atmospheres of surveillance theoretically as well as methodologically from the perspective of arts and cultural studies through empirically informed analysis.

I explore the research questions listed above on three closely interrelated levels:

(a) Theoretically, through the development of a comprehensive theoretical vocabulary centered on the concept 'atmospheres of surveillance'. Drawing on insights from surveillance theory in combination with perspectives from the scholarship on 'atmospheres' in phenomenology, aesthetics, and affect studies, the concept 'atmospheres of surveillance' proposes a comprehensive vocabulary for analyzing sensory experience of surveillance. While it applies to analysis in visual art, literature, film, and popular culture, this vocabulary also contributes to a deeper understanding of our lifeworld of urban spaces, airports, smart homes, and other material environments which are experienced bodily. Hence, this dissertation provides a theoretical framework for identifying and analyzing embodied and multisensory experiences of surveillance in everyday life. Furthermore, this concept illuminates how atmospheres can be intentionally produced – and herein lies a critical potential – as a tool of critical awareness: 'Atmospheres of surveillance' can draw our

attention towards how surveillance shape experience in the contemporary surveillance culture.

(b) Empirically, through a series of readings of artworks. This dissertation adds to the ongoing work of mapping and analyzing the body of artworks which can be classified as 'surveillance art'. Crucially, the concept 'atmosphere of surveillance' is developed and nuanced through analyses of artworks. While the theoretical framework is not necessarily limited to aesthetic experiences in a narrow sense, the empirical contribution of this dissertation is more closely focused on atmospheres of surveillance in a selection of contemporary installation artworks. I propose that thinking about the lived, embodied experience of surveillance through the lens of contemporary art can make certain atmospheres more explicit to us, through for instance, strategies of intensification and defamiliarization.

(c) Methodologically, through the development of experimental written vignettes as a form of *atmospheric writing* attentive to, and responding to, the atmospheres of surveillance encountered and perceived in the artworks. The combination of written vignettes and interpretative readings of artworks in this study forms a dual movement which I refer to as 'immersive readings'. Exploring how surveillance is experienced as atmospheres in contemporary art is intimately linked to questions of representation as well as to the role of the researcher perceiving the artworks bodily, enveloped by its atmosphere(s). In this respect, the topic transgresses the safety of the armchair, because, as Böhme asserts, "to talk about atmospheres, you must characterize them by the way they affect you. They tend to bring you in a certain mood, and the way you name them is by the character of that mood" (Böhme 2017, 2). Atmospheres are that which is "*experienced* in bodily presence in relations to persons and things or in spaces" (Böhme 2017, 17, italics added). The character of atmospheres, again following Böhme,"must always be *felt*: by exposing oneself to them, one experiences the impressions that they make" (Böhme 2017, 26, italics added). This has methodological implications. Addressing these implications, I explore an experimental methodology of written vignettes, which forms an essential part of this dissertation's research contribution. I am inspired by the exploratory writing practices in recent feminist scholarship which are attentive to the role of situated, embodied and affective experience, and the work of Anna Gibbs (2015); Jane Rendell (2010): Nina Lykke (2014); Kathleen Stewart (2011, 2015); and Elisabeth Militz & Carolin Schurr (2015). Through various ways of writing, these scholars explore alternative modes of not only how to disseminate, but also how to generate

academic research, which has guided me in my own work. To me, this is a way of acknowledging knowledge as situated and partial (Haraway 1988) through its very form. I elaborate on the methodological challenges of researching atmospheres of surveillance in Chapter 2.

It follows from the outline above that my overall methodological strategy in the present study is dialogic: The theoretical foundation of the study informs the empirical analyses, yet the movement is also reversed: the artworks challenge, inform, and contribute to a further development of the concept 'atmospheres of surveillance'. Hence, on the one hand, the empirical analyses of artworks in this study works as sounding boards to test and explore the conceptual framework of the study. On the other hand, atmospheres of surveillance come into being through the readings of the artworks. As such, the readings and vignettes further develop and substantiate the concept 'atmospheres of surveillance'.

Why Art?

Recently, there has been a call for studies of the cultural imaginaries of surveillance, the emotions and affects expressed and embodied in works of art and popular culture (Kammerer 2018). My study adds to the work of mapping the diversity of affects, moods, and atmospheres of surveillance from an aesthetic perspective. Accordingly, the empirical analyses of this dissertation offer new perspectives on how surveillance is staged, perceived, and experienced in works of art. The central premise is that thinking about the lived, embodied experience of surveillance through the lens of contemporary art can make various atmospheres of surveillance more available to us. We can experience them through the artworks. Hence, another underlying premise in this dissertation is that contemporary art can offer important perspectives on what goes on in the present, as it is happening, and provide knowledge of our lived experience with surveillance. Artworks can provide for us an additional prism for understanding surveillance; they can "encourage us to *feel*, to *live* surveillance" (McGrath 2004, 141, italics added). Moreover, and crucially, as surveillance is embedded in our lifeworld in new ways, affecting our lived experience differently than before, we should turn to art not merely for illustrations of this development, but as *sites of knowledge in its own right*. Artworks can open up new insights and "readjust what a person is or is not able to feel, understand, produce and connect" (Hickey-Moody 2013, 88). As surveillance increasingly influences our contemporary lived experience, the amount of artworks, literature, film, and popular culture exploring, criticizing, or playing with

surveillance is burgeoning. Thus, this is the realm where our emotional experiences and cultural imaginaries of surveillance most clearly comes into sight. Artworks can explore, critique, articulate and seek alternatives to the ideas and imaginaries of our time, and thus art can offer us a distorted and defamiliarized mirror for the logics, affects, and atmospheres of surveillance. In more concrete terms, I argue that by making atmospheres of surveillance available for sensual experience, art offers us a site of knowledge of the forces at work.

Finally, this dissertation is also of relevance to the increasingly varied scholarship on atmosphere and ambiance. Specifically, it contributes a surveillance perspective and a thorough discussion of the intertwining of digital and physical space, which contributes to the spatial understanding of atmospheres. Likewise, the methodology of written vignettes employed in this dissertation is relevant to the discussion of non-representational methodologies within scholarship on atmosphere. Notwithstanding, this dissertation is mainly a contribution to surveillance studies. In the following, I will situate my work within this field.

Surveillance Studies: Entering the Conversation

In this section I will introduce central concepts and theoretical insights within the field of surveillance studies which inform my own thinking about surveillance, and which make up the foundation upon which this study rests. However, it is not an attempt to provide a full overview of the theoretical and conceptual scope of the multi-disciplinary field of surveillance studies here. Rather, the focus throughout will be on key approaches to how surveillance has been understood and conceptualized as specifically spatial, infrastructural, environmental, and experienced bodily.

Historically, surveillance is far from a new phenomenon, and early written sources on surveillance practices has been traced back as far as the ancient Egyptian censuses and the Doomsday Book from 1086 (Lyon 1994). Surveillance studies as a distinct field of research has taken shape within approximately the last thirty years. It has emerged from a shared recognition of how pervasive information systems represent "a larger transformation in how people and organizations perceive and engage with the world" (Monahan and Murakami Wood 2018, xix). Surveillance studies can be characterized as multidisciplinary, or 'transdisciplinary' (ibid), and scholarly work on surveillance emerges from a broad spectrum of disciplines ranging from the social sciences to history, legal studies, information studies,

arts, and cultural studies. What ties these various disciplines together as a distinct field, besides a shared interest in the topic of surveillance and how it influences and regulates our lives, is the shared theoretical and conceptual conversation.

The Panopticon and the Slave Ship

Since the emergence of surveillance studies as an academic field, *visibility* has played a central role in the conceptual discussion of surveillance. Particularly the work of French philosopher Michel Foucault, and his analysis of the disciplinary society in the book *Discipline and Punish: Birth of the Prison* from 1975 (translated to English in 1977), has been highly influential. Foucault's notion of 'panopticism', developed from an analysis of the British utilitarian philosopher Jeremy Bentham's architectural invention of the panopticon, is a classic reference within surveillance studies. Widely acknowledged and widely criticized, Foucault's analysis of the panopticon has become a continuous point of reference, as well as a concept continuously sparking discussions and refinements (Galic et al. 2016). Originally, Bentham conceived the panopticon – or 'the inspection house' as an architectural structure for inspection of any kind, first written and conceptualized as a series of letters in 1787, and published 1791. In the words of Bentham, the panopticon was "a new principle of construction applicable to any sort of establishment, in which persons of any descriptions are to be kept under inspection" (Bentham [1791] 2008, n.p.n). In later writings, Bentham would revise and expand on his idea, but most famously, it is known as a structure for penitentiaries and prisons. Bentham's idea, which he developed in cooperation with his brother, was for a circular structure of cells surrounding a central tower. Backlighting from large windows ensured that light would penetrate the cells, making everything visible from the central tower, where one or a few guards enjoyed total overview. Thus, the 'Pan-opticon', or all-seeing, was a design for full transparency of the watched, while the watcher remained concealed.[8] For the inmates, Bentham's elaborate design would ensure the impossibility of knowing when they were under the gaze of the watcher; it was a technology for "power of mind over mind" (ibid, preface, n.p.n.). From the beginning of the formation of surveillance studies as a distinct academic field, the influence from Foucault's analysis of the panopticon ensured the centrality of the role of visibility in discussions on surveillance, and questions of *watching and being watched* are continually emphasized (Lyon 2007; 2018a).

[8] At the same time, in Bentham's original conception of the idea, interested members of society could visit the watchtower to ensure transparency and democratic oversight of power (Bentham [1791] 2008].

However, also influenced by Foucault, another central theme is how surveillance is productive in terms of constructing subjectivities. This is a key point. Despite visibility's role in the design of the panopticon, Bentham considered that "the most important point is that the persons to be inspected should always *feel* themselves as if under inspection, at least as standing a great chance of being so" (Bentham 2008, 13, italics added). The built environment – the circular structure with the central tower – was to afford that every person actually *was* under inspection most of the time, which was central to obtain what Bentham wanted his design to produce: an *intense feeling* of being watched at all times (ibid, 14). This is what made the panopticon an arch model for the automatic functioning of power in Foucault' analysis. Foucault considered the panopticon as the architectural figure for the political dream of a modern, disciplined society, where power is automated, efficient, and disindividualized, penetrating the smallest details of everyday life, (Foucault [1977] 1991).

In other words, with the panopticon, Foucault saw a model for discipline where "[p]ower has its principle not so much in a person as in a certain concerted distribution of bodies, surfaces, lights, gazes" (ibid, 202). On the one hand, it was a material structure designed to discipline through visibility and the un-verifiability of power. On the other, it was a technology for the construction of subjectivities, for power to penetrate behavior and the 'soul'. The inspected were to internalize the inspecting gaze and become their own guards. In Foucault's analysis, the main outcome was "that the inmates should be caught up in a power situation of which they are themselves the bearers" (Foucault 1991, 201). Thus, *visibility*, *seeing without being seen*, the *internalization of the inspecting gaze*, and *self-discipline* has been key in discussions of Foucault's analysis of the panopticon. Additionally, and I want to emphasize this point as it informs the way I understand and conceptualize atmospheres of surveillance throughout this study, with panopticism, power is inscribed upon the *body*. Note, for example, how Bentham's design is a piece of architecture designed for the sensuous, embodied experience of its 'users', who by design were to *feel* as under inspection at all times. This was ensured by the visual *awareness* of the central tower; when inside the structure, one would internalize the gaze of the watcher, dependent on an embodied, perceiving presence in the built environment. Accordingly, the panopticon was a figure of political technology (Foucault 1991, 205).

In *Dark Matters: On the Surveillance of Blackness* (2015), surveillance and black studies scholar Simone Browne compellingly demonstrates how the arch model for power in

modernity equally well could reside in the diagram of the slave ship, as in Bentham's diagram of the panopticon. I want to unfold Browne's argument more in depth here, as it expands and problematizes the widely acknowledged canon within surveillance studies in important ways, particularly in terms of how the history of surveillance is also intimately bound up with the history of the transatlantic slave trade, racialization, and colonialism. Browne recounts how, on the very same trip as Bentham travelled to visit his brother Samuel in Krischëv, Russia (today's Belarus), where he outlined the idea of the panopticon in a series of letters in 1787, he also embarked from the once ancient Greek city of Smyrna (today's Izmir in Turkey) on a ship containing "18 young Negresses (slaves) under the hatches" (Bentham, cited in Browne 2015, 31). Taking this note by Bentham as her starting point, Browne intervenes into the classic narrative of the panopticon as the arch model for understanding power in modernity and notes how, at the same time as its very formation, Bentham travels on a ship with enslaved women in its cargo. In dialogue with Foucault's analysis of the panopticon, then, Browne argues that "the slave ship too must be understood as an operation of the power of modernity" (ibid, 24). She recounts how the diagrams of slave ships from the time period visualize how the enslaved 'cargo' could be 'packed' most rationally to get the most out of the ship's spatial potential. Furthermore, Browne observes how the "architectural design, registration, documentation, and examination at slave trafficking forts and ports […], were subject defining, but always violent" (Browne 2015, 42). Thus, Browne argues, disciplinary power does not supersede sovereign (corporeal) power, as Foucault maintained in *Discipline and Punish*. Rather, the two forms of power continue to co-exist during slavery and plantation surveillance, which she considers "a system of surveillance that was regulated through violence and the written word" (ibid, 52). Moreover, Browne shows how the body was a site of surveillance practices through branding irons, ships registers where humans were treated as cargo, census categories, estate records, and plantation inventories which catalogued enslaved people as merchandise (ibid, 42).

Racialized Surveillance

At the core of Browne's project is a call for rethinking the conceptualization of the operation of power in modernity and how the workings of surveillance must be understood along the lines of racialized surveillance. She demonstrates how the racializing elements of surveillance practices are intrinsic to surveillance as a means of classifying, observing, individualizing, and branding. Through the close reading of a set of written rules for how to manage enslaved

labor at a plantation in Texas in the mid-nineteenth century, for example, Browne demonstrates how "disciplinary power operated by way of set rules, instructions, routines, inspection, hierarchical observation, the timetable, and observation" (ibid, 51).

I highlight Browne's call for understanding surveillance as inherently caught up in the colonial project of modernity and its racist aftermath here, because it is significant for understanding current surveillance as a socio-political phenomenon with specific historical continuities. When considering contemporary surveillance logics and practices, an understanding of surveillance along the lines of racialization and discrimination should be kept in mind. As Browne asserts: "rather than seeing surveillance as something inaugurated by new technologies […] to see it as ongoing is to insist that we factor in how racism and antiblackness undergird and sustain the intersecting surveillances of our present order" (Browne, 8-9). In my view, what Browne's analysis demonstrates so sharply, is the need to be mindful of how surveillance is differently distributed according to categories of difference such as race, gender, and class. This is crucial to keep in mind, and moreover it has consequences for how to understand the embodied experience of atmospheres of surveillance – namely, that they, too, may be unequally distributed and not necessarily similarly shared. There is an ongoing and unresolved tension with regard to positionality and the often universalizing vocabulary of atmosphere which will be discussed further in Chapter 1 and 2 of this dissertation. Now, continuing the focus on key perspectives on how surveillance can been understood and conceptualized as spatial, infrastructural, environmental, and experienced bodily, I turn in the following to what has been referred to as post-panoptic, *infrastructural* surveillance theories.

Digital Infrastructures of Surveillance

Despite the many attempts within surveillance studies to move beyond the panopticon as a concept and metaphor for surveillance, it has proven itself sticky: "the panopticon is alive and well, armed in fact with (electronically enhanced, 'cyborgized') muscles so mighty that Bentham or even Foucault could not and would not have imagined them", as the sociologist Zygmunt Bauman asserted in 2013 (Bauman and Lyon 2013, 55). Nonetheless, a significant concern for much writing on surveillance since Foucault has been the advent of 'dataveillance' (Clarke 1988), and computer-based systems. While the significance of the panopticon for understanding surveillance has been described as belonging to an *architectural*, or spatial, period in surveillance theories (Galic et al. 2016), what came after is

often referred to as post-panoptic, *infrastructural* surveillance. Broadly summarized, this strand of theories concentrates on surveillance as networked and infrastructural, relying on digital rather than architectural and physical technologies (ibid). I want to highlight a few influential contributions to this notion of surveillance, to further the idea of surveillance as an environment, both spatial and networked.

In a short essay, "Postscript on the Societies of Control" (1992), French philosopher Gilles Deleuze made an early revision of Foucault's understanding of surveillance by emphasizing the role of computer-based information technologies and their distribution across various public and private institutions. We no longer live in societies of discipline, moving from one enclosed institution to the next (the family, the school, the military, the factory, the prison and so on), Deleuze argued, but in societies of *control*. While the disciplinary societies were dominant in the eighteenth and nineteenth centuries, societies of control replace them in the twentieth century (Deleuze 1992). Now, the corporation replaces the factory, and societies of control are based on the principle of *modulation*, continuously changing from one moment to the other. Furthermore, code rather than physical structures decides on access, and power is fleeting and everywhere (ibid). Importantly, Deleuze's essay turned attention to how pervasive information practices create digital information subjects, divisible and reducible for a range of purposes: "[w]e no longer find ourselves dealing with the mass/individual pair. Individuals have become '*dividuals*', and masses samples, data, markets, or '*banks*'" (Deleuze 1992, 5). With the turn to infrastructural surveillance and code, the physical body as site of surveillance retreated into the background, replaced by the notion of the dividual.

Expanding on a similar idea of individuals as decorporalized information, Kevin D. Haggerty and Richard V. Ericson's concept of the 'Surveillant assemblage' (2000) highlight the abstraction and separation of human bodies into virtual 'data doubles'. Haggerty and Ericson's starting point was the need to move on from what they considered to be the dominance of the metaphor of the panopticon (as well as what they identified as the other dominant metaphor of surveillance, George Orwell's notion of *Big Brother*) when theorizing surveillance. Published in 2000 and highlighting the decentralized nature of surveillance practices around the turn of the twenty-first century, Haggerty and Ericson argued that surveillance practices and technologies should be understood in the light of an emerging 'surveillant assemblage', were various surveillance systems merge by "abstracting human bodies from their territorial settings and separating them into a series of discrete flows"

(Haggerty and Ericson 2000, 606). These flows can be reassembled into 'data doubles', "targeted for intervention", and a key point in the article was that this kind of 'rhizomed', non-hierarchical surveillance included new and broader groups as subjects of surveillance (ibid). Finally, Haggerty and Ericson maintained that surveillance practices were increasingly driven by "the desire to bring systems together, to combine practices and technologies and integrate them into a larger whole" (ibid, 610).

Liquid and Intimate Surveillance

As stated above, this dissertation explores how the physical body 'returns' into the main focus as the site where spatial, emotional, and bodily surveillance merge with dataveillance and biometrics, for example through embedded sensors, wearables, and smart technologies which link the individual and their body to their data traces in real time. I return to this argument and the notion of embodied surveillance experience in Chapter 1. What I want to emphasize here is how the architectural and the infrastructural currently merge in new ways, as locative media, smart technologies, and AI are increasingly becoming embedded in our lived environments and everyday practices. Dataveillance is closing more tightly in on the physical body in space, as exemplified by the personal smartphone, permeated with locative media such as a GPS tracker, smart watches monitoring our movements, heartbeats, fertility and stress levels, or CCTV with facial recognition technologies monitoring moods in public space or at the airport. Moreover, with the proliferation of biometric technologies which translates the body into binary code, the physical body remains a privileged site of identification (Magnet 2016). Facial recognition technologies treat the face as "an index of identity" (Gates 2011, 8), and as a site of truths. While efforts to teach computers how to automatically identify human faces and facial expressions have been in progress since the 1960s, they solidified in the nineties, and have accelerated since the advent of social media and the access to image training sets thus provided (Gates 2011).

Surveillance and communication scholar Kelly Gates observes that, "[w]here automated identification of individual faces disregard their affective qualities, automated facial expression analysis treats those affective dimensions as objects for precise measurement and computation" (ibid). Unsurprisingly, interest in the body as identifier extends beyond the face. Gates argues that the aim of biometric technologies (such as optical fingerprinting, iris scanning, and voice recognition) is "to bind identity to the body using digital representations

of unique body parts, or, in the case of voice printing, by capturing, digitizing, and analyzing the sounds that the body produces" (ibid, 14). Yet, computer vision systems and other automated technologies for biometric identification are, despite their positivist connotations of objectivity, constrained by, among other things, their design, use, and the decisions involved (ibid, 11). A recent study on automated facial analysis algorithms to identify gender found a marked bias in the gender classification algorithms developed by influential players in the field such as IBM and Microsoft, where females of darker skin tones made up the group most likely to be erroneously identified by the technology, while males and lighter skinned individuals were the least likely to be misidentified (Buolamwini and Gebru 2018). In other words, white and light-skinned men were the least likely to be misidentified by the algorithms.

What is more, our multiple data doubles are tied more closely back to our physical bodies in real time. This point can be illustrated further by the promise made by the wearable health and fitness smartwatch Fitbit in a recent advertisement: "know your body better".[9] Sleep, weight, activity, locations, heart rate and stress levels, contacts and phone activity, and so on, all come together here, "because fitness is the sum of your life".[10] Fitbit tracks every part of the user's day—including activity, exercise, food, weight and sleep. Wearable computing devices such as Fitbit are clear examples of the voluntary self-surveillance practices of current surveillance culture, by which we monitor ourselves while simultaneously providing valuable raw material for datafication. As such, 'the quantified self-movement' perfectly illustrates how the strong desires for control and calculability which saturates the contemporary culture extends to the individual level. Intimate surveillance devices such as the Fitbit and other forms of wearable computing concern the body and its interior, what sociologist and surveillance scholar Gary T. Marx has called 'interiorizing surveillance' (cited in Browne 2015, 15). Marx links this type of surveillance to a 'transparent society', by which he refers to a society "in which the boundaries of time, distance, darkness, and physical barriers that traditionally protected information are weakened" (ibid).

The above example of wearable computing physically attached to the body such as fitness trackers further exemplify what Zygmunt Bauman and David Lyon calls 'liquid surveillance'. This concept, which echoes key insights made by Deleuze, points to how, in the age of

[9] https://www.fitbit.com/dk/whats-new. Accessed 05.01.2020.
[10] https://www.fitbit.com/dk/whyfitbit. Accessed 05.01.2020

'liquid' modernity (Bauman 2000), surveillance is increasingly ubiquitous, soft, and driven by temptation in the consumer realm. Bauman and Lyon observe that "surveillance, once seemingly solid and fixed, has become much more flexible and mobile, seeping and spreading into many life areas where once it had only marginal sway" (Bauman and Lyon 2013, 3). 'Liquid surveillance', then, "spills out all over" (ibid). While Bauman maintains that the panopticon still operates at the margins of society, and in the 'total institutions', a main characteristic of the post-panoptic phase of liquid surveillance is that the "pattern of domination" applicable to the majority of the global north is a move from force to seduction and desire (ibid, 57).[11] Hence, 'liquid surveillance' mainly takes place in the consumer realm. With regard to the current participatory culture of surveillance, characterized by active and willing participation in a range of surveillance practices, Bauman writes, "[t]he gear for the assembly of DIY, mobile and portable, single-person mini-panopticons is of course commercially supplied. It is the would-be inmates who bear responsibility for choosing and purchasing the gear, assembling it and putting it into operation" (Bauman and Lyon 2013, 73). Thus, with liquid surveillance seeping into all aspects of everyday life, Bauman asserts, "just as snails carry their homes, so the employees of the brave new liquid modern world must grow and carry their personal panopticons on their own bodies" (ibid, 59).

Intense Yet Partial Perspectives

Finally, as this account of the central perspectives from surveillance studies which make up the foundation for the inquires in this dissertation is nearing its end, the notion of oligoptic surveillance must also be mentioned. The rather sinister perspectives outlined above might be supported by how, if not willingly strapped to the body such as in the case of the Fitbit, the advent of 'smart technologies' which are gradually becoming more embedded in the material and built environment in which we move, work, and live, expands the scope of dataveillance to a new level. However, what is actually 'seen', or captured, might be tempered by the 'oligoptic' nature of these kinds of systems. Originally introduced by the French social theorist and philosopher Bruno Latour, the notion of the oligopticon is a critique of the notion of a total, all-seeing perspective such as the panopticon (Latour and Hermant 1998; Latour 2005). Oligoptica, Latour asserts, are complex systems characterized by their limitations; they do not provide a full panoramic view, but rather a narrow and specific look (from the

[11] *Liquid Surveillance* is a conversation book; hence, Bauman and Lyon differ in opinions on some matters discussed in the book. Therefore, I will refer to only one author when passages are directly linked to their name as responding to a question or answer from the other.

Greek oligo meaning little). Latour argues that from the oligopticon "very little can be seen at any one time, but everything appears with great precision" (Latour and Hermant 1998, 32). In other words, the oligoptic perspective is intense, but partial, co-producing what is seen. The notion of the oligoptic has been welcomed and developed further in surveillance studies, most recently in relation to smart cities. I find the notion of the oligoptic relevant for how to understand the contemporary surveillance environment not as sites of total surveillance, but as "limited in their purposes, range, and views" (Murakami Wood and Mackinnon 2019, 178). For example, surveillance scholars David Murakami Wood and Debra Mackinnon argue that surveillance in the urban environments known as 'smart cities' is broad and horizontal, but diffuse and unfocused (ibid, 180). "[I]n the oligoptic city", they write, "there is no one total view or even necessarily views that add up; rather, some elements of the urban collective or assemblage (people, places, things, times, feelings, etc.) are subject to intense surveillance, but other elements much less so or even not at all" (ibid). Moreover, "the ways in which different elements are seen are not the same" (ibid).

The notion of oligoptic surveillance relates to current surveillance systems in that they are more often than not partial and incomplete, rather than total and all-encompassing, although increasingly connected. In fact, we are dealing with surveillance practices and technologies that are simultaneously more visible and invisible than before (Ball et al. 2012). Moreover, power is progressively more invisible, slipping into a 'liquid' state where our movements are continually monitored, tracked, and traced, while the inspectors have slipped away (Bauman and Lyon 2013).

This dissertation contributes to the theoretical body of literature outlined above. On the whole, the muddy landscape of desire and entertainment entangled with surveillance and security in the early decades of the twenty-first century requires new theoretical frameworks such as the conceptual framework offered in this dissertation in order to grasp the current configurations of surveillance. Furthermore, by emphasizing embodied experience and perception, the notion of 'atmospheres of surveillance' contributes to a move beyond the visual metaphors and tropes which have become so influential in the conceptual discourse on surveillance. This point will be developed further in Chapter 1. However, a move 'beyond' the ocular, does not mean leaving the ocular behind, rather, it acknowledges its central role for understanding surveillance while emphasizing surveillance as also being a multisensory, embodied experience. In what follows, I will elaborate on what is referred to as the cultural

turn in surveillance studies, and propose that the aesthetic perspective, rather than solely the anthropological, is crucial to a cultural approach to surveillance.

The 'Cultural Turn' in Surveillance Studies

As already suggested above, in 'the culture of surveillance', which has gained momentum in new ways by web 2.0 and 'digital modernity', we are all actively involved (Lyon 2018a). David Lyon points out that "from being an institutional aspect of modernity or a technologically enhanced mode of social discipline or control, [surveillance] is now internalized and forms part of everyday reflections on how things are and of the repertoire of everyday practices" (2017, 825). Likewise, theatre and performance studies scholar John McGrath has argued that the story of surveillance is now less one of technology, government, law, or rights, than one of cultural practice: "[i]t is the way in which we have come to produce and exchange surveillance of ourselves that is defining the experience of surveillance going into the second decade of the twenty-first century" (McGrath 2012, 83). Yet, there is another vital dimension to surveillance culture besides the 'anthropological' view of surveillance culture as practices, habits, and participation cited so far. This is the realm of art and aesthetic approaches. While surveillance studies have traditionally been anchored in the social sciences, it has simultaneously been characterized as "influenced as much by literature and film as it is by social theory" (Monahan and Murakami Wood 2018, 377). Classic novels and short stories such as Yevgeny Zamyatin's *We* (1924), Franz Kafka's *The Trial* (1925), Aldous Huxley's *Brave New World* (1932), George Orwell's *Nineteen Eighty-Four* (1949), Philip K. Dick's *The Minority Report* (1956), and to a lesser degree Karin Boye's *Kallocain* (1940) and Margaret Atwood's *The Handmaid's Tale* (1985), as well as films such as Alfred Hitchcock's *Rear Window* (1954), Michael Powell's *Peeping Tom* (1960), Francis Ford Coppola's *The Conversation* (1974), and more recent films such as Steven Spielberg's *Minority Report* (2002), and Andrea Arnold's *Red Road* (2006), for example, have made up a shared cultural reservoir of reference in discussions within the field. Nevertheless, literature and popular culture, and to a lesser degree art, have tended to serve as entry points for discussions mainly situated in the social sciences. Recently, however, contributions from the arts and cultural studies have gained influence. What is more, the interest in surveillance from cultural perspectives has moved towards the center of surveillance studies, to the extent that it has been suggested as a cultural turn (Monahan and Murakami Wood 2018). This cultural turn is further reflected in the addition of an Arts editor and two new sections dedicated to

"artistic engagements with surveillance" in the leading journal of the field, *Surveillance & Society* (2020).

Returning to the work of David Lyon, who has played a central role for the formation of the field of surveillance studies and is referred quite extensively in this dissertation, he has lately argued for his new concept 'the culture of surveillance' to supersede and complement the formerly influential concepts 'the surveillance state' and the 'surveillance society' (Lyon 2018a). In his 2018 book *The Culture of Surveillance*, Lyon shows how these concepts are no longer sufficient for understanding the surveillance logics and practices at stake. Rather, he argues, they need to be supplemented by the concept 'the culture of surveillance', which pays attention to how participation and the active role played by users in engaging with surveillance have become defining for surveillance today. Briefly outlined, Lyon starts by recounting how the notion of the 'the surveillance state' designate 'Orwellian' practices of centralized state surveillance characteristic of the period after the World War II. While practices of gathering information on individuals by state institutions such as the police and intelligence agencies still exists, Lyon argues that the concept no longer adequately describes key developments in surveillance practices (ibid, 2). Likewise, the notion of 'the surveillance society', designating the many decentralized practices of mass surveillance through government agencies and commercial actors and organizations alike, also mainly focuses on surveillance from the outside, and thus has a blind spot when it comes to people's own current involvement in surveillance practices. This development is, according to Lyon, better captured with the notion of 'the culture of surveillance', where surveillance is participatory and tied to the user-generated practices of contemporary digital culture (ibid). The shift to the culture of surveillance, according to Lyon, appears at the turn of the twenty-first century and particularly after 9/11, 2001 and with the proliferation of social media shortly thereafter. Moreover, the culture of surveillance marks a shift away from 'discipline' and 'control' towards 'performance' (Lyon 2018a, 11).

Lyon's perspective on culture, however, is anthropological rather than aesthetic; what matters in his analysis is understanding surveillance in everyday life as "customs, habits, and ways of looking at and interpreting the world" (ibid, 2). Despite of the fact that the book opens with a call to move beyond Orwell's novel *1984* to understand present surveillance culture and closes with a thorough reading of the 2013 novel *The Circle* by Dave Eggers as an account of surveillance more suited to the present, Lyon makes clear that what he has in mind, is "primarily the surveillance imaginaries and practices of ordinary users of smartphones and

the internet" (ibid, 42). Accordingly, the concept 'the culture of surveillance' is drawing on Charles Taylor's notion of culture as practices and imaginaries, and culture is understood broadly, as a whole way of life:

> Understood here, the culture of surveillance is about how surveillance is imagined and experienced, and about how mundane activities of walking down a street, driving a car, checking for messages, buying in stores or listening to music are affected by and affect surveillance. And about how surveillance is also initiated and engaged by those who have become familiar with and even inured to surveillance (Lyon 2018a, 2).

When calling for a move away from Orwell, Lyon's point is that the novel's representation of surveillance does not accurately depict the experience of everyday subjects in the culture of surveillance today. Thus, he argues,

> To persist with the language of a totalitarian tyrant who threatens his victims with ravenous rats and kicking jackboots simply deflects attention from what is actually going on in the world of surveillance. Some surveillance situations are indeed sinister and sadistic and are rightly deplored as such. But most people's experience of surveillance is not like that, which is why going beyond Big Brother is necessary now more than ever (ibid).

As an alternative to the preoccupation with and dominance of imagery from *1984*, Lyon offers a reading of Dave Egger's novel *The Circle*, which depicts a northern California tech company clearly meant by Eggers to invoke large tech monopolies such as Google. Nevertheless, Lyon's reading of *The Circle* seems largely to be a discussion of how well it performs as an illustration of the argument already provided of contemporary surveillance as participatory and user-generated, while simultaneously being exploited by the big tech companies.

By contrast, the approach to surveillance culture in this study is aesthetic rather than anthropological. While I am very much in agreement with David Lyon's view of surveillance as central to social experience, and his analysis of how contemporary culture is characterized by a relationship to surveillance which is participatory and embedded in almost all aspects of life, this study is differently focused. It pays attention to the sensory experience of surveillance and considers surveillance culture from the perspective of art and aesthetic approaches. Yet, the anthropological and the aesthetic are not considered as strictly separate domains – the aesthetic perspective on surveillance culture developed in this dissertation pays quite a bit of attention to the reflexive relationship between art and contemporary society.

Nonetheless, what is neglected in a focus on surveillance culture solely as user's practices and imaginaries (mainly centered on the smart phone), in my view, is the affective and multisensory experience of surveillance. Moreover, it overlooks art as a realm of that which is not yet fully articulated – the uncertainties and ambivalences, alternative interrogations and critical enactments with regard to surveillance. Put differently, it risks missing out on *new* insights articulated by artworks and artistic practice which are not yet segmented in cultural practices and imaginaries understood as participants' sense-making of their world.

What is more, while Lyon notes that "the performance dimension, so important for sensing surveillance culture, has everything to do with embodied experience" (ibid, 39), and while he emphasizes the emotional aspect of surveillance culture, these perspectives are not developed very thoroughly in his recent book, even though fear, anxiety, uncertainty, pleasure, and desire are briefly touched upon. The aesthetic perspective taken on surveillance culture in this study, on the other hand, foregrounds surveillance as multisensory and affective experience. It seeks to attune to the subtleties of surveillance logics and listens for the more or less subtle directions shaping bodies, as well as the invisible walls of desire and consumption which also make up everyday experience, however intangibly.

Orwell's novel from 1949 does not provide an accurate illustration of surveillance in democratic countries in the early decades of the twenty-first century. However, in my view art (including literature) should not be evaluated mainly for its ability to provide illustrations. Rather, art can be a realm for the affective, for the intangible, the ambivalences and tensions, intensifications and defamiliarization, as well as for explicitly critical interrogations, among a range of the many possible artistic engagements with surveillance. Hence, I suggest that a focus on surveillance culture needs to go beyond the habits, practices, and imaginaries of actively involved users of smartphones and the internet. Rather, my approach to surveillance culture pays heed to the current historical and cultural moment in a reflexive relationship with the same society's ideas, art, and aesthetic production. These kinds of perspectives do not only examine the content of a novel for its thematic focus, but also, for example, for its qualities of form (narration, focalization, use of surveillance technologies as literary strategy, and so on), its atmosphere and moods, and pose questions about how artworks reflect, critically interrogate, add nuance to, make visible, or point towards alternatives to surveillance. Furthermore, the aesthetic perspectives I promote enable explorations of how artworks defamiliarize the present, haunt us, make us feel differently about something, afford affective experience, ambivalences and tensions, explorations of pleasures as well as dreads.

As this study argues, art and aesthetic approaches to surveillance offer important angles on the affective and multisensory dimension of surveillance and is able to trace more or less subtle power dimensions and social and affective experience, past and present. Moreover, this approach allows for the artworks of the past to inform the present – such as is the case with Orwell's *1984*. The novel brings forth bodily and sensual experiences of surveillance. It is a work of art dripping with an atmosphere of surveillance which enters the bodies and minds of its readers, haunting us once we have read the novel or extracts thereof; a work drenched with an atmosphere of surveillance to the extent that we can smell the cabbage, taste the cheap gin, and feel the affects of the two-minute hate sessions of the totalitarian surveillance state of endless war. After all, why is it that the imagery of Orwell's novel is still so potent? Because of its atmosphere! While the historical context of the novel is state surveillance in the twentieth century, its atmosphere nonetheless haunts the present. This can be illustrated by the fact that when Snowden revealed NSA's surveillance programs in June 2013, the novel immediately rose to the top 5 of Amazon's bestseller lists.[12] This is not to argue against the relevance, pointed out by Lyon, of directing attention to how the novel might be less productive for our understanding of contemporary surveillance practices today. Rather, it is to say that, in my view, it is probably more a matter of finding ways to move beyond the worn expression of 'big brother' used in everyday language as a designation for a surveillance state no-one desires, an expression frequently used by many who have not necessarily read the novel, than moving away from the novel itself.

Nevertheless, aesthetic experiences may very well influence our cultural imaginaries, and thus the way we perceive surveillance. In other words, perhaps the aesthetically experienced atmospheres of surveillance cannot always be so clearly separated from how we perceive surveillance as a phenomenon? Dietmar Kammerer argues that works of popular culture "can help decipher, describe, categorize, and analyze the public discourse on surveillance" (Kammerer 2018, 5). Kammerer goes on to argue that "works of popular culture are often the only way most people actually experience surveillance. Surveillance is notoriously hard to describe or observe" (ibid, 5-6). As we cannot "see, hear or feel dataveillance", for example, Kammerer suggests that fictional works are the realm most readily available to publicly debate the experiences and emotions of living in a surveillance culture" (ibid, 5-6). Here I find the implication of a potential feedback loop, where surveillance experienced in the

[12] https://www.latimes.com/books/jacketcopy/la-et-jc-nsa-surveillance-puts-george-orwells-1984-on-bestseller-lists-20130611-story.html

aesthetic realm might transfer to experiences of surveillance in everyday life. In this light, aesthetic experiences may both inform and sometimes also blur our understanding of phenomena such as surveillance.

The basic argument in this dissertation resonates with the precise observation of the Italian social theorist Andrea Mubi Brighenti, namely that "surveillance produces not only social control but also an ideoscape and a landscape of moods" (2010, 185). Cultural studies scholar Nicole Falkenhayner discusses a similar idea when she shows how CCTV surveillance and its images entangle with the imaginaries and affective experiences of being under surveillance in present day Great Britain (Falkenhayner 2019). Notably, Falkenhayner finds that new affects, feeling-states, and moods emerge in contemporary lifeworlds of "being captured" by CCTV, influencing our collective and personal subjectivization (ibid, 161). Likewise, when arguing that surveillance contains and co-produces atmospheres, I pay attention to the ways in which surveillance shapes and directs affective experiences. While there are close affinities between Brighenti's notion of a 'landscape of moods' and atmospheres, I follow the distinction between 'mood' and 'atmosphere' within the German phenomenological tradition from which I draw my theoretical framework. According to Böhme, moods are distinguished as that which belongs to the subject, while atmospheres can be shared, and are the co-presence of subject and object. Böhme differentiates between atmospheres as something "out there", and moods as something which belongs to the interiority of the self. Hence, a quality of atmospheres is that they can bring us into a certain mood (Böhme 2017). In an interview with Tonino Griffero, Böhme separates atmospheres from moods (the German Stimmungen) in the following way: "Stimmungen and Atmospheres are almost the same thing. But if we talk about terminology, it might be well to distinguish the use of these two words: Atmospheres are "out there", they [are] a tuned space, while Stimmungen is about your inner "feeling", your Befindlichkeit" (Böhme, interview, n.d.). However, there does not seem to be a distinct differentiation in the use of these terms in the English-language discussion (perhaps partly because the German word Stimmung does not translate well). Nonetheless, for purposes of conceptual clarity I will follow the distinction of 'mood' and 'atmosphere' outlined above throughout the dissertation.

Specifically, I am concerned with how atmospheres can be deliberately *staged* (Böhme 2013, 2016; Bille 2015; Zumthor 2006), and to how surveillance is perceived and experienced in works of art. The focus on the staging and manipulation at work in the production of

atmospheres does not imply that planned effects necessarily will occur, as atmospheres are dependent on a perceiving subject (Böhme 1993). However, the attention to staging does entail the presumption that an awareness of the manipulation at work can help us improve our 'atmospheric competence': our ability to consider the atmospheres at work critically, and assess how they might influence us (Griffero 2018). This is of consequence, because as Böhme observes, "atmospheres are involved wherever something is being staged, wherever design is a factor – and that now means: almost everywhere" (Böhme 2013). The same could be said about surveillance: it penetrates and affects the material and built environment in which we move and live our lives in a variety of different ways. Surveillance forms a part of social experience. To sum up, I suggest that 'atmospheres of surveillance' emphasizes the affective and multisensory *experience* of surveillance, as well as the objectives and forces at work. This proposition is further explored in Chapter 2-4 of this dissertation, which comprise a series of readings of contemporary art. To situate these readings, the following sections will introduce and outline what is referred to as 'surveillance art', and comment on the selection of artworks for the dissertation, before I close the introduction with an overview of the chapters of the dissertation.

Surveillance Art

In the empirical contribution of the dissertation, I explore my research questions through analyses of a selection of contemporary artworks which can be characterized as 'surveillance art'. In the broadest sense, any work of art reflecting surveillance could fall into this category, be it a poem, a novel, a film, a play, installation artwork, painting, series of photographs, print, internet art, etc. More specific to this study, however, I work with surveillance artworks that are encompassed by the field of visual arts, and particularly screen-based installation art. As I will elaborate on below and in Chapter 2 of this study, I consider installation artworks as exemplary sites of atmosphere. Accordingly, I will limit the discussion in this section to the field of visual art, all the while keeping the boundaries open and porous for the many hybrid practices of contemporary artists.

While writings on art at the intersection of surveillance have their own small subfield within and at the fringes of surveillance studies (see for instance Barnard-Wills and Barnard-Wills 2012; Brighenti 2010; Cahill 2019; Finn 2012; Levin et al. 2002; Monahan 2018; McGrath 2004, 2012; Remes and Skelton 2010; Stark and Crawford 2019; Wolthers 2014, 2016), this is still an under-studied field. For example, there is to the best of my knowledge no work

anthologizing or offering a comprehensive overview of the various contributions at the intersection of art and surveillance from inside and/or outside the field of surveillance studies, art history, or visual culture studies, with the exception of the 2002 exhibition catalogue *CTRL [SPACE]*, to which I will return below. While artistic contributions of surveillance art are "rapidly growing in diversity, scope, and scale" (Morrison 2016, 6), this is still a small subfield within surveillance studies with much potential for further exploration and consolidation. Surveillance scholar Susan Cahill recently observed that "[s]cholarly work on art and creative practice in its intersection with the field of surveillance studies is a developing research area, and there is still much work to be done" (Cahill 2019, 354).[13] This dissertation contributes to the ongoing work of mapping and analyzing surveillance art in Chapter 2-4. While artistic exploration of surveillance is far from new, scholarly writings on the subject and larger exhibitions are more recent. The aforementioned major exhibition and catalogue *CTRL [SPACE]*, curated by media and cultural theorist Tomas Levin, stands as a first landmark at the intersection between art and surveillance. The exhibition ran at the ZKM, Center for Art and Media in Karlsruhe, Germany from October 12, 2001 – February 24, 2002. Indeed, Levin and his co-editors of the catalogue *CTRL [SPACE]* can be recognized as being at the forefront of identifying developments that form what today is recognized as 'surveillance culture'. The exhibition and 655 pages long brick of a catalogue accompanying it is subtitled *Rhetorics of Surveillance from Bentham to Big Brother*. This subtitle speaks quite specifically to the time of its creation. In the early 2000s, *Big Brother* was screening as a popular reality show across Europe and in the US, suddenly adding new layers of entertainment and voyeuristic and exhibitionistic pleasures to the older, more sinister connotations of surveillance sticking to Orwell's *Big Brother* figure, which had until then represented the embodiment of all-seeing state power conceived in the aftermath World War II.[14] The editors of *CTRL [SPACE]* referred to the endeavor as forming part of "an urgently needed surveillant literacy" (Levin et al. 2002, 10). This 'surveillant literacy', "a critical, differentiated analysis of the pros and cons of surveillance" was to be found in the body of creative work referred to as "the arts of surveillance" (ibid, 11). Hence, *CTRL [SPACE] Rhetorics of Surveillance from Bentham to Big Brother* paved the way for what is

[13] Cahill's own work on assembling Canadian artworks dealing with surveillance is exemplary in this regard. She is responsible for the *Art &Surveillance Project*, a research project and web forum mapping and exhibiting artworks dealing with surveillance in the Canadian context. http://www.artandsurveillance.com/about/ .
[14] The reality TV show Big Brother made its debut in the Netherlands in 1999.

now considered the emergence of a distinct genre in its own right, ‘surveillance art’. In the following section, I will introduce and define this genre more closely.

Defining the Genre

The notion that artistic practices and explorations of surveillance formed a new genre of art has been sporadically voiced. More often than not, though, surveillance art is referred to with no further specification. Sociologist and visual scholar Andrea M. Brighenti has broadly defined ‘surveillance art’ as designating “every contemporary artwork that in some way hints to or deals with topics, concerns and procedures that fall within the interest of surveillance studies” (Brighenti 2010, 137). This includes artistic explorations and approaches to surveillance “from the overtly political, through the cynical, to the playful” and includes both artists who have briefly engaged with surveillance in their works and those who have made it a central part of their practice (ibid). Brighenti’s broad definition, although pragmatic, is coming from an oddly specific vantage point: “that fall within the interest of surveillance studies”. Authors, artists, and filmmakers have produced works engaging with surveillance for a long time. Collecting this rich body of artworks under the header of the genre of surveillance art would surely be of interest outside of the field of surveillance studies, e.g. for art history, visual culture, cultural studies, the interested art public, museumgoers, and so on. In the field of contemporary art today, an interest in surveillance is shared by an increasing number of artists who engage with surveillance in numerous ways, some explicitly and others more subtly, e.g. by playing with the techniques and aesthetics of surveillance. Surveillance and performance studies scholar Elise Morrison provides another definition, seeking to establish the genre of surveillance art more firmly. Morrison introduces ‘surveillance art and performance’ – by which she refers to performance-based arts activism – as a site of opportunity to critically reflect on, imagine and rehearse alternative responses to living in a contemporary surveillance society (Morrison 2016, 5). In Morrison’s definition, surveillance art is “performances or installations in which surveillance technologies are central to their production, design, content, aesthetics, and/or reception” (ibid, 7). In other words, Morrison’s definition is based on the centrality of surveillance technologies. Importantly, Morrison points out how surveillance as a representational instrument “produces – even as it is produced by – cultural norms”, much the same way as art and popular culture does (ibid, 10).

It makes sense to recognize this body of work as a genre in its own right – as ‘surveillance art’. For the purposes of this dissertation, ‘surveillance art’ broadly refers to:

> *any work of art or artistic practice which articulates a relationship to surveillance, whether formally or thematically, regardless of medium.*

This definition recognizes surveillance art as a genre independent from "the interest of surveillance studies", and, moreover, it recognizes works of art which articulates a relation to surveillance regardless of whether or not surveillance technologies are central to the work. I have purposefully kept the definition inclusive, to allow for the many variations of aesthetic approaches to and articulations of surveillance, past and present. One of the earliest historical examples of a work of art engaging with surveillance is the Flemish artist Hieronymus Bosch, and his drawing *The Wood Has Ears, The Field Has Eyes* from the turn of the sixteenth century, to which I will briefly return in Chapter 1. Yet, while there are sporadic examples of artworks engaging with surveillance from Bosch onwards, artistic engagements with surveillance becomes more plentiful from the 1960s, with influential and oft-cited artworks such as for instance Bruce Naumann's *Live/Taped Video Corridor* (1969-70), and Sophie Calle's *Suite Vénitienne* (1979) and *The Hotel* (1980). According to art historian Anne Marsh, the genre of surveillance art entered the critical agenda in the 1970s and 1980s, in the wake of the attention given to Foucault's *Discipline and Punish* (1975, English translation 1977), and *Birth of the Clinic* (1960, English translation 1973). Marsh observes that the early works of surveillance art were primarily lens- and performance-based, with an interest in the disciplinary aspects of the gaze (Marsh 2011). Furthermore, Susan Sontag has pointed out the links between photography, voyeurism, and surveillance from the invention of photography in the mid-nineteenth century (Sontag 1977). In relation to recent artworks, art historian and curator Sandra S. Phillips has suggested that the many artists working with surveillance today reflect a certain anxiety in the culture as such (Phillips, 2010).

Selection of Artworks

In the selection of artworks for this dissertation, I have purposely chosen artworks from within the last decade that can be characterized as 'surveillance art', while still being underexposed in the field of surveillance studies.[15] The artworks analyzed in this study are from the second decade of the twenty-first century, by artists based in Northern Europe (Denmark, Germany) and the UK. What is more, the artworks – Ed Atkins' *Safe Conduct*

[15] A few artists and artworks have been referred quite extensively, including Hasan Elahi's *Tracking Transience* (2002-), Jill Magid's *Evidence Locker* (2004), and Manu Luksch's *Faceless* (2007).

(2016), Hanne Nielsen & Birgit Johnsen's *Modern Escape* (2018), and Hito Steyerl's *Factory of the Sun* (2015) – all fall under the genre of screen/ video-based installation art. While any work of art or cultural artefact could be approached through the conceptual lens of 'atmospheres of surveillance', I find installation art to afford exemplary sites of atmosphere. This is due to the privileged attention installations typically pay to the relationship between the visitor's physical body and the space of the work. They are immersive, and as such especially adept at creating atmospheres. Moreover, the three works all include elements of performance, where the artists themselves are acting (although in the case of *Safe Conduct* this is by proxy, as a digital avatar is modelled on the artist's facial expressions through motion capture technology). These works are similar in how they pay attention to the visitor's body inside the installation space, and in regards to the screen-based nature of the works. However, they have been selected for how they allow for different perspectives on atmospheres of surveillance through each in their own way representing a variety of artistic strategies which shed light on themes of surveillance from the regime of bodily surveillance in the airport to the automated surveillance gaze of recent home surveillance technologies, and the muddy landscape of desire and control which characterizes digital (consumer) culture. Moreover, a key criterion for the selection has been that I should be able to access and experience the artworks firsthand in an exhibition. Together, the artworks compose a body of commentaries, critical interventions, and exposures addressing the power and politics of surveillance. As we now approach the end of this introduction, I will provide an overview of the dissertation's chapters.

Overview of the Dissertation

The dissertation consists of this introduction, four chapters and a conclusion. The introduction thus far has presented the basic argument of the dissertation, namely that *surveillance contains and co-produces atmospheres*. The theoretical vocabulary and methodological reflection on the articulation of the 'felt' to grasp different aspects of the emotional and embodied experiences of surveillance will be pursued and developed further throughout the chapters of this study. Moreover, the introduction has situated the project within the field of surveillance studies, and more specifically within the so-called 'cultural turn' in surveillance studies, where I have argued for the need to maintain the role of art and aesthetic approaches to surveillance rather than solely anthropological perspectives. Following this, I have introduced and further defined the genre of 'surveillance art' and commented on the selection of artworks included in this study. Moving on from the

introduction, Chapter 1 begins to address the overall research question of the study by establishing the theoretical framework for understanding surveillance as atmospheres, which is grounded in a combination of insights from surveillance studies and work on atmospheres emerging from phenomenology, aesthetics, and affect studies. The chapter opens with a consideration of the proposed notion of atmospheres of surveillance and what it entails. Next, I identify and discuss key definitions of surveillance, mainly focusing on the debate between David Lyon and James Harding. Subsequently, the main part of the chapter examines theories of atmosphere, with particular attention to the philosophy of atmosphere as it has been developed and refined by the German phenomenologist German Böhme. Böhme's notion of atmosphere is supplemented and discussed further against perspectives from, mainly, philosophers Hermann Schmitz, Tonino Griffero, and Teresa Brennan, feminist theorist Sara Ahmed, and cultural geographer and affect theorist Ben Anderson. The chapter concludes with a first conceptual formulation of 'Atmospheres of Surveillance'.

Following from this, I turn to the three analytical chapters, which each in their own way expand on and further explore aspects and nuances of the theoretical understanding of atmospheres of surveillance through immersive readings of artworks. These chapters (2-4) each address one of the three sub-questions of the study in a corresponding chronological order. However, I would like to emphasize that they are closely intertwined and together address the overarching research question of this dissertation. The series of readings of selected works of 'surveillance art' in combination with written vignettes in these chapters forms the dual movement I refer to as 'immersive readings'. The continued exploration and development of the concept 'atmospheres of surveillance' is informed by the specificities of the concrete artworks and the new angles they bring forth.

Chapter 2 examines how atmospheres of surveillance are created, perceived, and experienced in the video installation *Safe Conduct* (2016) by British contemporary artist Ed Atkins. The artwork's defamiliarization of the everyday situation of going through an airport security check evokes threatening and ambiguous atmospheres inside the installation space. First, the chapter engages in a reflection on key methodological challenges arising from the attempt to research the transient and fleeting phenomenon of atmospheres. Central to the discussion on atmospheres is the question of (re)presentation: how to research and represent phenomena which might be more available to feeling than to description? Following this line of inquiry, the chapter outlines the methodological contribution of my project, which is tested in the analysis of *Safe Conduct*. Second, through the reading of the artwork, the chapter examines

the deliberate production of atmospheres, drawing on Gernot Böhme's double perspective on atmospheres as *produced* and *perceived*. Considering how atmospheres affect us bodily, I argue that the endless repetition of the brace positions and positions for searches and controls performed by the digital avatar in the airport security check in *Safe Conduct* is a reminder of how a new bodily repertoire of movements emerged in the aftermath of 9/11, 2001.

The third chapter analyzes the contemporary video installation *Modern Escape* (2018) by the Danish artist duo Hanne Nielsen & Birgit Johnsen. The artwork recreates a modern western home, pervaded by surveillance and a sense of paranoia. The first section of the chapter opens with a closer look at the actual AI enabled interactive home surveillance system, *Lighthouse*, which is directly referenced in the artwork through appropriated footage. The purpose of this is to prepare the ground for an examination of how *Modern Escape* responds to and plays with the notion of a home penetrated by smart surveillance technologies. Theoretically, the chapter further elaborates on the conceptual framework of the study through an exploration of Avery Gordon's notion of 'haunting' as a perspective to illuminate traces of the violence and power relations of surveillance.

The fourth and final chapter provides a further investigation into contemporary art which express the experience of surveillance of the present moment – a time best characterized by the synthesis of digital surveillance culture and the form of late capitalism which has been characterized as 'surveillance capitalism', based on principles of data extraction, prediction, and behavioral modification (Zuboff 2019). Specifically, the chapter addresses Hito Steyerl's immersive video installation *Factory of the Sun* (2015), which exploits the format of a video game. First, the chapter engages in a much-needed discussion of the role of digital information technologies with regard to the conceptual understanding of atmospheres, as connected and pervasive digital technologies complicate notions of the *spatial* and embodied experience. Next, through the reading of the artwork, the chapter explores Raymond William's notion of 'structures of feeling' as a perspective to analyze atmospheres of surveillance which seems to 'stick around' for longer, in ways that come to articulate historically distinct, affective and social experiences of the present. Inspired by Williams, the chapter proposes the notion of *ambient entrapment* as an emerging sensibility towards contemporary surveillance.

Proceeding from the analysis of the artworks, I conclude by way of a final discussion of how the concept 'atmospheres of surveillance' can expand our understanding of the implications of lived surveillance today. The dissertation ends with an epilogue.

****Parts of the dissertation are published in a condensed form in Søilen, Karen Louise Grova. 2020. "Safe is a Wonderful Feeling: Atmospheres of Surveillance and Contemporary Art",* Surveillance & Society *18 (2*), *170-184. Revised excerpts from the article can be found in the following sections: Introduction, Chapter 1 -2, and the conclusion.*

Likewise, a short piece for Blink – *the blog of* Surveillance & Society, *titled "Surveillance is in the air" draws on content from the present dissertation in a reflection on the above article*. https://medium.com/surveillance-and-society/surveillance-is-in-the-air-62babe035945.

Chapter 3, The System only dreams in Total Darkness *was first submitted as a paper to the* Surveillance Studies Summer Seminar *at Queens University, Kingston, Canada, May/June 2019.*

CHAPTER 1.

Atmospheres of Surveillance

> [T]he atmosphere in which we live weighs upon every one with a 20,000-pound force, but do you feel it?
>
> Karl Marx, *Speech at the anniversary of the people's paper*

Have You Ever Walked Into a Room and 'Felt the Atmosphere'?

"Is there anyone who has not, at least once, walked into a room and 'felt the atmosphere'?" (Brennan 2004, 1). This question, posed rhetorically by the Australian feminist philosopher Teresa Brennan, will induce a spontaneous reply in many. We even have, as the German phenomenologist Gernot Böhme points out, a rich vocabulary for describing the experience of atmospheres: they can be "serene, melancholic, oppressive, uplifting, commanding, inviting, erotic", and so on (Böhme 1993, 114). Now consider your last experience of an atmosphere of surveillance. Did you enter a certain space, perhaps an airport security check, lined with body scanners and security personnel ready to perform a search? Or navigate through a metro station in a major European city, feeling a slight shudder while wondering if or when the CCTV system might also feature facial recognition technology? Perhaps the idea of atmospheres of surveillance resonates better with an aesthetic experience from watching a film (Francis Ford Coppola's *The Conversation*? Henckel von Donnersmarck's *The Lives of Others*?), from reading a book (Margaret Atwood's *The Handmaid's Tale*? Karin Boye's *Kallocain*?), or from TV-series (*Homeland? Black Mirror?*)?

In the 'post- 9/11' commentaries on counter-terrorism politics, surveillance, and security, a recurring observation has been how "surveillance creates an atmosphere of distrust, fear, and suspicion" (Patton 2000, 185), how the politics of prediction and logics of preemptive action create "an atmosphere of fear" (Massumi 2010, 61), or how the discriminatory surveillance of the Muslim community in New York has "produced an atmosphere of fear and mistrust" within mosques and the community (ACLU, n.d.). I want to examine this further. What kind of atmospheres do surveillance rationales, practices, and technologies contain and co-produce? How does atmospheres of surveillance come into being, how do we experience

them, feel them, express them, become influenced by them? Considerations such as these inform the main research question of this study, which this chapter will begin to address: *in what ways may the concept 'atmospheres of surveillance' contribute to our understanding of the embodied, multisensory experience of contemporary surveillance culture?*

To begin to approach this question, this chapter sets out to build a comprehensive theoretical foundation for developing a theoretical vocabulary for 'atmospheres of surveillance' and further refine the argument that surveillance contains and co-produces atmospheres. I open the chapter by unpacking the proposed notion of atmospheres of surveillance and what it entails. Next, the chapter introduces and discusses key definitions of surveillance from within the field of surveillance studies. I deliberately situate the definitions of surveillance in this chapter in order to allow them to productively inform the reading of the theories on atmosphere, particularly the notion that atmospheres can be produced. The affiliation between surveillance and atmospheres is further suggested through the notion of 'ambient power', a concept borrowed from John Allen (2006), which offers an understanding of the more or less subtle ways through which power works in emotionally tuned space.

Subsequently, the chapter turns to a comprehensive account of the notion of atmosphere as developed in phenomenology, aesthetics, and affect studies, which I draw on in my own thinking. Here, I first and foremost focus on the philosophy of Gernot Böhme, while also providing theoretical background and supplementing the discussing further, employing theoretical insights from Sarah Ahmed, Ben Anderson, Teresa Brennan, Tonino Griffero, and Hermann Schmitz. These work on the qualities of atmospheres will serve as the foundation from which I propose the notion of 'atmospheres of surveillance'.

In closing, the chapter offers a first conceptual formulation of 'atmospheres of surveillance' and elaborates on the productive critical potential of the concept, drawing on a combination of ideas of 'atmospheric competence' (Griffero 2018) and 'surveillant literacy' (Levin 2010). This first conceptual formulation will subsequently be nuanced and expanded through the series of readings of contemporary artworks in the following chapters.

The Wood Has Ears, The Field Has Eyes: Towards a Multisensory Notion of Surveillance

Before delving into the existing theoretical scholarship on atmosphere, I would like to open with a few considerations regarding the argument that *surveillance contain and co-produces*

atmospheres, and what the concept 'atmospheres of surveillance' entails. First, it derives from my interest in understanding the embodied experience of surveillance and how it affects us. I suggest that atmospheres of surveillance envelope our bodies and can be perceived through multiple senses; they have a spatial dimension as a lived environment. However, the focus here is not solely on the spatial dimension of surveillance as such, rather, surveillance will be explored with regard to *emotionally tuned* space – or atmospheres. Furthermore, with the notion of atmospheres of surveillance, I explore how these atmospheres can emerge as a result of surveillance objectives; how they can be deliberatively produced, or *staged* according to purposes of surveillance. This includes a focus on the workings of power. Canadian philosopher and social theorist Brian Massumi considers the looming, unidentifiable threat perceived in what he calls the 'atmosphere of fear' of post- 9/11 politics to operate affectively on bodies, writing that "[t]hreat's ultimately ambient nature makes preemptive power an *environmental* power. Rather than empirically manipulate an object (of which actually it has none), it *modulates* felt qualities infusing a life environment" (Massumi 2010, 62). This observation informs and resonates with the notion of atmospheres of surveillance, yet as we shall see, the production perspective of atmospheres takes this modulation of felt qualities quite literally: its focus is the means by which emotionally tuned space is materially produced. Moreover, the question of the objectives at work is reinforced by performance studies scholar James Harding's assertion that, far from being solely a means of passive watching, surveillance is an "active force", and "primarily a mode of directing" to "shape" behavior and experience (Harding 2018, 45, 90). I will return to this understanding of surveillance later in the chapter. However, the production, or staging, of atmospheres of surveillance also takes place in the domain of aesthetics in the narrow sense of art. Drawing on an insight from Böhme, it is possible to say that works of visual and installation art, fiction, theatre, film and popular culture *produce atmospheres of surveillance as part of their craft* (Böhme 1993). Indeed, the realm of art might be where we can experience atmospheres of surveillance most intensely, as art engages us through our bodily sensations (Ring Pedersen 2015).

In addition, the concept 'atmospheres of surveillance' offers a move beyond the strong focus on the ocular within surveillance studies discourse, by pointing towards the bodily, emotional, and multisensory experiences of surveillance and our perception of the lived environment. As in western cultural history at large, vision has been the dominating sense and metaphor for understanding surveillance. Clearly, this is valid insofar as central aspects

of surveillance traditionally have been and still *are* visually informed. Moreover, to watch is present in the etymological core of the word 'surveillance'. 'Surveillance' first appears in English at the turn of the nineteenth century (*Oxford English Dictionary* 2019). It derives from the French word surveiller, where 'sur' translates to above, over, and 'veiller' comes from the Latin 'vigilāre', to watch (ibid). Surveillance means to watch over, to oversee. This is not to say that surveillance theorists in general consider surveillance to be just about watching. On the contrary, power relationships and the shaping of behavior is at the core of much research in the field (Monahan and Murakami Wood 2018). Yet, when looking at the vocabulary of surveillance as rooted in western cultural and intellectual history at large, it is, on the one hand, infused with more or less explicit references to religious, Christian imagery such as the notion of the omniscient eye of God, and on the other hand, the vocabulary of surveillance also bears the mark of a disembodied, detached and controlling Cartesian eye. Both strands of imagery connote the eye and power. The implications of drawing on religious imagery for understanding surveillance as a contemporary phenomenon will be treated more in depth in the discussion of James Harding's critique of David Lyon's definition of surveillance later in this chapter. What is more, the sense of sight has held a privileged position and functioned as metaphor for certainty in western cultural and intellectual history going back to classical Greek thought (although this has not been a linear, continuous development) (Jay 1994; Pallasmaa 2013). Intellectual historian Martin Jay traces the roots of ocular metaphors and their cultural importance back to ancient Greek philosophy, where the visual was privileged over any other sense (Jay 1994). Indeed, the philosopher Hans Jonas has argued that the distancing function of sight was instrumental to the creation of the binary opposition between subject and object as it emerged in from Greek philosophy (Jonas 1982, cited in Jay 1994). I return to the subject-object dualism in western philosophy as a topic of critique in theoretical writings on atmosphere later on in this chapter. The privileged position of sight reappears in the Renaissance and is further extended with the renaissance system of the senses, which regarded vision as the noblest (Jay 1994). The Renaissance period also marks the invention of perspective, the central vantage point from which to view the world, which "made the eye the centre point of the perceptual world" (Pallasmaa 2013, 18). Furthermore, art historian Astrit Schmidt-Burkhardt notes that "[n]o later than the eighteenth century, vision became widely favored by the various strands of the Enlightenment and was pronounced the predominant paradigm of cognition" (Schmidt-Burkhardt 2002, 17). Schmidt-Burkhardt also finds a strong masculine connotation with regard to the power of the eye and argues that "the gendered role of the eye, the supreme organ of control has masculine

connotations. Its task consists first of all in obtaining a systematic overview of human frailty in everyday life" (ibid, 19). Finally, according to the Finnish architect and theorist Juhani Pallasmaa, who has written extensively on atmosphere, the "hegemony of vision" is reinforced in the current era "by a multitude of technological inventions and the endless multiplication and production of images (Pallasmaa 2013, 24).

The 'ocular bias' of western cultural and intellectual history noted above has also made its mark on surveillance studies. As I note in the Introduction to this study, surveillance is routinely referred to as *the study of watching and being watched*. Recently, a critique of the limitations of the foregrounding of seeing has been posed from the perspectives of feminist and decolonial surveillance scholars. Andrea Smith argues that "surveillance is about a simultaneous seeing and not-seeing. That is, the purposeful gaze of the state on some things and peoples serves the function of simultaneously making some hypervisible through surveillance while making others invisible", and moreover, that "[a] feminist surveillance studies focus on gendered colonial violence highlights that which cannot be seen—indigenous disappearance" (Smith 2015, 25, 26). Furthermore, Elise Morrison argues that gender perspectives on the distribution of the gaze have been underexposed in a field of study otherwise so preoccupied with the gaze and power and asserts that the surveillance gaze is not gender neutral (Morrison 2016). While also emerging from a feminist position, the critique of the foregrounding of seeing in surveillance studies takes a slightly different approach in this dissertation. I suggest a move away from the strong ocular focus in surveillance studies to foreground multisensory embodied experience of atmospheres. While I do not dispute that surveillance is about watching and being watched (literally, as well as figuratively, such as in regards to dataveillance), I am interested in how it may also be about the intentional shaping of material environments, the directing of bodies and movements, the modulation of subjectivities, and the implications for lived experiences generated by infrastructures (material and digital), political agendas, policing, design and architecture, and the rhythms of places, among other things. Thus, by thinking of surveillance as atmospheres I aim to emphasize the multisensory, lived experience of surveillance. The motivation for this exploration is the need to understand how surveillance is experienced by situated human beings who perceive the world through multiple senses at once. Thus, in order to understand the lived and felt experience of surveillance we need to go beyond the strong focus on the ocular and visibility. The French phenomenologist Maurice Merleau-Ponty describes embodied, multisensory perception in the following way: "[m]y body is not a collection of

adjacent organs but a synergic system, all of the functions of which are exercised and linked together in the general action of being in the world" (Merleau-Ponty 1962, 234). The concept of 'atmospheres of surveillance' holds the potential to capture encounters with surveillance which are perceived as a 'whole', rather than as elements to be perceived by individual sense organs (Böhme 2017). Yet, as I emphasize later in this chapter, this does not make atmospheres universal. In closing these considerations here, I believe that an investigation of the present relation between surveillance and emotional and embodied experiences should follow Pallasmaa's advice that "[t]he eyes want to collaborate with the other senses" (Pallasmaa 2013, 45).

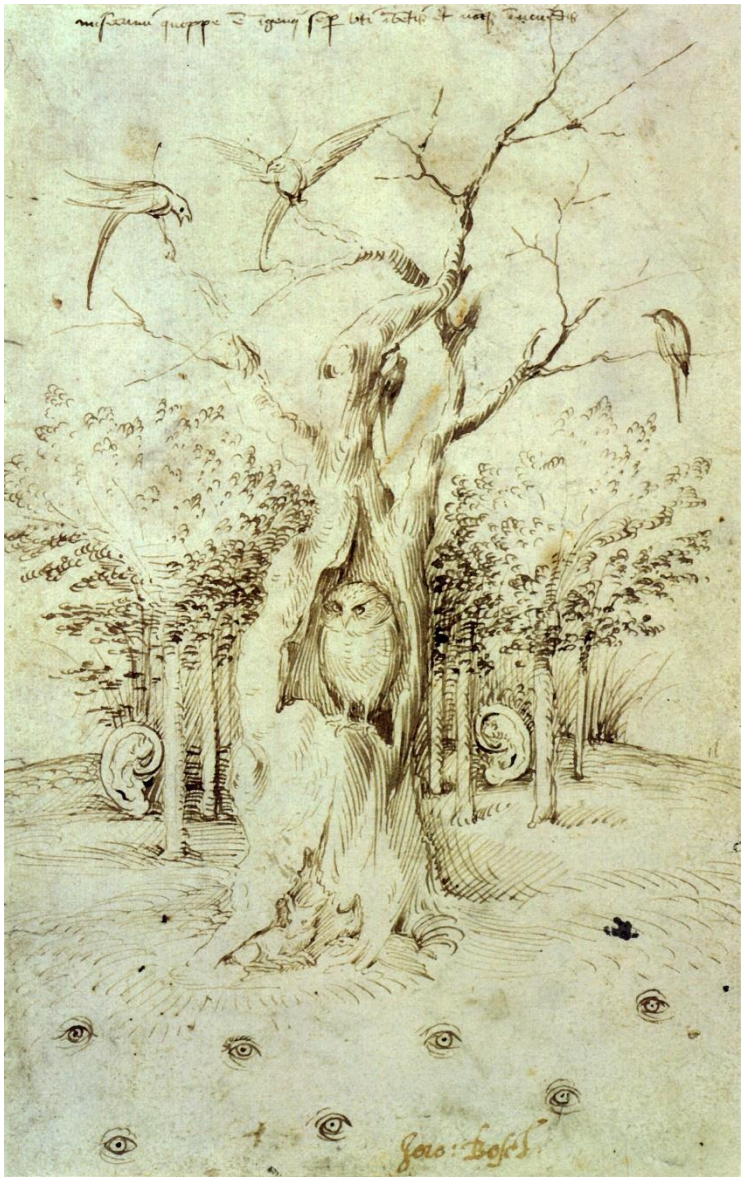


Figure 2. Hieronymus Bosch. *Das Feld hat Augen, der Wald hat Ohren*, 1500 - 05. Image rights: Kupferstichkabinett, Staatliche Museen zu Berlin / Jörg P. Anders. Creative Commons.

Now, consider one of the earliest examples of an artwork engaging with surveillance, the drawing *Das Feld hat Augen, der Wald hat Ohren* (The Wood Has Ears, The Field Has Eyes) by the Flemish painter Hieronymus Bosch, dated 1500-05 (Figure 2). This small work (20.5 x 13 cm) made by pen and ink on paper depicts a large owl sitting in the middle of a hollow three at the center of the drawing. The owl is staring directly at the viewer with a penetrating gaze. A little further back, by the entry to the forest, two detached human ears are lingering. The tree grows out of a field where human eyes are scattered and embedded, seven in all, smaller in scale than the ears and the owl. At the top of the tree are four birds (or "messengers"), and in a cavity at the base of the

tree sits fox and rooster. In the background of the drawing, we see a cluster of trees. There is a tension present between the enclosed darkness of the woods and the openness and lightness of the field. Bosch's drawing is allegorical, illustrating an old proverb tracing back to the eleventh century, which was common in Europe in the sixteenth century (Zbikowski 2002, 46). It warns that you are heard and seen everywhere and directs to behave accordingly. Simultaneously, the proverb conveys how the natural environment, the field and the forest, observe you (ibid). To me, today, disregarding the original religious symbolism intended by the proverb and the artist, this drawing beautifully expresses the idea of an atmosphere of surveillance: to be situated in and enclosed by an environment saturated with surveillance practices and objectives which directs and shapes behavior, affecting our embodied, multisensory experience of the world.

Defining Surveillance

One of the most cited definitions of surveillance in the field of surveillance studies comes from sociologist and surveillance scholar David Lyon, who has defined surveillance broadly as "the focused, systematic and routine attention to personal details for purposes of influence, management, protection or direction" (Lyon 2007, 14). This influential definition maintains that surveillance is deliberate, depending on "protocols" and "techniques", and that it has a purpose (ibid). Moreover, Lyon makes the power relationship involved explicit; asserting that power usually will be greater on the side of the watcher. In addition, Lyon's definition of surveillance accounts for surveillance as having multiple purposes, including intentions of protection and care. In this regard, Lyon has established surveillance as operating on a continuum between control and care (Lyon 2007), also referred to as the 'Janus-face' of surveillance (Lyon 1994). However, other voices downplay the "caring" aspects of surveillance and argue for the need to sharpen the focus on the controlling and regulating aspects, including the capacity to modulate behavior (Monahan and Murakami Wood 2018, xix). Gilliom and Monahan define surveillance as "monitoring people in order to regulate or govern their behavior" (Gilliom and Monahan 2013, 2, cited in Monahan and Murakami Wood 2018). What is more, Monahan and Murakami Wood emphasize the role of surveillance in reinforcing social inequalities and discrimination:

> Across domains, from state security agencies to social media sites, surveillance regulates boundaries and relations. It reinforces separation and different treatment along lines of class, race, gender, sexuality, age, and so on. Regardless of the context,

> surveillance is never a neutral process. There are always value judgements and power imbalances, and they usually reproduce social inequalities (Monahan and Murakami Wood 2018, xx).

Recently, performance studies scholar James Harding has put forth a strong criticism of Lyon's view that surveillance involves the two faces of "care" and "control" (Harding 2018, 38). According to Harding, this notion of surveillance practices and technologies reproduces the religious idea of God's eye as simultaneously caring and controlling (ibid). However, he argues, it is highly problematic that surveillance, as "a sociopolitical phenomenon" has "consistently been conceptualized through the religious metaphors of the Judeo-Christian tradition" (Harding 2018, 34). Moreover, Harding claims that Lyon's conceptualization of the two-faced nature of surveillance as a binary between care and control not only draws on religious heritage, and thus muddles the critical scholarly gaze; Harding claims that this view "justifies surveillance's continued development and use", and that "the notion of a surveillance of care […] becomes the privileged signifier that retains its inviolate status regardless of the results that surveillance actually produces" (ibid, 39).

To be fair, Lyon has maintained a strong focus on the problematic aspects of surveillance throughout his writings, not the least in his insistence on 'social sorting' as a central aim of contemporary surveillance which creates and reinforces social difference through classification (Lyon 2003). Yet in my view, the emphasis on the caring and positive aspects of surveillance *does* involve a risk of levelling the controlling, regulating, and modulating aspects. What are, for example, the risks involved in bringing forward a notion of surveillance as 'good gazing', defined as "surveillance-for rather than merely surveillance-of the other" (Lyon 2018a, 24)? In his most recent book, Lyon calls for a renegotiation of cultural imaginaries of surveillance in "constructively critical" ways, in order to include the notion of 'good gazing', which is surveillance informed by "an ethics of care linked with human flourishing", which "reaffirm[s] the human" (ibid, 148, 179, 183).

Despite the important endeavor of highlighting the ethical implications and potentials of surveillance, one risk of calling for a renegotiation of surveillance imaginaries towards 'good gazing', in my view, is that in the current muddy landscape of a contemporary surveillance culture of seduction, entertainment, security, and safety, it is becoming increasingly hard to criticize the power implications of surveillance practices without simultaneously acknowledging the "positive" aspects involved. Or, at the very least, to acknowledge the aspects of socializing, sharing, communication, and "fun" afforded by infrastructures, logics,

and practices which also entail surveillance. Yet, maintaining a critical position does not imply that the understanding of surveillance should be blind to nuance of the many-sided nature of contemporary surveillance. It *is* a complex and multifaceted phenomenon. Rather, it means that surveillance scholarship should be "careful", so to speak, in levelling the problematics of surveillance, which are only getting greater in the digital age.

Returning to Harding, he argues for the importance of recognizing that surveillance is not a matter of passive watching. The "very term 'surveillance' itself", he writes, "is a bit of a misnomer that distracts from the performative realities of surveillance as a sociopolitical phenomenon (Harding 2018, 90). On the contrary, according to Harding,

> Surveillance is primarily a mode of directing. Its objectives are focused less on observation and intelligence gathering than on influence, persuasion, control, containment, and coercion. Its goals are to mediate and thereby shape the parameters of human events, interaction, communication, and exchange (ibid).

The performative aspects of surveillance have similarly been emphasized by Elise Morrison, who argues that "[s]urveillance technologies are typically employed to not only record but also influence behavior and thereby produce a repertoire" (Morrison 2016, 24). This follows Morrison's view of surveillance technologies as 'scriptive things' which "prompt certain behaviors, interactions, and sentiments from people" (ibid). This dissertation draws on Harding and Morrison's understanding of surveillance as *primarily a mode of directing,* as a means to *influence behavior* and *produce a repertoire.* It emphasizes the productive aspects of surveillance as an active force, which furthermore echoes Foucault's analysis of surveillance as a means to "penetrate into men's behaviour" (Foucault 1977, 204).

Ambient Power

Taking Harding's understanding of surveillance as an active force which shapes and directs behavior (Harding 2018) and Morrison's notion of surveillance technologies as 'scriptive things' which produce a 'repertoire' of behavior and sentiments (Morrison 2016) as a point of departure, this section brings this understanding of surveillance in dialogue with John Allen's notion of 'ambient power' (2006). With this particular approach, I emphasize an understanding of surveillance which is attentive to how the "shaping", "directing", and "repertoire" of surveillance possess environmental qualities which can be experienced in more or less subtle ways. In other words, surveillance infuses environments of lived experience with more or less inconspicuous suggestions for feelings and behavior. Whereas

John Allen's notion of ambient power specifically refers to urban public spaces such as the shopping center, the market, and the plaza, I consider ambient power to be a potential present in any kind of built or designed environment through which we move, live, or linger. Allen defines 'ambient power' as the following:

> By ambient power, I mean that there is something about the character of an urban setting—a particular atmosphere, a specific mood, a certain feeling—that affects how we experience it and which, in turn, seeks to induce certain stances which we might otherwise have chosen not to adopt. There is a certain quality about such settings, or qualities, which show themselves in such a way as both to encourage and to inhibit how we move around, use and act within them (Allen 2006, 445).

Once again, the idea of ambient power does not need to be restricted to public space. It can be present in airports, work environments, smart homes, and so on. Potentially, ambient power can be present in any material environment involving deliberate design which is experienced bodily. Its objectives are spatially embedded through qualities which "encourage" and "inhibit" movement and action. Key to the idea of ambient power is the notion that it has an "unmarked presence" and that "it is the manner in which the space itself is experienced that is the expression of power" (ibid, 445). In other words, the objective of 'ambient power' is to incite and limit behavior, to affect, shape, and direct bodies. In this context it is worth noticing that Allen describes ambient power as operating through a logic of seduction, which means that "we remain largely oblivious to the *scripted* nature of such […] spaces" (ibid, 443, italics added). Contrary to power operating at the hard edge through gates and walls, for instance, ambient power works through subtle design directed at the senses, intended to prompt affective response. As such, the logic of seduction at work, according to Allen, makes it an instrumental mode of power which shapes and molds the will through "the suggestion of possibilities" (ibid, 448). Crucially, moreover, ambient power affects us whether we are aware of it or not, it "is felt before it is understood" (ibid, 446).

The notion of something as "felt before it is understood" is important for how ambient power will feed into the conceptualization of atmospheres of surveillance.[16] In an observation on atmospheres which echoes the insight by Allen noted above, Pallasmaa observes that

[16] The use of ambient and ambiance can be understood as more or less interchangeable with atmosphere. In scholarly discussions, *ambiance* is used particularly within the Francophone tradition of urban studies, architecture and social theory, while *atmosphere* derives from the German phenomenological tradition (Thibaud 2020). I discuss one possible distinction between the two in chapter 4 of this dissertation, where I suggest that ambience is more often referring to background phenomena than atmospheres, which might exert more authority.

"[a]tmospheric characteristics of spaces, places and settings are grasped before any conscious observation of details is made" (Pallasmaa 2013, 15). Likewise, atmospheres can be understood as given to us as a whole, as multisensory encounters of place (Alberto Pérez-Gómez 2016). Thinking about ambient power in the light of surveillance and the built environment, it can be further illustrated by Pallasmaa's assertion that "[a]rchitecture initiates, directs, and organizes behavior and movement" (ibid, 68). These observations all inform and resonate with the notion of atmospheres of surveillance.

To briefly sum up here before turning to the next section which elaborates on the qualities of atmosphere: the above discussion has emphasized that surveillance is an active force, shaping and directing experience. Moreover, I have argued that surveillance possesses environmental qualities which can be experienced in more or less subtle ways. Drawing on Allen's notion of 'ambient power', I have suggested that atmospheres of surveillance may incite and limit behavior in ways which are not necessarily consciously grasped. This view of the workings of power through the instrumental staging of atmospheres is further resonant with what political sociologist Christian Borch calls 'atmospheric politics', namely a subtle form of power exercised to govern behavior, desires, and experiences. This form of power aims to "achieve its effects by working on a non-conscious level", Borch argues (Borch 2014, 78). As such, it works through "conditioning experiences and rendering some behaviours more likely than others" (ibid, 85). In this perspective, atmospheres become a form of power working through the senses. The above observations are significant for the notion of atmospheres of surveillance: how they are perceived bodily whether we are aware of it or not, how they infuse our lived environment, how they are shaping and directing behavior, producing a repertoire and capturing it too, and why we need a critical tool for raising the awareness of their productive aspects. From this perspective, a theoretical vocabulary which is able to grasp atmospheres of surveillance turns out to be vital. The following section will further establish this proposition through theories of atmospheres from phenomenology, aesthetics, and affect studies.

Atmospheres. Entering the field of the in-between

> "So I went out into the nervous system of the air –" *Joshua Clover, "Poem"*

Thus far, I have suggested that a significant way we can understand the embodied and multisensory experience of surveillance is through the notion of atmosphere – what I call 'atmospheres of surveillance'. In the following, I introduce and discuss some of the central theoretical insights on atmosphere in order to solidify the theoretical foundation for my proposition. There seems to be a consensus in writings on atmosphere that it belongs to the field of the "in-between": in-between the immaterial and material, subject and object, private and shared. Furthermore, a majority of the various approaches to the topic circle around the idea of atmosphere as something we perceive bodily, as being "in the air" – having an environmental and spatial dimension. The Italian philosopher Tonino Griffero notes that "[w]e often say that 'there is something in the air' or that 'there is something brewing', that we feel, who knows why (apparently), like 'a fish out of water' or 'at home'", and as such, an "atmosphere can therefore, paradoxically, be everything and nothing, a bit like 'air' " (Griffero 2018, 11). What is more, it is frequently spoken of as that which "surround, envelop and influence us", and as having an affective dimension (Thibaud 2020). Originally referring to meteorological phenomena and the weather, "atmosphere" comes from modern Latin atmosphæra, which derives from the Greek *ἀτμός* (vapour) and *σφαῖρα* (ball, sphere) (*Oxford English Dictionary Online* 2020). The word gained usage in English in the mid-seventeenth century (ibid). From the late eighteenth century onwards, atmosphere has been used figuratively to describe moods, feelings, and senses that are "in the air", suggesting that we experience atmospheres as something shared that can be sensed in our surroundings through the body (Böhme 2017; Frølund 2016). Looking up the contemporary usage and synonyms of *atmosphere* in English, the *Oxford Living Dictionaries* online provides the following result,

> *ambience, aura, climate, air, mood, feel, feeling, character, tone, overtone, undertone, tenor, spirit, quality, aspect, element, undercurrent, flavour, colour, colouring, look, impression, suggestion, emanation; environment, milieu, medium, background, backdrop, setting, context; and surroundings, environs, conditions, circumstances, vibrations* (*Oxford Living Dictionaries* 2018).

The list from this dictionary speaks to the ways in which we currently use and understand the word in everyday language. In an academic context, theories and discussions on the notion of 'atmosphere' are closely linked to phenomenology and aesthetics, as well as to the recent "affective turn" in the social sciences and humanities which has taken place during the last

decade, for instance in cultural geography and urban studies (Griffero 2018). Scholarly work on atmosphere has been particularly prolific during the last two decades or so, although it is a matter of somewhat parallel discussions in different academic communities. The latter is partly due to the interdisciplinary interest in the subject, and partly due to the lack of English translations of the full work of Gernot Böhme and Hermann Schmitz in particular, although recently this has changed when it comes to the latter (Bille 2018; Brink 2013). What is more, the closely related French discussion on *ambiance* has until relatively recently partly unfurled as a parallel track, as it has been less accessible to non-French speaking scholars (Adey et al. 2013). A book series on *Atmospheric Spaces* directed by Griffero offers the following precise definition of atmospheres:

> According to an aesthetic, phenomenological and ontological view, [atmospheres] can be understood as a sensorial and affective quality widespread in space. It is the particular tone that determines the way one experiences her surroundings. [..] the founding idea of atmospheres: a vague ens or power, without visible and discrete boundaries, which we find around us and, resonating in our lived body, even involves us. Studying atmospheres means, thus, *a parte subjecti*, to analyze (above all) the range of unintentional or involuntary experiences and, in particular, those experiences which emotionally "tonalize" our everyday life. *A parte objecti*, it means however to learn how atmospheres are intentionally (e.g. artistically, politically, socially, etc.) produced and how we can critically evaluate them, thus avoid being easily manipulated by such feelings" (Griffero and Moretti, 2018, n.p.n.).

This definition brings together several key insights from the scholarship on atmosphere, such as the central observation that atmospheres involve *sensorial and affective qualities widespread in space*. Furthermore, it brings forth the notion of atmosphere as a *vague power resonating in our lived body*, and the role of atmosphere in determining *experience*. Finally, it identifies two analytical approaches which we may employ on atmospheres: as *unintentional experiences* which tonalize our everyday life, and as *intentionally produced*. The qualities of atmospheres identified here will be unpacked and expanded more thoroughly in what follows. First, I will introduce the theoretical framework of atmosphere as developed in phenomenology and aesthetics. To do this, I begin with recounting the initial insights on the qualities of atmospheres introduced by the German philosopher and phenomenologist Hermann Schmitz. Following this, I center the discussion in the theories of Gernot Böhme. The work of Böhme has particularly influenced the current interest in atmospheres across disciplines, and the above definition of atmosphere draws extensively on Böhme's theories. Moreover, Böhme's work on atmosphere is grounded in aesthetics and preoccupied with art

as well as aesthetic experience in a broad sense (as a general theory of sensory experience). Hence it is particularly apt for the purposes of this study. Nevertheless, the philosophy of Schmitz, and particularly his philosophy of the body, has been vital for Böhme's development of the ontological position of atmospheres, which is why I turn to his argument first.

Phenomenological and Aesthetic Theories on Atmosphere

Hermann Schmitz' *Gefühlsraum*

Hermann Schmitz' work on atmospheres is perhaps best known through the work of Gernot Böhme, as Schmitz has been more sparsely read outside of the German-speaking world. Schmitz' main work, the series of ten monographs *System der Philosophie*, was published between 1964 and 1980. However, the first translation of an article by Schmitz into English did not appear before 2011, and, e.g. the first Danish translations of his books appeared as late as in 2017. Yet, Schmitz can be regarded as a founding father for research on atmospheres (Kazig 2016). In *System der Philosophie*, Schmitz develops a phenomenological philosophy of the subject based on bodily sensations and emotions, which he refers to as 'new phenomenology' (Frølund 2018). This project represents a radical desubjectification of emotions, where emotions are not to be understood as internal properties of the subject, but rather as forces encountered in external space, which resonates in the felt-body (Griffero 2018). A central influence for Böhme is the *System der Philosophie* monograph, *Der Gefühlsraum* [The Sphere of the Emotions] (1969), where Schmitz argues that emotions should be understood as spatial atmospheres (Böhme 1993; Schmitz 2017; Wolf 2017). In essence, Schmitz argues that emotions are atmospheres distributed in space – they surround us, can seize or move us, and are experienced spatially through the body (Wolf 2017). The body, moreover, is where emotions resonate: they seize us through the body, and directly affect the way we experience this body. Briefly explained, Schmitz makes a distinction between the 'felt body' (*Leib*, which I understand as corresponding to the phenomenological 'lived body'), and the 'material body' (*Körper*).[17] The latter refers to the somatic body,

[17] The phenomenological distinction between *Leib* and *Körper* is perhaps best known from the German philosopher Edmund Husserl. In Husserl's terminology, Leib designates the pre-reflectively lived body, i.e., the body as an embodied first-person perspective, while Körper designates the experience of the body as an object (Husserl 1973), as outlined in *Stanford Encyclopedia of Philosophy*. https://plato.stanford.edu/entries/self-consciousness-phenomenological/. This can roughly be understood as the distinction between being a body (lived body) and having a body (the body as an object).

whereas the 'felt body' refers to "everything that he himself can perceive as belonging to himself, in the vicinity – not always within the boundaries – of his material body" (Schmitz 2016, 3). The idea of the felt body can be illustrated by how, for example, seized by joy the body expands, or burdened by sorrow it subtracts (Wolf 2017). Thus, the felt body is not confined to the surfaces of the material body in a strict sense. Schmitz regards the felt body as the basis for the notion of human experience (Kazig 2016). In particular, Schmitz' philosophy of the body has been central for the way Böhme secures the ontological status of atmosphere through a move away from the subjective-objective dichotomy, which has been influential in western philosophy. This is supported by Schmitz' argument that emotions are experienced as something which intrudes into the human body from the outside, rather than originating from within.

The re-conceptualization of emotions central to Schmitz' philosophical project revolves around an argument against the tradition of western philosophy and its binary opposition between subject and object. This critique can be found in a condensed form in a recent work from 2009, *Kurze Einführung in die Neue Phänomenologie* [English translation *New Phenomenology: A Brief Introduction*, 2019], where Schmitz argues that a changed attitude towards emotions occurred around the second part of the fifth century B.C. This change is identified as a move from conceiving emotions as exterior, spatial atmospheres to classifying them as interior, private, and individual entities. Schmitz ascribes this classificatory change to the ideas of Democrit, later to be furthered by Plato, and, he argues, the latter view has persisted until our time. This decisive shift caused emotions to become classified as belonging to the subject, turning them into an interior, private domain to be mastered by reason, closed off from the outside (Schmitz 2017; Wolf 2017). Previous to this shift, however, emotions were experienced as external atmospheres. Schmitz supports and illustrates his claim by examples from literary history and finds in Homer's *The Iliad* numerous passages which suggest how Homer's contemporaries understood emotions as spatially and affectively charged atmospheres, enveloping and affecting people from the outside. For example, Schmitz shows how Achilles is described as being seized by external forces and exposed to the possession of gods and affects, which cannot be resisted. Hence, Schmitz argues, in the worldview of the ancient Greeks at the time of the Iliad, emotions were not considered a force to be tempered and controlled by the individual (Schmitz 2017).

However, the change toward interiorizing emotions can be located as fully visible in plays by Sophocles from the second part of the fifth century B.C. Now, the person has an interior,

private world where emotions reside. Further, with Demokrit and later Plato, the split between mind and body arrives, which Schmitz considers to be the dualism responsible for the fatal misunderstanding that humans are masters of their own interior feelings and passions, contained within their interior, private selves. From this moment onwards, he determines that the immediate experience of feelings as atmospheres are gone, repressed, and forgotten (ibid). Yet, Schmitz argues that the interiorizing of emotions as properties of the subject is not in accordance with the phenomenon as we experience it (today): emotions are experienced as something external and spatial which moves us (Wolf 2017).

Thus, following Schmitz, the initial qualities of atmosphere can be understood in this way: emotions are spatially distributed atmospheres which "grip" and "retune" us from our spatial surroundings through the body (Frølund 2018, 147). This insight, in combination with the dismantling of the binary opposition between subject and object continue to inform theories on atmosphere. As previously mentioned, Hermann Schmitz' philosophy has played a central role for Gernot Böhme's work on the concept, which will be addressed in the following.

Gernot Böhme's *New Aesthetics*

Böhme has written extensively on the notion of atmospheres in relation to a wide array of topics including art, architecture, urban planning, stage design, branding and advertising, light and sound design, politics, and the overall aestheticization of the life world (Böhme 2017). I will in this section elaborate on his philosophy of atmosphere, as it is the main point of departure for the notion of 'atmospheres of surveillance' proposed in this dissertation. In the subsequent section, however, I will challenge and expand Böhme's understanding of atmospheres with perspectives from feminist and affect theory.

Böhme first introduced the concept of atmosphere in the 1989 work *Für eine ökologische Naturästhetik* [Towards an Ecological Aesthetics]. From here onwards, he has continuously refined and developed the concept. The central text by Böhme in the Anglophone discussion on atmospheres has been the article "Atmospheres as the Fundamental Concept of a New Aesthetics", originally given as a lecture in 1991 and published in English in 1993. Here, the foundation for his extensive theory of atmospheres is established. Recently, a key selection of his later essays on atmosphere has been published in English as *The Aesthetics of Atmospheres* (2017). The outline of the main features of Böhme's philosophy of atmosphere in this chapter is primarily based on my reading of the abovementioned English publications.

First of all, Böhme's errand in the article "Atmospheres as the Fundamental Concept of a New Aesthetics" is to develop atmosphere as a "new" concept for aesthetics which goes beyond judgements, taste, and the fine arts (Böhme 1993). Contrary to the tradition following Kant, Böhme's new aesthetics sets out to offer a general theory of sensory perception relevant for both the arts and the broader field of aesthetics of everyday life (ibid).

Atmospheres, according to Böhme, are often invoked, but never explained. Consequently, he opens with a critique of the vague semantic meaning of the term as it is used in aesthetic and political discourse. Against this background, he turns to the phenomenological approach of looking at the use of the word in everyday speech:

> [h]ere the expression 'atmospheric' is applied to persons, spaces and to nature. Thus one speaks of the serene atmosphere of a spring morning or the homely atmosphere of a garden. On entering a room one can feel oneself enveloped by a friendly atmosphere or caught up in a tense atmosphere. We can say of a person that s/he radiates an atmosphere which implies respect, of a man or a woman that an erotic atmosphere surrounds them (Böhme 1993, 113-114).

The fact that we have a rich and precise vocabulary for characterizing the otherwise indeterminate phenomenon of atmospheres and how they affect our mood, Böhme argues, reveals that the phenomenon in itself exists as a shared experience (Böhme 1993). Yet there is a paradox with regard to determining the ontological status of atmospheres. As it is now, he writes, we are "not sure whether we should attribute them to the objects or environments from which they proceed or to the subjects who experience them", we are not even sure where they are, as they "seem to fill the space with a certain tone of feeling like a haze" (Böhme 1993, 114). The question is whether atmosphere belongs to the *objects or environments*, or to the experiencing *subject*.

Returning to the notion of atmosphere as a concept for a "new" aesthetics, this new aesthetics privileges experience and presence, and as such, Böhme argues, it is a departure from the 'judgmental' aesthetics in the tradition from Kant, the later role of semiotics, and the normative distinction between high and low art (Böhme 1993). As the role of the experience of the present moves to the center of aesthetic theory, the importance of the concept of atmospheres as an aesthetic, sensuous experience taking place *in between* subject and object follows. Böhme proceeds his argument by introducing a double perspective on atmospheres: "as regards the producers [it is] a general theory of aesthetic work, understood as the production of atmospheres. As regards reception it is a theory of perception in the full sense of the term, in which perception is understood as the experience of the presence of persons,

objects, and environments" (Böhme 1993, 116). This double perspective is refined and developed further in his later writings, and I will return to it repeatedly throughout this dissertation. What is more, Böhme notes the close affiliation between atmosphere and what the German philosopher and cultural critic Walter Benjamin referred to as the 'aura' of a work of art, which also "flows forth spatially" and is "absorbed bodily" (ibid, 117). According to Böhme, "to perceive aura is to absorb it into one's own bodily state of being. What is perceived is an indeterminate spatially extended quality of feeling" (ibid, 117-118). Which means, an atmosphere.

To further secure the ontological status of atmospheres, which Böhme describes as a "peculiar intermediary position […] between subject and object" (ibid, 118), he turns to the philosophy of the body of Schmitz. Here, the spatial character of atmospheres is already established, and hence, atmospheres can be determined as "affective powers of feeling, spatial bearers of moods" (Böhme 1993, 119). Consequently, Böhme suggests that through, on the one hand, the phenomenological method where what is given is recognized in everyday experience, and on the other hand, Schmitz' philosophy of the body, the ontological status of atmospheres is broadly secured. In the latter case, the argument against the subject/object dichotomy in the western philosophical tradition dismantles the idea that atmospheres are projections of the private emotions and moods of the subject onto the environment and recognizes emotions as atmospheres seizing us from the outside. Böhme concludes that "[a]tmospheres are evidently what are experienced in bodily presence in relation to persons and things or in spaces" (ibid, 119).

An additional central point from this article is the emphasis Böhme ascribes to things, and this is where he differs most directly from Schmitz, who "credits atmospheres with too great an independence of things", and consequently, in Böhme's view, fails to say anything about atmospheres which proceeds from objects or an aesthetics of production (ibid 120). The atmospheres of Schmitz are rather free-floating. Böhme, on the other hand, is interested in the material dimension of atmospheres. He sets forth to liberate the object from its classical ontological understanding based on its determinations (form, color, etc.), and addresses the material dimension of atmosphere through objects (Böhme 1993). This is an important point. Going against an understanding of an object as determined by qualities of internal unity, separation, and closure, Böhme proposes that objects are tuned and radiates into the environment. In this way, they contribute to the creation of an atmosphere through their

presence (ibid 121; Thibaud 2020, n.p.n.). He calls this "the ecstasies of the thing" (Böhme 1993, 121).

Based on the above, Böhme arrives at the following definition of atmospheres:

> They are spaces insofar as they are 'tinctured' through the presence of things, of persons, or environmental constellations, that is, through their ecstasies. They are themselves spheres of the presence of something, their reality in space [...] atmospheres are thus conceived not as free floating but on the contrary as something that proceeds from and is created by things, persons, or their constellations (ibid, 121-122).

Thus, atmospheres should be understood as something *in-between* subject and object: dependent on both the subject sensing and perceiving them, and on the object(s), other persons, and environments from which the atmosphere radiates (ibid, 121-122). Accordingly, atmospheres are characterized by being something out there, they are quasi-objective, yet they simultaneously belong to subjective experience, as "sensed in bodily presence by human beings" (ibid, 122). As such, they are "the common reality of the perceiver and the perceived" (ibid).

The final part of Böhme's article considers how atmospheres can be deliberatively *produced,* which in my view makes it a particularly fertile concept for capturing the many different shapes of our engagement with surveillance today. Böhme suggest that there is a rich field of "implicit, tacit knowledge" of how to produce atmospheres among aesthetic workers, and that aesthetic work "is a question of 'making' atmospheres through work on an object" (ibid, 123). Aesthetic work, moreover, does not only include the arts, but also a range of work from design, stage sets, interior design, advertising, etc. Finally, as a response to what Böhme calls "the progressive aestheticization of reality", the new aesthetics offers a critical awareness of aesthetic manipulation (ibid, 125).

In Böhme's later work, he has continued to refine the central ideas introduced above. One conceptual clarification which is not as evident in the article discussed above, is that Böhme views atmosphere as what *mediates* between "objective factors of the environment" and the "aesthetic feelings" of subjects (Böhme 2017, 1). This allows Böhme to clarify that "[t]he atmosphere of a certain environment is responsible for the way we feel about ourselves in that environment" (ibid). Here, it becomes clear that atmospheres are not only *in between*, they also *mediate* and *relate* (ibid). Furthermore, with regard to the "making" of atmospheres,

Böhme has introduced the art of the stage set, or scenography, as a "paradigm for an aesthetics of atmospheres" (Böhme 2017, 29). I will unfold this idea further here, for two reasons. First, the double perspective Böhme takes on atmospheres, namely that they can be "approached in two different ways: either from a *perception* aesthetics or a *production* aesthetics viewpoint" is of particular interest to this study (Böhme 2017, 2; emphasis added). According to Böhme, artists, architects, landscape gardeners, and stage designers all work with the craft of producing atmospheres, across genres and mediums (Böhme 2017). In this respect, atmospheres involve objectives, and they are deliberatively *produced*. Consequently, the craft of producing atmospheres also entails the powers to manipulate. Secondly, the art of the stage set is employed by Böhme as an argument to prove that we experience atmospheres in similar ways, an argument I will challenge later in this chapter. To be precise: I do not challenge that atmospheres are quasi-objective, with regard to being experienced as something outside of us which can alter our mood. However, I do maintain that atmospheres as 'tuned space' are not necessarily a matter of shared experience, and moreover, that the relative homogeneity of the theatre audience might not be representative for the heterogeneity of the crowd outside. As such, the question becomes whether the art of the stage set is the most useful paradigm for the concept of atmosphere, or if there might not be a need for further nuance.

When considering the phenomenon of atmospheres from the perspective of production aesthetics, Böhme views stage design as a paradigm for theory and practice of atmospheres: "you can learn from the stage designer what means are necessary in order to produce a certain climate or atmosphere", and this can be achieved through light, sound, objects, the arrangement of space, and so on (Böhme 2017, 2). The very art of stage setting proves, according to Böhme, that atmospheres are something quasi-objective, for, as he claims: "if each member of the audience were to perceive the climate of the stage in a different way, the whole endeavor of stage setting would be useless" (ibid). Because the practice of the stage setter is to make an atmosphere which will be experienced in roughly the same way by the members of the audience, Böhme concludes that the art of the stage set demonstrates that atmospheres cannot be purely subjective. However, he does have one reservation: the audience must have "a certain homogeneity, that is to say, a certain mode of perception must have been instilled in it through cultural socialization" (ibid, 30). It is tempting to object that the theatre is, after all, a rather privileged place, so the homogeneity of the audience is likely to be higher than in so many other 'settings'. Yet Böhme maintains that regardless of the

"culture-relative" character of atmospheres, their quasi-objective status is thus established (ibid). Despite the fact that this argument demands more nuance, a key point in his writings to which I will return throughout this dissertation, is that atmospheres are nothing without a perceiving subject. Atmospheres must be felt and are first realized in the bodily presence of the subject, which means that "atmospheres are always something spatial, and atmospheres are always something emotional" (ibid, 2). The latter does indeed open up the concept for the idea that, for instance, several emerging atmospheres might be co-present, and that the felt atmosphere depends on the situated subject. Nevertheless, there seems to be a slight conceptual tension here. Perhaps out of a similar awareness, Böhme suggests that with regard to the making of atmospheres such as through the art of the stage set, it is a matter of "setting the conditions in which the atmosphere appears", and shaping the space through, for instance, employing light, sounds, and objects "which radiate outwards into space", and thus become "generators of atmosphere" (ibid, 31, 32). The making of atmospheres is, in other words, "the art of bringing something to appearance" (ibid, 33). A similar point is relevant for the perception aesthetics of artworks and thus for this study, namely that the experience and appreciation of artworks – Böhme explicitly mentions land-art and sound-installations, but this will obviously apply to a wider range of artworks – require "exposing oneself to the atmospheres they are radiating" (ibid, 6).

Finally, the insight that atmospheres can manipulate and modify our mood and behavior is a key concern in Böhmes later writings on the concept. Because atmospheres "affects us deeply […] on the level of bodily feeling" and can strike us from the outside, the conscious making of atmospheres involves power (Böhme 2017, 2-3). I would like to emphasize that this is a major point from Böhme's theories of atmosphere with regard to this dissertation: the art of producing atmospheres is "*at every moment also the exercise of power*" (Böhme 2017, 27, italics added). This insight, coupled with the view that we live in a time increasingly characterized by the "*staging* of everything" (ibid, 3, italics in the original), make the theory of atmospheres a critical theory able to "reveal […] the theatrical, not to say manipulative character of politics, commerce, of the event-society" (ibid, 6). This particular point is key to my understanding of the critical potential of 'atmospheres of surveillance'.

Tonino Griffero's 'Atmospheric Competence'

The need for a critical assessment of atmospheres is further elaborated upon in the work of Italian philosopher Tonino Griffero. Griffero draws on central insights from both Schmitz and Böhme in his project of what he terms "the paradigm of atmospheres". In Griffero's view, the "surprising ubiquity" of interest in the concept of atmospheres comes out of a widespread acknowledgement that today, "there is probably no situation totally deprived of an atmospheric charge" (Griffero 2018, 12). Along similar lines of critique as Böhme, Griffero develops an understanding of the production perspective of atmospheres as being closely related to the so-called 'aestheticisation of the real' in advanced capitalist economies, and the interdisciplinary affective turn in the humanities:

> In short, one could say that wherever there is greater emphasis on felt-bodily experience than meanings, on emotionally arranging an environment than narratively representing something, on appreciating phenomenic nuances than quantifying phenomena in order to statistically predict future events and thus avoid any involuntary life experience, the atmospheric approach appears to be ever more necessary (ibid, 13)

Griffero further argues a point reminiscent of Böhme's idea of atmospheric theory as *critical* theory, namely what Griffero terms 'atmospheric competence'. This, according to Griffero, is

> […] the means to learn how to relate to atmospheres, namely to deeply feel them, but also to immunize our experience (as much as possible) from the media-emotional manipulation which the aestheticisation of politics and social life in the late-capitalistic "scenic" economy results in (ibid, 14).

What is more, Griffero brings forth the notion of atmospheric feelings as 'quasi-things', which have the ability to be "much more present and aggressively active on us than things in the strict sense" (ibid, 76). Building on Schmitz, Griffero argues that "feelings must […] be understood not as internal properties [..] of the psychological subject but as external constraints, relatively stable and authoritarian entities around which the subject has to revolve" (ibid, 77). However, departing from Schmitz, Griffero nuances his view by adding that the "desubjectification of atmospheres must not make us forget that their quasi-thingly effect is still relative to a subject" (ibid, 79-80). This is important, as it highlights the position of the subject as a vital part in the relation. It opens for the potential of a critical awareness of atmospheres and their workings, which is the "atmospheric competence". I will return to this when I suggest the potential of atmospheres of surveillance as a critical tool at the end of this

chapter, but first I will discuss some important concerns and points of dispute with regard to the notion of atmospheres presented so far.

Key Perspectives on Atmosphere from Feminist Theory and Affect Theory

Sara Ahmed's 'Angles'

One point of critique to the theories of atmospheres outlined above is that all three writers, but perhaps particularly Böhme with regard to his writings on the production perspective of atmospheres, risk placing a too strong an emphasis on the universal dimension of the shared experience of atmospheres. This is partly countered in Böhme's later writings on the subject, but it needs to be taken into account that atmospheres are not always shared, even though they have the potential of being so. Atmospheres can be felt quite differently. Feminist scholar Sara Ahmed reminds us that we might arrive with an "angle", and as a result, our own mood will affect how we experience the atmosphere of the space we arrive in (Ahmed 2010). Ahmed has criticized ideas of atmosphere such as the one posed by Teresa Brennan through the rhetorical opening question of this chapter, namely that we can walk into a room and 'feel its atmosphere' as what she refers to as 'outside in' models. Such an 'outside in' model refers to the notion of emotions which "*come from without and move inward*" (Ahmed 2014b, italics in the original). Against this, Ahmed points to how, for instance, feelings of anxiety can cast a shadow over any atmosphere we experience. Because anxiety is 'sticky', it gives our experiences a certain angle: "[i]f bodies do not arrive in neutral, if we are always in some way or another moody, then what we will receive as an impression will depend on our affective situation" (Ahmed 2010, 36). Hence, Ahmed recognizes the affective qualities of atmospheres, yet argues that the atmosphere we feel depends on the angle of our arrival, "the atmosphere is already angled; it is always felt from a specific point" (ibid, 37). This, moreover, can affect how the perceived atmosphere unfolds, yet it might also work the other way:

> Having experienced the atmosphere in a certain way, one can become tense: which in turn affects what happens, how things move along. The moods we arrive with affect what happens: which is not to say we always keep our moods. Sometimes I arrive heavy with anxiety, and everything that happens makes me feel more anxious, whilst at other times, things happen which ease the anxiety, making the space itself seem light and energetic (Ahmed 2014a, n.p.n.).

While at first sight this view on atmospheres resembles the 'interior'- model of emotions criticized by Schmitz, this is not Ahmed's position. Upon closer scrutiny, Ahmed rather suggests that it can be seen as open for a two-way movement: on the one hand, our own mood or feelings might dominate how we perceive a situation, and on the other hand the atmosphere of the situation might change our mood. What is more, Ahmed locates another quality of atmospheres with her observation that even when atmospheres are shared, they are angled. We can be in the same place and yet experience the atmosphere quite differently. She explains this in the light of attunement: "[s]ome might be more attuned to some things, some bodies, some sounds. Attunement helps us to explain not only what we pick up but what we do not pick up" (ibid).

Teresa Brennan's 'Transmissions'

Ahmed's notion of the experience of atmospheres as situated, or 'angled', differs from Brennan's, who in a fashion reminiscent of Hermann Schmitz' breaks with the subject-object dualism of the western philosophical tradition by arguing that while we are not resistant to our thoughts being influenced by others, we are "peculiarly resistant to the idea that our emotions are not altogether our own" (Brennan 2001, 2). This, she argues, is due to the idea of the 'emotionally contained subject' prevalent in western thought: "The fact is that the taken-for-grantedness of the emotionally-contained subject is a residual bastion of Eurocentrism in critical thinking" (ibid). Breaking with this idea, she puts forth the radical thesis that affects are contagious, and transmittable between persons:

> The origin of transmitted affects is social in that these affects do not only arise within a particular person but also come from without. They come via an interaction with other people and an environment. But they have a physiological impact. By the transmission of affect I mean simply that the emotions and affects of one person, and the enhancing or depressing energies these affects entail, can enter into another (ibid, 3).

This understanding of affective atmospheres privileges the social. As such, it falls under what Ahmed calls an 'outside in' model of affects as felt atmosphere entering our bodies from the outside. Against such views, Ahmed recounts the numerous occasions in which she has surprisingly discovered that her experience of a situation radically differed from that of others (Ahmed 2014b). Thus, she suggests that such experiences of believing one's feelings where 'in the room', to later discover that others experienced the situation quite differently, can be described as 'intense' space: "[s]hared feelings are at stake, and seem to surround us, like a

thickness in the air, or an atmosphere. But these feelings not only *heighten tension*, they are also *in tension*" (Ahmed 2014b, 10, italics in the original). This argument is a reminder of the potential for miscommunication when subjective experience is involved.

Atmospheric Walls

Returning to Ahmed's argument regarding attunement, she moves on by suggesting that attunement is conditioned, and moreover, that the atmosphere surrounding someone or something to which we are not attuned can disturb the atmosphere present (2014a). As such, it can become "a technique, a way of making spaces available for some more than others" (ibid, n.p.n.). Ahmed calls this "atmospheric walls":

> I think whiteness is often experienced as an atmosphere. You walk into a room and you encounter it like a wall that is at once palpable and tangible but also hard to grasp or to reach. It is something, it is quite something, but it is difficult to put your finger on it. When you walk into the room, it can be like a door slams in your face. The tightening of bodies: the sealing of space. The discomfort when you encounter something that does not receive you (Ahmed 2014, n.p.n.)

I elaborate on Ahmed's notions of the qualities of atmosphere at some length here because the vocabulary of atmospheres (including my own) tends to be universalizing. Yet atmospheres should not be understood in a simple one-to-one relation. Different bodies might experience the same situations in different ways, related to e.g. gender, sexuality, race, class, cultural background, memories and personal history, and I want to be careful not to erase these differences. However, this is an ongoing and unresolved tension in the field. Philosopher Dylan Trigg observes that,

> Critically, the indeterminate nature of an atmosphere, as something that is both subjectlike and objectlike, means that it can function as a common ground between individuals. In the same measure, if an atmosphere can serve as a common ground for some groups, then it can equally serve as a point of division and exclusion for other people—a point that is largely neglected in the current research on atmospheres (Trigg 2020, 4).

Returning to the atmosphere of the security check at the airport as an illustration: will the presence of the body scanners and security personnel lined up to perform searches incite the same emotions and perceived atmosphere in people regardless of their gender, economic status, race, and cultural or religious background? The answer is obviously no. This poses conceptual and methodological challenges with regard to positionality. In an airport security

check in the western world post-9/11, my Norwegian passport and white female middle-class appearance seldom raise any red flags as I move through. Clearly, the situation is different for people who are categorized as subjects of suspicion based on identity markers such as gender, skin color, or religious background. This intensifies the experience and authority of the atmospheres of surveillance in the airport for some, while others move more freely. In other words, there is, with regard to the notion of atmosphere, a tension and an unresolved risk of universalizing experience.

Regarding another revision to the concept of atmospheres, cultural geographer and affect scholar Ben Anderson highlights how atmospheres are always in the process of emerging and are reworked in lived experience, "becoming parts of feelings and emotions that may themselves become elements within other atmospheres" (Anderson 2009, 79). Put differently, there might be several atmospheres present simultaneously; and they are dynamic, rather than static entities. Furthermore, atmospheres can be difficult to capture. So, then, how do we know if we experience them as shared? Is it sufficient to point to the shared expressions found in language, as does Böhme, or could one equally point to how language suffers from limits of representation? Literary scholar Hans Ulrich Gumbrecht has noted that "[a]s the tuning of an instrument suggests, specific moods and atmospheres are experienced on a continuum, like musical scales. They present themselves to us as nuances that challenges our powers of discernment and description, as well as the potential of language to capture them" (Gumbrecht 2012, 3- 4). In my view, this is a good illustration of how atmospheres are easier to feel than to describe, a point which I will elaborate further in the methodological discussion on the challenges of researching atmospheres in Chapter 2. Finally, Griffero provides further nuance to the notion of atmospheres by distinguishing between various types of atmospheres. While maintaining the quasi-objective quality of atmospheres as an "atmospheric affordance", he recognizes that they may exert more or less authority upon the perceiving subject, and that we might be more or less 'in tune' with them and thus more or less emotionally affected (Griffero 2018, 81, 82). For example, Griffero describes how,

> The impressive entrance hall of a major banking institution will express an aggressive atmosphere of power for those who venture there in search of a loan, while expressing, on the contrary, a quiet atmosphere of proud belonging, not even clearly felt, for an employee who has developed a strong *esprit de corps*. And yet what generates both atmospheres (conscious aversion and overwhelming awe or unnoticed sense of wellbeing and pride) is still the same spatial-emotional quality of intimidating vastness (Griffero 2018, 82).

The examples provided by Ahmed and Griffero places the emphasis differently: While Ahmed privileges the cultural conditioning of attunement and the emotional intensities of shared space, Griffero focuses more on the atmospheric affordances of the material environment. Yet, both examples emphasize how atmospheres can be experienced differently depending on the perceiving subject. Concluding this discussion here, there is, with regard to the notion of atmosphere, a tension in the shared experience of atmospheres which remains within this concept as an inherent ambivalence. Nevertheless, in my view, this ambivalence does not exclude the significance of the notion of atmosphere. On the contrary, it might even be productive for bringing forth the manipulations and specific exercises of power involved in the production of atmospheres to keep in mind that they will not always affect everyone in the same way.

What Kind of Body?

I have now established the philosophical and theoretical foundation for the notion that surveillance contains and co-produces atmospheres that envelop, surround, and are experienced by bodies, but what kinds of bodies? The point of departure in this dissertation is the phenomenological, lived body as a site of perception. Merleau-Ponty famously wrote that "I am conscious of the world through the medium of my body" thus highlighting the lived, embodied experience of the world (Merleau-Ponty 1962, 82). Yet, this body – our medium for perceiving the world, taking in information through the sensuous system – has itself become a matter of information, decorporealized and decomposited into bits and pieces as data double, dividual, and digital doppelgänger. Haggerty and Ericson described this development two decades ago, writing that "[t]he observed body is of a distinctly hybrid composition. First it is broken down by being abstracted from its territorial setting. It is then reassembled in different settings through a series of data flows. The result is a decorporalized body, a 'data double' of pure virtuality" (Haggerty and Ericson 2000, 611). Yet despite data doubles, human existence cannot be but situated – Böhme would say that we have a 'space of bodily presence', which is essential to our 'bodily existence', in other words: a "being-here" (Böhme 2013b, 457, 460). Bodily space, according to Böhme, is the space of actions, moods, and perceptions (ibid, 461). Nevertheless, as perceiving living bodies we are today increasingly aware of the existence of our other 'data doubles', albeit abstractly. Yet, it is hard to locate versions of these data doubles, or 'data bodies', to know where they 'are', and the purposes for their existence: Who is using our data for what kind of purposes? This – the

individual broken down to bits of information, combined and repurposed in ways beyond anyone's overview, is one of the pressing issues of contemporary dataveillance. Furthermore, it is becoming even more pressing as the environments of our embodied experience are increasingly permeated with digital sensors and 'smart' technologies; now the lived body and its double(s) are increasingly converging, and the areas in which they do are expanding. The tension between body and data addressed here is further exemplified by contemporary biometric information technologies, such as the iris and retinal scan, fingerprint reader, facial recognition, gait recognition, and DNA which rely on the body as referent. Crucial in this context is the tension between the truth(s) about a subject's body produced by these technologies and their categories, and the lived identity of the subject (an obvious example is gender) (cf. Magnet 2016). The way these kinds of systems are designed has been criticized for reproducing essentialist categories rather than acknowledging identities as performed and fluid (Barnard-Wills and Barnard-Wills 2012; Crawford and Paglen 2019ab). To unfold this argument further, I return to Simone Browne, who has discussed some of the concerns regarding biometric information technologies at length. She notes how biometrics is a technology for measuring the living body, rendered as digitized code:

> By digitized code I am referring to the possibilities of identification that are said to come with certain biometric information technologies, where algorithms are the computational means through which the body, or more specifically parts, pieces, and, increasingly performances of the body are mathematically coded as data, making for unique templates for computers to then sort by relying on a searchable database (Browne 2015, 109).

Browne demonstrates how the pseudo-scientific discourse of measuring and cataloging the human body and racial difference which goes back to the nineteenth century and Alphonse Bertillon's system of 'anthropometry", can be traced in the theoretical basis upon which current facial computational models are constructed (Browne, 112). This adds to the troubling theoretical foundations already discussed in the Introduction in relation to facial recognition technologies and affective computing.

The above reflections bring me to the following central argument*: the physical body must return into main focus as the site where spatial, emotional, and bodily surveillance merge with dataveillance and biometrics.* While the understanding of surveillance as 'invisible' or hidden dataveillance has been central in surveillance theories and developments during the last two decades, *there is still a materiality to the body as site of lived experience*, a

materiality to surveillance as sensors on smartphones in our pockets, in our homes, and a materiality to data storage centers sucking up water resources and electricity in places like Utah and western Denmark. As suggested, with the media attention to surveillance practices such as Edward Snowden's revelation of the NSA in 2013, the *Cambridge Analytica* scandal as disclosed in 2018, the introduction of GDPR in EU that same year, and all the smaller cases in between, people are becoming gradually more aware of generating, or *being* data. The sensing body not only mediate information from the environment to our perception; it generates information back to the embedded digital sensors, wearables, and tracking systems in the environment which link the individual and their body to their data traces in real time. This argument will be explored further in Chapter 4.

Towards a New Concept: Atmospheres of Surveillance

This dissertation argues that *surveillance contain and co-produces atmospheres.* On this basis, I propose that a significant way we can understand the embodied and multisensory experience of surveillance is through the notion of 'atmospheres of surveillance'. Drawing on theoretical insights on surveillance, ambient power, and the qualities of atmosphere discussed so far in this chapter, the concept *'atmospheres of surveillance' comes together as the following*:

'Atmospheres of surveillance' directs attention to embodied, multisensory, and affective *experiences* of places and practices of surveillance. The concept privileges attention to the body as the site where spatial, emotional, and infrastructural surveillance practices merge, and for which surveillance generates a more or less subtle emotional and behavioral 'repertoire'. Atmospheres of surveillance 'shape' and 'direct' through environmental qualities which seek to determine experience. Sometimes this shaping and directing presents itself as nudging and soft surveillance in the consumer realm of ubiquitous computing, other times it manifests itself at the hard edges of security. Simultaneously, the concept draws attention to the affective dimension of surveillance and offers a lens through which to grasp how we 'feel' in the environments of everyday life with surveillance. Moreover, atmospheres of surveillance are perceived bodily in more or less explicit ways, they are a vague power perceived by and resonating within the lived body. This also means that atmospheres of surveillance can be felt before we are consciously aware of their presence; this can be part of the intention. Atmospheres of surveillance are what emerges in-between subject and object,

they are simultaneously spatial and emotional. Yet, atmospheres of surveillance may be differently distributed and not necessarily similarly shared, and at the collective level they are emergent and changing. Attunement helps explain why atmospheres of surveillance are experienced differently. Atmospheres of surveillance can be intentionally produced to manipulate and modify moods and behaviors; in such cases they are an expression of power with specific objectives. Atmospheres of surveillance can also be produced by artists as part of their craft – such artworks provide openings for becoming more attentive to their existence, as they intensify in aesthetic experience. As a critical tool, *atmospheres of surveillance can make the manipulative character of surveillance present*.

A Critical Tool?

Indeed, a crucial insight from the theories of atmosphere reviewed in this chapter when it comes to surveillance is the notion that atmospheres can be deliberatively *produced*, and the implication that the craft of producing atmospheres also entails the powers to shape, direct, and manipulate. Following this, the awareness that atmospheres of surveillance can be intentionally produced amplifies the importance of being able to critically evaluate them. To repeat Böhme's assertion, the making of atmospheres "*is at all times also an exercise of power*" (Böhme 2014, 46, italics added). For this reason, I see 'atmospheres of surveillance' as a highly relevant critical tool for surveillance studies. Yet, if we perceive and are affected by atmospheres of surveillance through our embodied experience – sometimes without even being aware – how are we to resist their workings?

As previously noted, Griffero calls for the development of an 'atmospheric competence'; which he defines as a knowledge of how to "deeply feel" atmospheres while also being able to "immunize our experience" from their manipulative intentionalities (Griffero 2018, 14). Significantly, seen as a continuation of Griffero's concept, a dimension of the concept atmospheres of surveillance is its potential for critical and performative work: with regard to surveillance, this is the ability to 'deeply feel' and be aware of the more or less subtle surveillance atmospheres which envelope and surround daily life. Moreover, it is a matter of critically considering the atmospheres of surveillance at work, and assess how they might influence us, thus finding ways 'to immunize' from the manipulations as work, as described by Griffero. In this way it becomes a critical tool.

The paths towards both feeling and immunization will be various. However I would like to suggest one specific direction from the perspective of arts and cultural studies. This approach

places Griffero's concept in a productive dialogue with media and cultural theorist Thomas Y. Levin's notion of a 'surveillance literacy', where he suggests that artworks can teach us 'how to read' the new practices of surveillance. In closing this chapter, I will briefly outline Levin's argument, as it resonates with the critical potential of atmospheres of surveillance that I seek to pursue further in the empirical readings of surveillance artworks in Chapter 2-4.

In an essay on surveillance artworks, Levin proposes that "the aestheticization of surveillance 'render *visible'*, i.e. make available to the senses, the existence and the capacities of surveillance system[s]" (Levin 2010, 191). As a result, artists' interventions can create a 'surveillant literacy', which Levin defines as "an informed and critical awareness of the complex issues involved in the range of practices and technologies of surveillance" (ibid, 191). This "aesthetic as tactic" refers to what Levin calls "the pedagogy of the surveillant sensorium" which means advancing "the perceptual skills needed to 'read' surveillance in its many different manifestations" (ibid, 191). Taken together, such a 'surveillant literacy' afforded by works of surveillance art, combined with an atmospheric competence, forms a powerful critical dimension to the concept 'atmospheres of surveillance'. As I have argued in the introduction to this study, art lends itself particularly well as a realm in which to feel atmospheres of surveillance deeply, and as such, artworks can attune us to their presence and provide a space for critical reflection.

Chapter Conclusion

In conclusion, this chapter started by suggesting a move 'beyond' the ocular discourse in surveillance studies, and argued that there is a need for a theoretical and methodological framework that may encapsulate that which evades the (literal and figurative) eye. Accordingly, the chapter has established the theoretical foundation for 'atmospheres of surveillance' as a concept which may offer an understanding of the embodied and multisensory experiences of surveillance. Because atmospheres are considered a multi-sensorial phenomenon experienced through synesthetic perception, no one individual sense that holds privilege over others (De Matteis et al. 2019). This makes 'atmospheres of surveillance' a fruitful concept for grasping embodied experiences of surveillance, and this chapter has argued that the physical body must return into main focus as the site where spatial, emotional, and bodily surveillance merge with dataveillance and biometrics. However, the suggested move 'beyond' the ocular does not leave the ocular behind, rather, it acknowledges the central role of vision and activities of watching and being watched for

understanding surveillance, while exploring how surveillance also generates and affects multi-sensorial, embodied experiences. In order to establish a first theoretical formulation of the concept 'atmospheres of surveillance', the chapter has particularly emphasized the productive aspects of surveillance as an active force and a means to influence behavior and produce a 'repertoire'. Moreover, the chapter has suggested the relationship between surveillance and the notion of how power might work environmentally to incite and limit behavior, and affect, shape, and direct bodies in more or less subtle ways. Furthermore, the chapter has suggested that the concept can sharpen our awareness of the surveillance at work in the atmospheres we encounter, and have suggested its critical potential. Finally, the chapter has argued that there is a need for more nuance to the theoretical vocabulary of Gernot Böhme, which runs the risk of universalizing the experience of atmospheres. More strongly than Böhme, I have maintained that atmospheres are not necessarily shared, despite their potential for being so. This tension is inherent to the concept, and to a certain degree, atmospheres of surveillance will unavoidably remain somewhat vague and ambiguous. For instance, there is tension involved in the way atmospheres are simultaneously quasi-objective, yet dependent on the emotionally affected subject. Then there is the tension in the understanding of atmospheres as shared, yet not experienced in the same way, and sometimes not shared at all. Moreover, as will become clear in the following chapters, there is tension between a numbness to atmospheres, and an amplified sensitivity which can be afforded by works of art, and there is ambivalence with regard to the temporal qualities of atmospheres – are atmospheres spatial phenomena of the 'here and now', or do they also have temporal dimensions? However, despite of this, if we "stay with the trouble" (Haraway 2016), tensions and ambivalences may generate productive potentials. Part of the work involves staying with the tensions. As I have suggested in this chapter, the tensions and ambivalence inherent to the notion of atmosphere is potentially productive for bringing forth the manipulations and specific exercises of power involved in its production. For example, the question of the quasi-objective character of atmospheres and the degree to which atmospheres are shared or not, invites the question of who are most likely to be 'in tune' with a given atmosphere, in turn opening the question: to whom does it exert more authority? Finally, as media and algorithm studies scholar Taina Bucher reminds us, "the ambivalent position means having to negotiate an ongoing tension without necessarily finding resolution" (Bucher 2019, 3). This is why the ambivalence inherent to 'atmospheres of surveillance' might make it an apt concept for resistance to the surveillance objectives of total certainty and prediction of outcome.

In the next three chapters, the first conceptual formulation for 'atmospheres of surveillance' provided thus far will be nuanced and explored further through readings of a selection of contemporary installation artworks. The following chapter (Chapter 2) turns to a discussion of how to work with atmospheres methodologically and introduces written vignettes as a form of *atmospheric writing*. The vignettes' potential for bringing forth the bodily, emotional, and sensory atmospheres of surveillance is explored in a reading of Ed Atkins' *Safe Conduct* (2016), which further delves into Böhme's argument that atmospheres can be intentionally produced. Chapter 3 continues to expand the conceptual exploration of this dissertation through introducing the notion of 'haunting' as a dimension of atmospheres of surveillance. Through a reading of Hanne Nielsen and Birgit Johnsen's *Modern Escape* (2018), the chapter suggests that the artwork's modern western home is saturated with traces of the military industrial complex and exclusions through its technologies, which are haunted by a history of war and masculine desires. Subsequently, the fourth and final chapter turns to a discussion of the spatial complications of atmospheres in a time of ubiquitous computing and invites the notion of 'structures of feeling' into the reading of Hito Steyerl's *Factory of the Sun* (2015) in order to further theorize the temporal qualities of atmospheres which seem to linger or 'stick around'.

CHAPTER 2.

Safe is a Wonderful Feeling

> Atmospheres are productive, they are active agents. When you introduce atmosphere into a space, it becomes a reality machine.
>
> Olafur Eliasson

> Something I really want in the work, sort of inherent in the structure of everything; rhythm, rehearsal, the rise and fall of meaning and affect.
>
> Ed Atkins

Absorbing + Performing Atmospheres

Atmospheres of surveillance are perceived through bodily encounters, as multisensory experiences. The previous chapter found that a number of approaches to the notion of atmosphere circle around the idea that it is something which can be perceived 'in the air' – something 'out there', as an emotionally tuned space which resonates in the lived body. Drawing on the philosophy of Gernot Böhme, the chapter suggested that atmospheres of surveillance are *in-between* subject and object, as that which *mediates* and *relates* between the environment, objects, and people, on the one hand, and the perceiving subject on the other (Böhme 2017). Accordingly, as a concept, atmospheres of surveillance draws attention to the affective dimension of surveillance, and offer a vocabulary to grasp how one 'feels' in environments of surveillance (ibid). Furthermore, as I have argued in the previous chapter, the concept gives prominence to the physical body as the site of lived experience, for which surveillance generates a more or less subtle emotional and behavioral 'repertoire'. To be clear, then, atmospheres of surveillance may be intentionally produced to 'shape' and 'direct' bodies and behavior through environmental qualities which seek to manipulate emotional experience in more or less subtle ways. In such cases they are expressions of power. Additionally, the previous chapter established that Böhme's philosophy of atmospheres privileges the *materiality* of atmospheres, by considering objects as tuned and radiating into the environment (Böhme 1993; 2017). In this respect, atmospheres emerge from things, constellations of things, and persons (ibid).

This is why, according to Böhme, atmospheres belong to that which is present, and the character of atmospheres "must always be *felt*: by exposing oneself to them, one experiences the *impression* that they make" (Böhme 2017, 26, italics added). Thus, atmospheres manifests "the *co-presence* of subject and object", and are experienced as "an emotional effect" (ibid, 26, 27, italics added). However, the qualities of atmospheres described here poses methodological challenges. As this chapter opens this dissertation's empirical investigation of atmospheres of surveillance in contemporary art, obstacles immediately appear. What approaches are available for describing and bringing forth atmospheres of surveillance perceived in artworks? Furthermore, if the object of study is intimately linked to the role of the researcher as a physically present spectator perceiving the artwork affectively, enveloped by its atmospheres, how can this emotionally tuned experience be captured, understood, and conveyed to others?

This chapter addresses the above considerations through the first sub-question of the study, that is, *what bodily, emotional, and sensory experiences of surveillance surface through the prism of contemporary art, and how can 'atmospheres of surveillance' be explored methodologically?* As I noted in the introduction, my overall methodological strategy in this dissertation is dialogic: the conceptual foundation of the study informs the empirical analyses, yet the movement is also reversed: the artworks challenge, inform, and contribute to a further development of the concept atmospheres of surveillance. Hence, one the one hand, the empirical analyses of artworks in this dissertation work as sounding boards to test and explore the conceptual framework of the study. On the other hand, atmospheres of surveillance come into being through the readings of the artworks. In this way, the readings and vignettes further develop and substantiate the concept.

Following from this, the objective of this chapter is two-fold. First, it aims to offer a discussion of the methodological challenges of researching atmospheres and to introduce the experimental methodology of written vignettes of *atmospheric writing* employed in this dissertation. The vignettes respond to the embodied, affective experience of atmospheres of surveillance. Thus, they offer impressionistic sketches attentive to the atmospheres experienced in the artworks. My ambition is that by absorbing and performing the atmospheres as they are encountered, the vignettes make an embodied experience of atmospheres of surveillance available for others. Hence, the vignettes are intimately linked to the argument that surveillance contain and co-produces atmospheres, while simultaneously

bringing forth various atmospheres of surveillance. Accordingly, the vignettes form a vital part of the overall methodological contribution of this dissertation. To be precise, then, I suggest that the written vignettes have potential as an atmospheric methodology, by absorbing and performing atmospheres as rhythm, tone, and affective experience. As such, the vignettes attune the reader to the atmospheres of the artworks and the experience of their 'thick' air, saturated by surveillance. At the same time, the vignettes also amplify the *situated* (as opposed to universal) experience of the works – it is *my* perceiving body inside the installation space through which the atmospheres are absorbed. Thus, the vignettes become a reminder of how atmospheres depend on the affective involvement of the particular perceiving subject. Throughout the analyses of artworks in the present and subsequent chapters, I combine the vignettes with readings of the artworks in a dual movement which I refer to as 'immersive readings'. Accordingly, the analyses emerge through a double approach which moves between embodied, atmospheric vignettes responding to and making present the perceived atmospheres of the artworks, and interpretive readings of the works which pay close attention to the formal and thematic components of the works.

The second, yet closely interrelated objective of this chapter is to examine how atmospheres of surveillance are staged and experienced as bodily, emotional, and sensory experiences of surveillance in the video installation *Safe Conduct* (2016), by British contemporary artist Ed Atkins. *Safe Conduct* recreates the well-known situation of going through an airport security check. Yet through a combination of visual narrative and a soundscape blending the shrill sounds of the conveyor belt and X-ray machines with heavy breathing and Ravel's *Boléro,* an uncanny anticipation of something awful emerges. Death and violence linger at the edges of the work, and a disquieting atmosphere fills the exhibition space. The analysis of *Safe Conduct* explores the shifting and ambiguous atmospheres surfacing inside the installation through Böhme's perspective of atmospheres as *produced* and *perceived* (Böhme 2017). Throughout the reading of the artwork, I further explore the argument that atmospheres of surveillance may be intentionally produced and elaborate on why this is a critical insight. Finally, the chapter concludes with a reflection on written vignettes as an atmospheric methodology, and what they have to offer.

Atmospheric Complications

Atmospheres enfold and surround us, but how to approach them methodologically? This first main section of the chapter sets out to open the discussion of the methodological challenges

of researching atmospheres of surveillance. I broadly identify them here as two closely related core challenges: first, how can the impression, or "emotional effect" (Böhme 2017) of an atmosphere be enclosed, understood, and made present for others to grasp, and second, to what degree can we assume that atmospheres are shared?

In both respects, researching atmospheres of surveillance requires methods responsive to a quasi-objective phenomenon. However, there is no established consensus on what these methods are. Cultural geographer and affect scholar Ben Anderson, echoing cultural theorist Raymond Williams, has characterized atmospheres as hesitating "at the edge of the unsayable" (Ben Anderson 2009, 78). Indeed, the question of (re)presentation is central to the multidisciplinary discussion on atmospheres, although it has been discussed more vigorously among scholars who have their disciplinary background in the social sciences. Nonetheless, it has also been treated from the perspective of literary studies (Gumbrecht 2012), and it is of key concern for the purposes of this study. Focusing on how surveillance is experienced in contemporary art, as atmospheres, is intimately linked to the role of the researcher as spectator, and thus to the researcher as embodied, and emplaced, with a story of her own which cannot successfully be separated from her affective repertoire. This means that there is no detached objective eye available, if there ever was. The affective involvement in the object of study becomes present in, for example, the selection of empirical material: the artworks included have in some way *moved me*. In her study of installation art, art historian Claire Bishop has pointed to the difficulties of capturing the subjective experience of three-dimensional space in installation artworks (Bishop 2005). Likewise, as indicated above, profound difficulties arise in the attempt to capture and represent the affective experience of atmospheres. In other words, the empirical analyses in this study are doubly challenged. Throughout the analyses in the present and following chapters, I examine encounters with atmospheres of surveillance in three artworks which all belong under the heading of screen-based installation art. Installation art affords exemplary sites of atmosphere, because installations deliberately create a relationship between the visitor's physical body and the space of the work. Indeed, as shown by Bishop, installation art, and its predecessor Minimalist sculpture, has been preoccupied with the viewer's perception and the interdependence of the viewing subject and the viewed object from the very beginning of the emergence of the genre (ibid). Notably, Bishop argues that since the publication of the English translation of Maurice Merleau-Ponty's major work *Phenomenology of Perception* (1945) in 1962, his philosophy of embodiment and perception has had decisive influence on

the understanding of the viewer's heightened bodily experience of artworks by both artists and critics (ibid 10, 50). The privileging of the experience of installation artworks as an embodied experience involving all the senses, and on the viewer as addressed directly as a literal presence in the space has become defining for works of installation art (ibid). For example, art historian Anne Ring Petersen argues that installation art as a genre is characterized by *ambiance* – or put differently, that installation art can be characterized by way of a surrounding environment (Ring Petersen 2015). In other words, the genre of installation art is self-consciously aware of the phenomenological experience of the visitor, and as such installation artworks lend themselves particularly well to aesthetic experiences of atmospheres of surveillance. Yet, how to research and represent that which may be transient, vague, and ambiguous?

The Ephemeral, the Fleeting, and the Not-Quite-Graspable

As established in Chapter 1, Böhme advocates the view that atmospheres can be named as distinct phenomena, for which everyday language provides a varied vocabulary (Böhme 1993). The fact that we can, and do, communicate about the characters of atmospheres through language, according to Böhme, attests to their existence as something which is out there, which can be experienced intersubjectively (Böhme 2017). However, in an article on what they refer to as "atmospheric methods", Ben Anderson and human geographer James Ash question the viability of representing atmospheres through the practice of naming them, and ask, "how is it possible to name an atmosphere, if naming is generally considered to be a representational act that fixes and therefore reduces a phenomenon?" (Anderson & Ash 2015, 35). Rather, they argue that atmospheres belong to the field of the 'non-representational' (Anderson and Ash 2015; Thrift 2007; Vannini 2015). Non- representational research, according to ethnographer Phillip Vannini, "wants to make us feel something powerful, to give us a sense of the ephemeral, the fleeting, and the not-quite-graspable" (Vannini 2015, 6). Following from this, Vannini suggests that as non-representational methodologies strive to cope with the multi-sensual and the affective qualities of bodies, they become a form of *listening* to hear the world (Vannini 2015, italics added). Hence, with non-representational methodologies, the paradigm of representation is replaced by a listening for, and a response to, affective resonances (ibid). Returning to Anderson and Ash, they argue that while it might be relatively easy to identify particularly intense atmospheres, it gets complicated when we want to pinpoint the banal and mundane (Anderson and Ash 2015). Importantly, moreover,

Anderson and Ash raise the question of how we are to account for the co-existence of multiple atmospheres which is present simultaneously. Questions like these are not easily answered, and this is an ongoing discussion within scholarship on atmospheres. Nonetheless, Anderson and Ash find that despite the risk of ambiguity being lost, naming can also be a way of evoking an atmosphere and its tone – and thus of rendering an atmosphere present (ibid).

Notably, one problem concerns whether or not atmospheres come forth as a unified experience. Anderson and Ash argue against this understanding of atmospheres, and in this respect, they explicitly disagree with the view offered by Böhme, Pallasmaa, and others who belong to the phenomenological and aesthetic tradition, which is that atmospheres are experienced as one overall impression. For example, the phenomenologist of aesthetic experience Mikel Dufrenne, to whom I will return later in this chapter, argues for the singular affective quality exceeding from an atmosphere. Particularly, Dufrenne finds that aesthetic objects reveal an affective quality, or "expressed world", which can be understood as *one* overall atmosphere to be perceived in the encounter between artwork (object) and the perceiving subject (visitor) (Dufrenne 1975, 555). This is where Anderson and Ash disagree with Dufrenne. Rather, they argue, multiple emergent atmospheres might coexist. While this disagreement might be considered a matter of whether we are concerned with aesthetic objects and artworks (as Dufrenne), or social situations (as Anderson and Ash), the analysis of *Safe Conduct* later in this chapter will show that the answer might not be so clear cut. Inside the installation space of *Safe Conduct*, various atmospheres emerge, and moreover, the atmosphere of the work is likely to be experienced differently depending on whether we experience it alone or whether other visitors are present.

This last point also feeds into the second methodological challenge of researching atmospheres, which is the question of the degree to which we can assume that experiences of atmospheres are shared. As I have problematized in Chapter 1, Böhme argues that the art of stage setting proves that atmospheres are something quasi-objective which can be experienced by people in roughly the same way (Böhme 2013a, 2017). In my view, this argument is not adequately substantiated. What is more, the assumption that an atmosphere can be considered as a universal and unified experience is disputed (Ahmed 2014; Bille et al. 2015). Böhme does nuance this argument, and it remains inconsistent. Moreover, there are methodological implications at stake. Recalling Ahmed's point in Chapter 1, we might arrive

with an “angle”, and thus, an atmosphere “is always felt from a specific point” (Ahmed 2010, 37). Hence atmospheres are inseparable from situated experience. Moreover, atmospheres might be far more available to feel than to description. Nevertheless, we might also perceive and recognize their presence without necessarily feeling the full range of their intensity, contrary to others who are present, and more than one atmosphere might be present at once (Griffero 2018). Griffero has argued that atmospheres might exert more or less authority, and as such they might be more or less possible to resist (Griffero 2018). What is more, in a special issue on the staging of atmospheres, the editors put the question this way: “[h]ow ‘strong’ must an atmosphere be in order not to be shaped by the subjective feelings of an individual? And if they only offer a potential for seizing the individual's feelings how can one know that one shares the same atmosphere?” (Bille et al. 2015, 34). Problematizing how a contemporary, western philosophy of atmosphere universalizes experience, the anthropologist Mikkel Bille and his co-editors drew attention to the role of various cultural attitudes, values and norms for conceptualizations and experiences of atmospheres (ibid).

As becomes clear through the above discussion, Böhme’s perspective of atmospheres risks placing too strong of an emphasis on the neutrality of the shared experience of atmospheres. As I stressed in Chapter 1, since atmospheres are dependent on sensory and embodied experience, they will resonate with different subjects in different ways, depending on e.g. past experiences and dispositions, cultural background, and identity markers such as gender, sexuality, race, and class. Nonetheless, the intensities of atmospheres are *also* felt in similar ways, and this is the reason why atmospheres remain an ambiguous matter. In the words of Anderson and Ash, “[a]tmospheres are perhaps better researched as affective propositions, unfinished lures to feeling a situation, site, person, or thing in a particular way that may come to condition life” (Anderson & Ash 2015, 44).

Hunches

Literary scholar Hans Ulrich Gumbrecht has also been preoccupied with the question of how to research atmospheres and moods, and asks, “[b]ut how can we uncover atmospheres and moods, retrace them and understand them? Is there such a thing as a professional – or for that matter, “scientific” approach?” (Gumbrecht 2012, 16). Disclosing his skepticism towards theories which try to explain atmospheres or moods, and most of all towards the possibility of pre-determined “methods” of any kind to identify them, Gumbrecht argues that

> [r]esearchers on the terrain of the "human sciences" should rely more on the potential of counterintuitive thinking than on a pre-established "path" or "way" […]. Counterintuitive thinking is not afraid to deviate from the norms of rationality and logic that govern everyday life […]. Instead, it is set into motion by "hunches" […]. Following a hunch means trusting an implicit promise for a while and making a step toward describing a phenomenon that remains unknown – one that has aroused our curiosity and, in the case of atmospheres and moods, often envelops and even enshrouds us (Gumbrecht 2012, 17).

Gumbrecht suggests that the hunch-based inquiry of atmospheres and moods in literary works are likely to be alerted by "single words", "small details", and "the hint of a different tone or rhythm" (ibid). Returning to the question of (re)presentation, the effect of the descriptions of the atmospheres and moods in literary works and cultural artefacts are, according to Gumbrecht, likely to coincide with the primary texts, and the aim is to promote their "becoming-present", through "giving oneself over to them affectively and bodily" and "yielding to them and gesturing toward them" (ibid, 18). This approach to describing atmospheres is, despite Gumbrecht's proclaimed aversion to methods, surprisingly similar to the approaches taken among non-representational scholars in the social sciences. For example, the anthropologist Tim Ingold asserts that, "[t]he challenge" is not to abandon writing, but "to find a different way of writing" (Ingold 2015, viii). Researching phenomena which belongs to the field of the 'non-representational' should, according to Ingold, take the form of experiments striving for *correspondence*, understood as "not coming up with some exact match or simulacrum for what we find in the things and happenings going on around us, but of *answering* to them with interventions, questions, and responses of our own" (ibid, vii). In other words, writing should aspire to find the form of "inscriptive performance" (ibid, viii). Likewise, design anthropologist and sensory ethnographer Sarah Pink advices that when engaging with research sensorially, we should strive to offer versions of experiences that are "as loyal as possible to the context, the embodied, sensory and affective experiences" through which the sensory knowing emerged (Pink 2015, 35). Pink advocates for scholarly writing which attends to the sensory and affective elements of experience, and for alternative ways of representing sensory knowing. The approaches of Gumbrecth, Vannini, Pink, and Ingold resonate with my attempt to achieve a different way of writing in this study – of gesturing towards the perceived atmospheres through writing as an act of a performative, affective and atmospheric writing.

Yet Pink also urges researchers to be more explicit about their ways of sensory knowing, and to the role of subjectivity and experience (Pink 2015, xii). Responding to Pink's call, here is

an example of my approach: I visit the exhibition again and again. This is a form of listening, a sensorial experience. I write field notes. First, focusing on trying to capture the feeling or tone of the work, and how it affects me, and second, taking notes of all the minute details of the exhibition space: how are objects arranged physically, how do visitors move around in the space, is there a soundscape, how is the lighting, etc. These elements belong to the craft of producing an atmosphere. I also take notes of the details of the work, how many screens there are, what is the format, what takes place on the various screens, and so on. Yet, overall, I follow what Gumbrecht referred to above as 'hunches' (Gumbrecht 2012).

A Way of Writing *Differently*? Vignettes as Atmospheric Writing

When turning to performative, written vignettes to express the embodied experience of the artworks, I draw on an insight from the phenomenology of aesthetic experience of Mikel Dufrenne, who suggests that "the aesthetic object is completed only in the consciousness of the spectator" (Dufrenne 1973, 204). According to Dufrenne, it is through feeling that we truly perceive an aesthetic object, and he contends that art "invites us and trains us to read expression and to discover the atmosphere which is revealed only to feeling (ibid, 542). Furthermore, I draw inspiration from the exploratory writing practices in recent feminist scholarship, which attends to the role of situated, embodied and affective experience, such as the 'affective writing' of political geographers Elisabeth Militz and Carolin Schurr (2015); the art criticism in the form of 'site-writing' of Jane Rendell (2010); the anthropologist Kathleen Stewart's writings on the affects of the everyday in the form of pieces of prose to bring forth what she calls 'atmospheric attunements' (2010, 2015); and affect scholar Anna Gibb's call for writing that "finds the particular form adequate to what it describes" (Gibbs 2015, p225, 227). What I find in their writings is a shared and thoughtful attention to the ephemeral, ambiguous, and fleeting range of experience, grounded in partial perspectives, often combined with a desire to "presencing" or performing affective (and atmospheric) experience though experimental methodological forms.

When crafting the vignettes, I try to go with the mood I sense in my field notes, which I carefully revise. This adds a different temporality to the matter, yet I strive to create a spontaneous feel to the vignettes retrospectively. I want to make the atmospheres present, for example, through the rhythm of the writing, the use of punctuation, and so on. This is one way of trying to contain and gesture towards the content through the form. Closing this

methodological discussion, the chapter now turns to its second main part, and the artwork *Safe Conduct*. The reading of the work sets out to respond to the concerns discussed above of first, how to understand and describe atmospheres, and second, how to bring forth atmospheres as situated, rather than universal experience. Moreover, the reading employs the vignettes in order to explore how an atmosphere of surveillance emerges through rhythms, repetitions, sounds, colors, and the feelings evoked in the perceiving spectator when experiencing the artwork.

Safe Conduct

I open the door and walk into the exhibition space. The relatively small room contains nothing but a three–channel video installation, monitors mounted in the center of the room as if they were large information screens of arrivals and departures in a modern airport. The scale and the vantage point encourage a sensation that the monitors are looming over me. On the screens, three related video narratives of a digital avatar in an airport security situation unfold, accompanied by the repetitive score of Ravel's Boléro. *The sound of the music fills the room; the human voice of the digital protagonist is humming along with it. His piercing gaze draws me in. His body is beaten up, de-composed, de-humanized; purple bruises mark his yellow skin. It is a disturbing vision, a strangely familiar double staring back.*

British contemporary artist Ed Atkins (*1982, UK) is currently attracting attention for artworks centering on bodily experience and human existence in the digital age. *Safe Conduct* (2016) is a mixed media work comprised of a three-channel high definition (HD) video installation running in a loop, an audioscape, and a pamphlet of writing available for visitors to pick up. The videos combine computer generated imagery (CGI footage) of a digital avatar caught in a purgatory loop within the airport security check, with fragments of existing footage depicting workers at a sausage factory. When using CGI, Atkins works with 3D models that can be modified, and the digital surrogate who figures as the protagonist of the work is partly modeled on the artists' own features using face animation software, which brings forth the strong tension between technology and corporeality that runs throughout the work. This type of facial motion capture technology, *Faceshift*, works by capturing the user's facial expressions and gestures through a camera ("Faceshift: Markerless Motion Capture" 2013). Then, the digital 3D model is mapped and animated with the same facial movements. Atkins has modelled the avatar with his own facial expressions and voice (Christov-

Bakargiev 2016). The result is disturbing, a hybrid form of digital avatar with recognizably human facial gestures. This technique has been employed by the artist in several works, such as for instance in the affiliated work *Ribbons* (2014). Moreover, Atkins' artworks often contain traces or fragments of writing, which form a significant part of his art practice along with video, drawing and performance. In later years, several of his works have centered on variations of these uncanny digital doubles. Curator and art scholar Carolyn Christov-Bakargiev describes how these "solitary male characters live in a world of emotional fragility, solitude, depression and melancholy, pathetically suggesting the disorientation and potential collapse of white male subjectivity at the start of the twenty-first century" (ibid, 15).

In *Safe Conduct,* the video installation recreates a situation well-known to many – the airport security check – and this familiarity is further underlined by the music; Ravel's *Boléro* (1928) is one of the best-known pieces of classical music in history (Decalf 2017). However, the combination of the video narratives of this beat-up, disturbing digital surrogate with the rhythms, repetitions, sounds, shifts in intonation, and increasing intensity in the music builds up an uncanny anticipation of something awful.

Death and violence linger at the edges of the work, a sinister and disquieting atmosphere fills the exhibition space. I sense anxiety, claustrophobia, fear. Rather than the feelings of safety so desired by a culture of control and surveillance, Safe Conduct's *de-familiarized airport security routine makes me feel unsettled, paranoid. Something (a catastrophe) has happened, or is about to happen, or both. There is violence and aggression here. I can't shake off his bloodshot gaze, the dirty nails, the texture of his skin, his chilling smile; it sticks to me.*

Figure 3*:* Ed Atkins *Safe Conduct*, 2016. Three channel HD video with 5.1 surround sound. Duration: 9 min 5 sec loop. Courtesy the artist, Galerie Isabella Bortolozzi, Berlin, Cabinet Gallery, London, Gavin Brown's Enterprise, New York, Rome and dépendance, Brussels.

Safe Conduct speaks to a culture of surveillance and control routinely experienced by many of us every time we travel, only this digital avatar takes the shape of a nightmarish dark double, animating the violence of the surveillance machine. The work brings forth the ambiguities and complicities of surveillance practices in a time when security, control, and risk management are at the top of the political agenda, in parallel with rapid technological developments and the buzz of big data, algorithms, and artificial intelligence (AI).

In the following, I will offer an immersive reading of the artwork *Safe Conduct*, where I explore how an atmosphere of surveillance is invoked in the work through rhythms, repetitions, sounds, colors, and the feelings evoked in the perceiving spectator when experiencing the installation. As a material structure, the airport security check is a space that regulates, inspects, and controls bodies, movements, and behavior (Aaltola 2005; Adey 2008; Bissel et al. 2012; Hall 2015a, 2015b; Parks 2007; Urry et al. 2016). Thus, it illuminates the materiality of control and surveillance as bodily experienced atmospheres. The chapter explores how the concept atmospheres of surveillance can be employed to identify how we engage with and are affected by the surveillance practices embedded in everyday lives and environments. As has become clear through the theoretical and conceptual outline so far in the dissertation, atmospheres can be deliberatively *produced*, through material objects and constellations which radiate into the environment, and thus bring us into a certain mood

(Böhme 2017). This is why the concept is useful for trying to convey the experience of *Safe Conduct* and how the artwork deeply affected my mood in the gallery and continued to haunt me for weeks.

Of particular interest to the reading in this chapter is the double perspective Böhme takes on atmospheres, namely that they can be "approached in two different ways: either from a *perception* aesthetics or a *production* aesthetics viewpoint" (Böhme 2017, 2, emphasis added). In the analysis below, I pay particular attention to the staging and manipulation of atmospheres in the artwork, including the use of sound and spatial arrangement (Böhme 2013; 2017). To reiterate a point from Böhme, the quasi-objective status of atmospheres means that they are "out there", you can "enter an atmosphere and you can be surprisingly caught by an atmosphere" (Böhme 2017, 2). Consequently, the craft of producing atmospheres also entails the powers to manipulate. The reading of *Safe Conduct* draws attention towards the affective dimension of surveillance and explores Böhme's vocabulary to grasp how one 'feels' in environments of surveillance, such as the airport security check (Böhme 2017).

The Rhythms of the Surveillance Machine

Safe Conduct was initially created for the X-room, a small white-cube exhibition space for contemporary art at the National Gallery of Denmark (SMK). Inside the X-room, the three video screens were arranged in the center of the room, which underlines the strong and deliberate resemblance to airport video walls for arrivals and departures. As a spectator, you look upward at the screens. You move around in the room from one screen to another in your own pace. The room is completely bare except for the centered screens and the speakers arranged in its corners. Visitors experience and encounter the work through multiple senses, moving their bodies around in the work, enclosed by the sounds and the music. The slight differences in action on each screen of the video triptych demand attention to detail. In each of the three videos, the avatar appears in partly overlapping scenes, mainly in the airport security check by the luggage carousel, sending objects and body parts through the scanner to the relentless soundtrack of *Boléro*. You cannot see the screens simultaneously, and, while you are watching one, the audio narratives of the others weave into the soundscape, drawing you in that direction.

The exhibition pamphlet, "love letters", is partially read aloud in the videos. The letters take the shape of confusing fragments of narrative addressed to a "you" – notes on bodily fluids and excrement pondering the claustrophobic sweat of genitals on an airplane. The voice reading and humming is the human voice of the artist, standing in as the voice of the avatar. The inhuman qualities of the model are deliberately kept, simultaneously pointing out the materiality and computer-generated qualities of the model. Atkins was inspired to make the work after being puzzled by the aesthetics of the safety and security animations in airports and their seeming innocence. He notes how the cartoon aesthetic of these instruction videos obscures the symbolic violence imposed by the rituals at the airport (Atkins 2016a). *Safe Conduct* can be situated among a number of recent artworks exploring the protocols of the post 9/11 airport (Browne 2015), including Pamela Z's intermedia *Baggage Allowance* (2010-11), Jillian Mayer's *Still Life Scans* (2018), Evan Roth's ongoing series *Art in Airports*, Roxy Paine's hand carved wooden *Checkpoint* (2014), and Jitish Kallat's *The Circadian Rhyme* series (2012-2013). These works illuminate the lived experience of airport security practices and atmospheres of surveillance in various ways. For instance, Kallat explores how the gestures of the security checkpoint have entered bodily repertoire. *The Circadian Rhyme* series consist of a long line of small, toylike figures being searched at the border – raising their arms, spreading their legs, etc. – bodies ready to be searched and controlled. As is the case with *Safe Conduct*, the *The Circadian Rhyme* series is both humorous and a chilling reminder of current developments.

The title of Atkins' work, *Safe Conduct*, contains a double reference to, on the one hand, the title of the 1931 autobiography of Soviet poet and novelist, Boris Pasternak, which opens with a railway journey, and on the other, an official state-administered document which affords safe passage to someone during wartime, conflicts or other states of emergency (Atkins 2016b, n.p.n; *Merriam-Webster* 2020). Consequently, the title brings to mind both the surveillance state of the Soviet Union and the current state of exception following the global war on terror. In the exhibition, the atmosphere of the work slowly emerges as I move around, as the sounds hits my ears, and my eyes meet the gaze of the digital avatar.

The gallery space is deserted. I am the only one here today. The screen shows the security checkpoint empty but for a giant naked digital body standing by the wall. Scattered chairs are indications of past events that remain unrevealed. A battered hand places a gun on the security tray. The sound of the Boléro *starts. A gigantic oversized foot appears. The shrill*

beeping of the luggage carousel momentarily drowns out the Boléro*; red lights are blinking. Suddenly, a short shot: two bruised hands clenched in some sort of emergency position. A MacBook is placed on the tray. The digital avatar from behind. Heavy breathing, short and intense, the sound of fear or a panic attack. That breathing. A frontal shot. The avatar going mechanically and arbitrarily into various positions for search and detainment. A large brain is put on a tray. Next follows a pineapple. A kidney. Empty trays going round and round the carousel to the sound of the* Boléro*. A steaming hot roasted chicken is carefully placed in a tray. A gun again. Lots of small paper knives. A close up shot of a large gun slowly and carefully placed in a tray by the yellowish, battered hand. I notice how the sleeve of his sweater is stained. Old sticky stains. Suddenly the hands again. The avatar in full body view, dressed in a grey jogging suit, completely beaten up, decaying, decomposing, dead or alive, smiling and posing for me, exhibiting his arousal, going into brace positions; the* Boléro *pitching high notes; small mini avatars, all in grey jogging suits, thrown onto the tray.*

The avatar pulling his eye out, his ear, his nose; a terrifying frontal shot of his face with dark holes were the eyes and nose used to be; moving; breathing; the rhythm of Boléro*;* Boléro *building up; small skeletons on the tray; small avatars on the tray; the avatar pulling off his face; humming; more hands on trays; more organs.*

Figure 4*:* Ed Atkins *Safe Conduct*, 2016. Three channel HD video with 5.1 surround sound. Duration: 9 min 5 sec loop. Courtesy the artist, Galerie Isabella Bortolozzi, Berlin, Cabinet Gallery, London, Gavin Brown's Enterprise, New York, Rome and dépendance, Brussels.

How does *Safe Conduct* create the particular atmosphere filling the exhibition space? From a *production aesthetic* point of view, repetition is key to the atmosphere of the work, and it is embedded in the artwork on several levels. First, the three video narratives are similar, yet not quite the same. This unsettles the viewer, who is forced to try to grasp the variations and differences in the three video projections. What are we looking for? The similarities activate an inspecting gaze. Second, the repetitive insistence of the musical piece *Boléro* by the famous French twentieth-century composer Maurice Ravel plays a significant role in the work. *Boléro* is a modernist piece characterized by its repetition and insistence. The composition is based on a single theme repeated a number of times without any development besides being played by various instruments while gradually becoming louder and more intense. This builds up a tension underpinned by a snare drum until that tension is finally released in the end. Originally composed for a ballet, Ravel himself emphasized the mechanical aspects of the piece, which he envisioned staged in an open landscape with a factory in the background – the rhythms of his father's factory (Lanford 2011). Sound is a particularly effective factor in the creation of atmospheres, and there is something oppressive about the musical piece that adds to the atmosphere filling the exhibition space – the sound coming at the audience from speakers at the corners of the room; the repetitive insistence of the music entering our bodies, enveloping us; the persistence of the rhythm of the snare drum creating a march-like association to war and violence.[18]

Third, the mechanical and repetitive structure of the music installation is mirrored by the more subtle reference to Pina Bausch's modern dance piece from 1978 *Café Müller* (Bausch 2010). This intertextual reference is present in the surreal tableaus of scattered café chairs in the background of the baggage carousel. In *Café Müller*, the setting depicts a modern, urban café. The dancers move about as sleepwalkers, seemingly with no purpose, repeatedly bumping into the café chairs. Like the airport security check in *Safe Conduct*, and the theme of *Boléro*, the café is also a deeply familiar scene, which is why it creates such an uncanny atmosphere invoking isolation and existential void when taken out of its usual context, stripped of meaningful interaction. A central scene in *Café Müller* is a couple dancing, falling apart, and coming back together, endlessly. Repetition is a core feature of the dance piece, and the loop of Atkins' video narratives parallels this repetitive structure. The protagonist in

[18]According to Michael Lanford, for Ravel's contemporary audience, the rhythm of the snare drum in *Boléro* would be a reminder of war: "For a country only nine years removed from the horrors of the First World War, however, snare drums, especially in tandem, would more likely evoke memories of military combat, destruction, and death" (Lanford 2011, 255).

Safe Conduct is taken apart and brought together repeatedly by the luggage carousel, endlessly bouncing back in shape. The structural affinity between *Safe Conduct* and *Café Müller* is present in the repetitions, the ruptures of violence, and the absence of clear narrative. Both works bear traces of something that remains unresolved but lurks at the edges, leading to a lack of meaning. The theme of repetition in *Safe Conduct* is further expanded by the insertion of found footage from a sausage factory. In the found footage, the repetitive labor of the factory workers blends together with the machines and the seemingly endless production of sausage and meat products. The meat at the conveyor belt in the factory associatively blends together with the meat at the conveyor belt at the airport security. These multiple levels of structural repetition create a sense of entrapment and claustrophobia. The color scheme in *Safe Conduct* is mainly kept in bleak shades of grey and pink and yellow flesh, which enhances the atmosphere of isolation, anxiety, and a dark existential void: humanity and machinery.

The shot slowly circles over the tossed chairs, meekly zooming into a tray on the floor with the avatar's head, the head singing along to Boléro *in a hollow rattling voice, staring directly at me; now the full body is on the belt, singing, staring at me with this unsettling gaze; a mini version sliding through the scanner on a tray, singing; a full body version posing on the tray with obvious pleasure, riding the luggage belt, enjoying the attention, singing; a close up of his face, singing and staring aggressively, provocatively; a shot from inside an aircraft, angle so low that it is close to the floor; more objects and organs on tray; the avatar inside the aircraft in his seat, putting on a gas mask, buckling up with small, yellowish beaten up children's arms for a seat belt; going into brace position, preparing for disaster;* Boléro *all around me; the aircraft from the outside, against the sky, a cartoon; the softly colored sky, the little white plane, zooming slowly, caressing the body of the aircraft; zooming in on the windows; on one window; I meet the gaze of the avatar; he is standing, looking out, singing. Am I humming too?*

Figure 5*:* Ed Atkins *Safe Conduct*, 2016. Three channel HD video with 5.1 surround sound. Duration: 9 min 5 sec loop. Courtesy the artist, Galerie Isabella Bortolozzi, Berlin, Cabinet Gallery, London, Gavin Brown's Enterprise, New York, Rome and dépendance, Brussels.

Choreography of Control

Safe Conduct has been characterized as a "computer-generated slapstick horror ballet security video" by the artist (Atkins 2016a). The dark humor of the work explores and parallels the tensions and affects produced by the strange discrepancies of the lightness and fun of safety instruction videos and the security and risk-management imperatives imposed when travelling (Bissel, Hynes and Sharpe 2012). Moreover, the choreography of *Safe Conduct* invokes the repetitive rhythms of the body as machine, trapped in a loop, in-between the dead and the living, repeating and rehearsing gestures learned for times of catastrophe. These rhythms and automatisms of bodily repetition, what philosopher and social theorist Henri Lefebvre has termed "dressage," speak of a conditioning to surveillance culture and an atmosphere of fear (Lefebvre 2004). The endless repetition of the brace positions and positions for searches and control performed by the digital avatar in *Safe Conduct* is a reminder of how a new bodily repertoire of movements emerged in the aftermath of 9/11. Lefebvre directs our attention to the discourse and ideology running underneath the rhythms of places and bodies. Here we glimpse how an atmosphere of surveillance emerges, directing bodies and movements towards specific purposes. Notably, the rehearsal of the brace positions in *Safe Conduct* speaks to the logic of *perceived* threat: rehearsing for the

catastrophe, learnt gestures training bodies for a certain ideological purpose: the management of risk. This is physical training for the atmosphere of fear, learning through bodily experience that catastrophe is near. Hence, it reveals how, in the name of security and safety, "bodies are targeted and strategically modulated affectively" (Knudsen and Stage 2015, 4).

Figure 6: Ed Atkins *Safe Conduct*, 2016. Three channel HD video with 5.1 surround sound. Duration: 9 min 5 sec loop. Courtesy the artist, Galerie Isabella Bortolozzi, Berlin, Cabinet Gallery, London, Gavin Brown's Enterprise, New York, Rome and dépendance, Brussels.

In the artwork, dressage permeates the rituals of control and surveillance in the security check: take off your belt, stand in line, wait for your turn, use one tray for your jacket and another for your bag, remove your shoes, move over for a random search, obey. These gestures and directions for how to behave are, by now, deeply familiar to most travelers regularly going through airports. The rituals not only imply potential rhythms of violence (near, here, and future) but also the eternal rehearsal of something other than the situation itself. What can be glimpsed underneath the dressage of bodies and movement in the airport is the surveillance machine, the pre-emptive control of bodies and the minute regulation of movements. The estrangement created by the ceaseless repetitions of trays containing objects and body parts going through the luggage carousel in *Safe Conduct* further illustrates how the airport security check is the place where, in the words of artist and media theorist Peter Weibel, "the regime of the panoptic principle reigns: everything must be seen and all must be shown" (2002, 207). This "logic of transparency", continually set on acquiring new territory of visibility, is aided by new technologies such as the full body scan and other techniques

which “[lay] bare the body as revealed truth” (Bissel et al. 2012, 697). Likewise, at the core of automated technology for identifying facial expressions is the idea and desire to reveal the “inner truth” of thoughts and feelings. In *Safe Conduct*, the intensively present face of the digital avatar in *Safe Conduct* brings to mind the notion of ‘micro expressions’ and emotional tracking and classification which was briefly discussed in the Introduction to this dissertation in regards to the disputed American psychologist Paul Ekman and the U.S. airport security program SPOT. The avatar seems to rehearse his way through a repertoire of different emotions, ranging from fear and anxiety to aggression, pleasure and arousal.

Furthermore, media studies scholar Lisa Parks has observed how new “close sensing” techniques at airport security checkpoints, “oriented toward the minute and the personal”, are making “the body visible in new ways” (Parks 2007, 190). Consequently, she finds that airport security has turned into a scene for “acts of disrobing”, where passengers “hurriedly strips of layers of clothes, remove their shoes and empty out their pockets to avoid further inspection” (Parks 2007, 190). However, in the performance of these rituals, one can notice a difference between the smooth commuter who never makes any mistakes, perfectly trained for the automatic functioning of power, and the inexperienced traveler who interrupts the rhythm of the slickly functioning machine. In this respect, airport rituals become bodily knowledge that “educates people in the ways of the contemporary world hierarchy” (Aaltola 2005, 262). Hence, the performative dimension of airport behavior enables subjects to prove themselves as self-regulating traveling subjects of the “post-panoptic” kind (Bauman and Lyon 2013; Hall 2015b). As a result, a softer, DIY surveillance complements the airport’s hard edges of security and control, because “travel, particularly through airports, is as much about self-control as it is about border control” (Browne 2015, 135). The performance at the airport becomes a bodily knowledge, co-producing identities, emotions, and affects. Through these performances, travelers become complicit in a participatory culture of surveillance and risk management – “cocreators of a shared reality” where “voluntary transparency” is at the core of the matter (Hall 2015b, 3-8). In this respect, the performance of transparency and the minute regulations of the airport security check should be viewed in the light of a western participatory surveillance culture where surveillance practices have become “a way of life” and a repertoire of everyday (bodily) practices (Lyon 2018a). In *Safe Conduct*, this is taken to the extreme as the self-trusted post-panoptic subject peels of his face, eyes, and fingers, and sends his inner organs through the X-ray machine, willingly and mechanically partaking in the act of revealing it all down to the interior of the body itself. What is more, the machinery

of surveillance shaping bodies, rhythms, and subjectivities is conveyed in the work through the explicit association to the factory and the conveyor belt. The found footage of the workers at the sausage factory invokes the process of rendering meat, and *rendering* is at the crux of *Safe Conduct*: it is that which brings meat, flesh, violence, and the digital together in the artwork. Rendering refers to the processing of meat, but moreover it also refers to computer graphics, where rendering describes processes and programs which are involved when generating 3D and computer-generated images from models, frequently used in architecture, computer games, and animated movies (*Techopedia* 2021). In art history, rendering refers to representation, or illustration, and rendering techniques to depict a motif include adding light, shadow, colors, depth, and so on. Finally, post 9/11, "rendition flights", and "extraordinary rendition" entered the vocabulary as it was revealed that the CIA ran clandestine operations to kidnap, detain, and torture suspected terrorists in secret prisons, or "black sites", run by the CIA outside of U.S. jurisdiction, such as for example in Poland (Paglen and Thompson 2006). The various processes of rendering bleed into each other in *Safe Conduct*, and Atkins has explained that,

> the word "to render" comes from what you do to animal parts, to meat, to bones. You render fat from a carcass by boiling it, or you render glue from hooves […]. It's attached to the abattoirs, to the butcher, to the industrialized production of food. So there's this line, etymologically, from artistic representation to technology's representation – of bodies, meat. […]. But I also think of extraordinary rendition […] where you can suddenly be taken off to a room, out the back, in an exceptional manner wherein your rights are suspended indefinitely. People that live entire lives without trial in a world of hidden, exceptional treatment is to me the most terrifying, horrendous disabuse; the suspension of everything, all rights, buoyed by of the murky threat of terrorism or ideological antagonism (Atkins 2016b, n.p.n.)

Practices at the airport are designed to sort and classify people, and since 9/11, it has become one of the most visible sites of discriminatory surveillance. The voluntary acts of disrobing in *Safe Conduct* speak of the specific position of the traveling avatar, with his expensive Macbook computer, who seems to be enjoying the privileged mobility afforded to a generic western white male of certain means, trusted to inscribe power upon himself. Curator of performance and media art Thomas J. Lax has observed that "[a]s we see our guy moving within the choreography typically experienced by brown travelers crossing borders –lying prostrate, hands zip-tied, and bent over – Atkins' surrogate seems to be trying on the pain typically assigned to others. Our pleasure as a viewer is guaranteed (or threatened) depending on our distance from routine surveillance and access to safe conduct" (Lax 2018, 81). This is

a chilling reminder of how the choreography and rhythms of bodies in the airport are distributed differently.

Nonetheless, there is a lingering pleasure in *Safe Conduct*, interfering with and adding to the atmospheres of the work described so far. There are traces of pleasure in repetition and in exposure, present as the digital surrogate is riding the luggage carousel with a complacent radiance of dark desire. With the avatar's eager and contagious humming of *Boléro* and his provocatively exhibitionist stare while riding the luggage belt, the Janus face of surveillance appears – not only the controlling gaze from the outside but also the inner desire to be seen, to partake in surveillance culture – again hinting at the complicity present in contemporary surveillance practices: the small piece in the machine performing its duties burning with *the desire to be seen*. Moreover, in between the rehearsals of the choreography of pain referred to by Lax above, the avatar looks directly at the viewer, visibly aroused by the violence. In addition, and referring back to the quote by Atkins at the beginning of this section, the work has a vein of dark humor. Thus, various and partly contradictory affects merge in the installation – fear, anxiety, isolation, aggression, pleasure, and fun –bringing to mind both Anderson's argument from Chapter 1, that atmospheres are always in the process of emerging (Anderson 2009), and surveillance scholar Hille Koskela's assertion that "[t]he very experience of being under surveillance is ambivalent" (Koskela 2000, 258).

Finally, spectators might feel revulsion and horror towards the digital avatar. The bruises and traces of violence on his body do not have any clear referent, creating an uncanny atmosphere of some looming unidentifiable threat. The texture of his skin, his human voice, and his human-like appearance create feelings of unease and dread; what has been coined the "uncanny valley" by roboticist Masahiro Mori (2012). Mori's hypothesis is that, when encountering life-like objects like humanoid robots, our emotional response changes relative to the degree of resemblance to real humans – when they appear *almost* like real human beings, but fails to do so completely, the result is uncanny feelings of eeriness and revulsion (Mori 2012). This idea is easily transferable from robotics to CGI. The human-like qualities of the texture of the digital avatar's bruised skin, bloodshot eyes, dirty nails, and the stains on his sweater – in sum, the blurred boundaries between human/non-human and the decomposition of his body shown in hyperreal representations – are part of the reason why *Safe Conduct* achieves such an uncanny atmosphere. However, the avatar also brings forth associations of the zombie and the corpse. These associations intermingle. Alongside this

dread there is also, as noted, an attraction present; in the avatar's humming along to *Boléro*, our own potential humming along to *Boléro*. The implications of disaster, death, and violence cater to certain fantasies which are present in the cultural imaginary of destruction post 9/11, suggesting our complicity in the machinery of surveillance and security operating on bodies today. This looming, unidentifiable threat perceived in the atmosphere of *Safe Conduct* is produced by the rituals of preemptive action.

The invisible surveillance and information gathering practices of sorting and analyzing the risk potentials of future travelers work in tandem with the physical screening practices and architectural design at the airport. Indeed, risk management practices and their bodily and affective effects are intentionally calculated, as airport designers and operators attempt to engineer and facilitate affect and behavior (Adey 2008). This echoes the argument by Massumi already noted in the previous chapter, namely that preemptive power "*modulates* felt qualities infusing a life environment" (Massumi 2010, 62). According to Massumi, 9/11 marked the threshold where perceived threats gained "an ambient thickness", which is to say that threat became primarily *felt*, rather than grounded in actual materialized danger (ibid). Yet the *felt quality of* threat is what legitimize preemptive power. From this follows a need to consider the effects on our bodies and lived experience in this environment, not only in the airport, but throughout the spaces of surveillance culture.

The Production of Atmospheres: A Reality Machine

How can thinking about surveillance through the lens of atmospheres and contemporary art add to understandings of our present lived experience? The analysis of *Safe Conduct* in the present chapter forms the first response to this dissertation's exploration of atmospheres of surveillance as an analytical concept. In the above analysis, I have proposed that the artwork *Safe Conduct* effectively opens up new perspectives on how atmospheres of surveillance subtly and suggestively penetrate everyday life down to our feelings, moods, and the movements of our bodies. The work illuminates how our environment, the rhythms of the places and practices of our contemporary time, are experienced bodily – as atmospheres. As the quote from the Icelandic-Danish artist Olafur Eliasson cited as an epigraph to this chapter suggests, atmospheres can work as productive agents when introduced into a space. In the words of Eliasson, atmospheres become a "reality machine" (cited in Borch 2014, 93). This resonates with Böhme's perspective on atmospheres, which proposes that they can be deliberatively *produced* (Böhme 2013, 2017). Spatial environments of surveillance, such as

the airport security check, urban spaces structured by CCTV, flowerpots, bollards, and other material structures designed for safety and to prevent terrorism, as well as less tangible infrastructures of surveillance, create atmospheres which envelop our bodies. Again recalling Böhme's double perspective on atmospheres, he also considers atmospheres as *perceived* – which adds to his observation that atmospheres are always something *spatial* and always something *emotional*. Following Böhme, I would argue that atmospheres of surveillance have productive effects on our bodies and emotions. Atmospheres have effects on our bodies by directing our movements and engagements, for example when rehearsing brace positions and how to go through security rituals, gestures learnt and incorporated in bodily repertoires. Atmospheres have effects on our emotions by implying the need for surveillance - by invoking the perceived threat and danger, producing moods of anxiety and paranoia, and training subjectivities for catastrophe. All of this moreover reinforces the imperative of performing a trustworthy behavior.

In closing this reading of *Safe Conduct,* the de-familiarized airport security check in the artwork reminds us how, in the airport, surveillance is everywhere, and, hence, it becomes the spatial representation of a surveillance society seldom "seen". Thus, *Safe Conduct* displays the dark side of embodied surveillance practices, perfectly trained bodies compliant to rituals of control. Furthermore, the work also illuminates how airport choreographies depend on categories of suspicion which are assigned differently. In this sense, it makes visible the ideologies running underneath the rhythms of security in the airport (Lefebvre 2004). However, I have also shown how the work opens up desire, fun, and the complicities of surveillance in contemporary surveillance culture. Eliasson states that "it is important to note that we are often numb to the atmospheres that surrounds us. Here, architectural detail and artistic intervention can make people more aware of an already existing atmosphere. That is, materiality can actually make atmospheres explicit – it can draw your attention and amplify your sensitivity to a particular atmosphere" (cited in Borch 2014, 95). Applying these insights to surveillance, my suggestion is that thinking about the lived, embodied experience of surveillance through the lens of contemporary art can make certain atmospheres more explicit to us. In *Safe Conduct*, the scenes from the airport security check blend with fragments of real footage from a sausage factory and the mechanical rhythms of *Boléro,* illuminating a surveillance machinery at work, ever so slightly modulating bodies through repetition. The performances at the airport make visible how surveillance directs and produces a

choreography for bodies and a repertoire for behavior. It is an active force, orchestrating and influencing human interaction and behavior (Harding 2018).

Chapter Conclusion

In this chapter, I have explored the potential of written vignettes as an atmospheric methodology. The vignettes aim to absorb and perform atmospheres as rhythm, tone, and affective experience. The ambition is to enable the reader to get *in touch* with the affective experience of the artwork and its perceived atmosphere, while simultaneously foregrounding the situated experience of the work. The vignettes thus form an essential part of the methodological contribution of this dissertation, and contribute to emphasizing the importance of adding nuance to the universalizing vocabulary of atmosphere. However, methodologies attending to fluid and ambiguous phenomena such as atmospheres, whether they are referred to as "affective", "non-representational", or "atmospheric", necessarily work within and upon tension and ambivalence which might simultaneously be "productive" and remain "unresolved" (Bucher 2019; Lapina 2020). In the above analysis, I have experimented with written vignettes responding to my embodied, aesthetic experience of atmospheres of surveillance inside the installation artwork *Safe Conduct*. I have illuminated how the artwork may express ways in which surveillance contains and co-produces atmospheres. The vignettes bring forth how *Safe Conduct*, through the avatar's humming voice and intense presence, his beaten-up face, the rhythms of his bodily gestures, his sneering and staring gaze, get *under my skin* – into the body. Amplified by the insisting rhythm of the music inside the installation space, the surveillance machine comes forth as that which directs and shapes bodies, from the inside. The analysis of *Safe Conduct* thus shows how certain atmospheres involve more or less subtle repertoires for behavior. Being more sensitive to the atmospheres of surveillance in our environment can give us a space to think critically about how these atmospheres affect us, in potentially different ways, how they are absorbed bodily, and how they attune our being: how surveillance is *in the air*. This speaks to the special place of contemporary art**:** it can highlight what goes on around us as it is going on, and it is a domain for questioning and facing the contemporary and the ways in which it influences our lifeworld. As for the aesthetic experience of *Safe Conduct*, it will necessarily open up in various ways for different spectators. Analyzing atmospheres from a production aesthetics perspective is therefore a matter of attending to the "*conditions* in which the atmosphere

appears“ (Böhme 2013a, 3, italics added), while remembering that these conditions will not always be realized.

From here, the exploration of atmospheres of surveillance will continue through a reading of the haunting of surveillance in a technology-saturated modern western home in Hanne Nielsen and Birgit Johnsen’s immersive installation *Modern Escape* (2018). Written vignettes will continue to inform the readings in the subsequent analyses.

CHAPTER 3.

‘The System Only Dreams in Total Darkness’:

The Haunting of Surveillance

> our life has, in the astronomical sense of the word, an atmosphere: it is constantly enshrouded by those mists we call the sensible world or history
>
> Maurice Merleau-Ponty, *The Visible and Invisible*

> Only the Lighthouse beam entered the rooms for a moment, sent its sudden stare over bed and wall in the darkness of winter, looked with equanimity at the thistle and the swallow, the rat and the straw.
>
> Virginia Woolf, *To the Lighthouse*

The Haunting of Surveillance

The present chapter further elaborates on the conceptual framework of this dissertation through an exploration of haunting as a dimension of atmospheres of surveillance. Drawing on the work of sociologist and feminist scholar Avery Gordon, the notion of haunting can be understood as material social forces that make themselves present affectively (Gordon 2008, 2011). Like atmospheres, haunting is something sensed in our surroundings. It is a matter of shadowy manifestations of past or present wrongs (Gordon 2008).[19] To be haunted, then, is “to be tied to historical and social effects” (ibid, 190). Haunting emerges as affective encounters, uncanny experiences where unresolved or repressed social violence – the traces of “modernity’s violence and wounds” (ibid, 25) – are felt in the present. The conceptual affinity between atmospheres and haunting as bodily sensed phenomena has been indicated by Hermann Schmitz, who defines feelings as ”unlocalized, poured forth atmospheres…which visit (haunt) the body which receives them” (cited in Böhme, 1993, 119).[20] Ben Anderson also imply this association when he describes how “atmospheres may

[19] For perspectives on atmospheres and haunting inspired by Derridaean hauntology, see e.g. Buser 2017. See also David Murakami Wood 2015 for a reading of vanishing surveillance and ghost hunting in the new scopic regime. Furthermore, Jan Slaby discusses Gordon’s notion of haunting in relation to affect and temporality, Slaby 2019.

[20] In the original work in German, Schmitz uses the word ‘heimsuchen’, which derives from Middle High German and held the double meaning of visiting someone’s home with friendly or unfriendly intentions, to

interrupt, perturb and haunt fixed persons, places or things" (Anderson 2009, 78). In this chapter I explore how haunting, understood here as a dimension of atmospheres of surveillance, may add an additional layer of receptivity to the violence, politics, and power dimensions of surveillance and its historical continuities. According to Gordon, "[w]e are haunted by something we have been involved in" (2008, 51), such as "all the different facets of the profound and elemental deprivations of modernity […] slavery and racism, state authoritarianism, Enlightenment science, gendered repression" (ibid, 197). Generally, surveillance is not equally distributed, rather it reinforces inequality, difference, and marginalization (see e.g. Browne 2015; Gandy Jr., 2009; Lyon 2003; Monahan 2009; Smith 2015). The lens of haunting activates the weight of the past in present surveillance practices, as well as the injustices we participate in, which are kept out of sight. To be precise, the lens of haunting addresses the more or less subtly felt power relations and violence intrinsic to surveillance practices and technologies. Gordon argues that haunting is "one way in which abusive systems of power make themselves known and their impacts felt in everyday life" (2008, xvi). Thus, following Gordon, being attentive to the haunting dimension of atmospheres of surveillance means listening and being attentive to the workings of power, to the moments and spaces "when disturbed feelings cannot be put away" (Gordon 2008, xvi).

This chapter addresses the second sub-question of this dissertation, that is: *how can the notion of 'atmospheres of surveillance' illuminate traces of the violence and power relations of surveillance?* Specifically, this chapter pursues the research question through an exploration of the haunting of everyday surveillance practices and technologies and argues that the technologies and their affordances become carriers and co-creators of atmospheres of surveillance. The chapter is structured as follows: the first section opens with a closer look at the home surveillance system *Lighthouse* to provide background and motivate the overall argument of the chapter as outlined above.[21] Second, the main section of the chapter analyses an immersive video installation centering on the technology-saturated western home: *Modern Escape* (2018), by the Danish artist duo Hanne Nielsen & Birgit Johnsen. *Modern Escape* directly references the *Lighthouse* home surveillance system, and the reading of the artwork puts forward how the modern western home, more or less subtly penetrated by surveillance, is entangled with the violence and repressive politics of national security and the military

attack. Contemporary standard translations of 'heimsuchen' to English also suggests "to plague, to afflict, to befall, to haunt". Schmitz 1964, 343; Duden Online 2020; Cambridge Dictionary Online 2020.

[21] During the time of writing this dissertation, *Lighthouse* went out of business. The analysis is based on the website including press materials as it was web archived in full by the author on December 18, 2018.

industrial complex. What is more, the chapter argues that the haunted atmosphere of surveillance in the artwork is evoked by the traces of war in the technologies of the home. The chapter concludes with an outline of what the notion of haunting has to offer the concept 'atmospheres of surveillance'.

Into the *Lighthouse*

Lighthouse is an actual AI-enabled interactive home surveillance system which introduced, among other features, object recognition and facial recognition technologies into the home. The interactive assistant for smart home surveillance existed on the US market for approximately a year and a half, from its official launch on May 11, 2017, through the first delayed shipments of the product reached customers in February 2018, to the announcement that the company was going out of business in December 2018. During this period, customers pre-ordered, installed, and lived with the technology. While *Lighthouse* was very much a lived reality, it also represented a technological dream, a specific fantasy of the twenty-first century home. Today, this fantasy lives on in other smart home surveillance systems such as Google's *Nest* and Amazon Ring's autonomous indoor drone *Always Home Cam*. However, *Lighthouse* was at the forefront in introducing features such as computer vision, facial recognition technology, artificial intelligence, and 3D sensors to the home.[22] Technologies simultaneously reflect and shape their time, and surveillance and communication scholar Kelly Gates argues that technologies are cultural forms which embodies "the hopes, dreams, desires, and especially the power relations and ideological conflicts of the societies that produce them" (Gates 2011, 4). What kinds of dreams, desires, and power relations emanate from an AI enabled smart home surveillance system?

The *Lighthouse* AI home system consisted of a 1080p High Definition video camera with high quality automatic night vision and a 3D Time-of-Flight sensor (a sensor which uses infrared light to determine depth information by building a 3D map of e.g. a room), a two-way audio with microphone and speaker, and a security siren (Newman 2018; Tillman 2020). The hardware to be installed in the home was accompanied by an app to be installed on the user's smartphone, customized to alert – or 'Ping', as it was called – the user according to their desires. Its promise: "Simply tell Lighthouse the things you care about, and it tells you

[22] After *Lighthouse* went out of business, Apple bought several of the company's patents (Wood 2019).

when those things happen" (Lighthouse Inc 2018).[23] Users were able to customize their 'pings' according to activities of interest, and the opportunities promised were seemingly boundless as the interactive assistant was willing to learn: "Lighthouse sees and understands your world as you do" (ibid). Customers who subscribed to a more expensive AI service plan could also set alerts based on "person or pet detection, facial recognition, children and waving" (ibid). Daily recaps of all activity were available in short time-lapse videos, and specific activities could be searched for by way of natural language, similar to the use of interactive assistants like Siri or Alexa. In essence, *Lighthouse* offered a searchable database of the home (Newman 2018).

At the core of the *Lighthouse* surveillance system is a desire for total awareness of everything that goes on in one's home in real-time. Surveillance scholar Torin Monahan argues that "[m]odern surveillance technologies […] operate much more on the masculine and controlling end of the gender spectrum", primarily through disembodied control from a distance (Monahan 2010, 113). This observation should be seen in conjunction with the role of gender in the design and engineering of digital infrastructures, and how, as feminist critique has pointed out, the fields of data science and artificial intelligence are dominated by elite white men (Crawford 2016; D'Ignazio and Klein 2020).[24] What kind of world do they envision, desire, and design? What are the affordances of 'masculine technologies' (Monahan 2010)? The two founders of *Lighthouse*, Alex Teichman and Hendrik Dahlkamp, came with backgrounds from the field of computer vision technologies, including the development of the vision system for the self-driving car Stanley, and technology that later played a role in *Google Street View* (Lighthouse "press release" 2017). In the press release launching the technology on the market, sent out from Palo Alto, California on May 11, 2017, the connection between the technology employed in *Lighthouse,* and the military industrial complex was highlighted as a major selling point,

> Lighthouse uses deep learning and 3D sensing technology developed as part of the DARPA Grand Challenge to introduce an unprecedented level of awareness within the home while you're away, accurately distinguishing between adults, children, pets and objects, known and unknown faces, and actions. The Lighthouse interactive assistant provides insight to three core things: what has happened, what is happening and what is happening that shouldn't be happening (ibid).

[23] *Lighthouse* Inc. went out of business in December 2018, and for this reason all references to the content from the company's website in this chapter are based on the author's web archive downloaded December 18, 2018.
[24] For instance, recent numbers show that 79% of engineers at Google are male (D´Ignazio and Klein 2020).

DARPA – the U.S. Defense Advanced Research Projects Agency – was founded during the height of the cold war, with the singular mission of making "pivotal investments in breakthrough technologies for national security" (DARPA 2020). The historical context of its founding can be traced back to the launch of the first artificial earth satellite SPUTNIK by the Soviet Union in 1957, which triggered the space race between the U.S. and the Soviet Union (ibid). This historical period is generally characterized by a strong sense of paranoia. After what is referred to by DARPA as "The Sputnik Surprise", the Agency was founded in 1958 with the ambition to be "the initiator and not the victim of strategic technological surprises" (ibid). On their website, DARPA announces the results of research and technological developments for the military and civil society alike,

> The ultimate results have included not only game-changing military capabilities such as *precision weapons and stealth technology*, but also such icons of modern civilian society such as the Internet, automated voice recognition and language translation, and Global Positioning System receivers small enough to embed in myriad consumer devices" (DARPA 2020, italics added).

Lighthouse proudly communicated the company's affiliation with the U.S. Defense Advanced Research Projects Agency's Grand Challenge. The DARPA Grand Challenge is a prize competition which was first initiated in 2004 to "accelerate the development of autonomous vehicle technologies that could be applied to military requirements." (DARPA 2020). The following year, Stanford University's Racing Team and the self-driving car Stanley won the prize. *Lighthouse* brought the technology into the home, announcing that "[h]aving spent years working on 3D sensing and perception systems for self-driving cars, we came to realize that there was enormous potential for these systems to be *useful and delightful in the home*" (Lighthouse "press release" 2017, italics added). DARPA's funding of and collaborations with U.S. universities and industries is part of a network of innovation intimately tied to warfare and national security.

The technological innovations coming out of these collaborations are entangled with politics. The agency's motto, "Creating breakthrough technologies and capabilities for national security", leaves no doubt as to what the main agenda is. The DARPA Grand Challenge referred to in the press release launching *Lighthouse* onto the market sought to develop an autonomous vehicle to partake in war. As the agency states,

> DARPA does not perform its engineering alchemy in isolation. It works within an innovation ecosystem that includes academic, corporate and governmental partners, with *a constant focus on the Nation's military Services*, which work with DARPA to create new strategic opportunities and novel tactical options (DARPA, 2020, italics added).

Considering the entanglements between a home surveillance system and the U.S. military services' desires for *new strategic opportunities* and *novel tactical options*, it is worth evoking feminist theorist and political scientist Cynthia Enloe's observation that "[t]hings start to become militarized when their legitimacy depends on their associations with military goals. When something becomes militarized, it appears to rise in value. Militarization is seductive" (Enloe 2004, 145). The subtle militarization of the home through computer vision developed for self-driving cars funded by the U.S. Defense Advanced Research Projects Agency casts a different light on *Lighthouse*'s promise of providing "an *unprecedented level of awareness within the home while you're away*". In this light, it attests to the coming together of the logics of warfare, paranoia, and the intimate sphere.

Useful and Delightful in the Home

From national security and military tactics to the home. In an endorsement of *Lighthouse,* one of the then newly established company's major investors highlighted how "[once] consumers experience *the peace of mind and convenience of having a comprehensive view into what's going on at home*, they won't know how they lived without it" (Lighthouse 2017 "press release", italics added). Lighthouse featured facial recognition technology which could be trained to recognize "who's welcome and who's *unexpected*" (Lighthouse Inc. 2018, italics added). Users could set their phone to send alerts if someone unwelcome in the home were detected, so they could immediately ring a loud siren, or address them through a two-way microphone while on the go. There is a strong underlying logic of action at stake, and the user's gaze is remote, but ever-present within the home. It is a gaze which desires to see and to know *immediately*. On the website's 'vision' section, under the header "Building the future of our dreams", the company announced that,

> We live in a time where some fundamental technologies — like artificial intelligence, computer vision, deep learning and natural language processing — have a chance to make a huge impact on our world and everyday lives. And for us, one of the most interesting possibilities is how we can apply all of this to the place that matters most: our home (Lighthouse Inc. 2018).

The concept of *Lighthouse* centered on "peace of mind", a peace of mind directly linked to total awareness. This corresponds well to the findings of feminist surveillance scholar Hille Koskela, who has shown that peace of mind and human emotions play a crucial role in the marketing of home surveillance systems (Koskela 2014). Furthermore, when taking a closer look at the website and narratives describing *Lighthouse*, the desire for peace of mind is supplemented by desires for aesthetic experience, control, care, and connectedness in real-time. For example, *Lighthouse* promised its users aesthetic experiences through livestreaming and the possibility to "see your home live in beautiful 1080p, with support for portrait and landscape modes". This invokes associations to art, that which is *beautiful*, and the genres of portrait and landscape. There is also the promise of entertainment: "color-coded halos make it easy to follow and sort out activity around adults, children and pets. And they're just so cool." The tone of this section of the website is light, fun, and alluding to the trivialities of the everyday. Moreover, the visual design of the website is dominated by light pastel colors of green, yellow, blue, and pink. The *Lighthouse* presents itself as a harmonic place, a utopia of sorts.

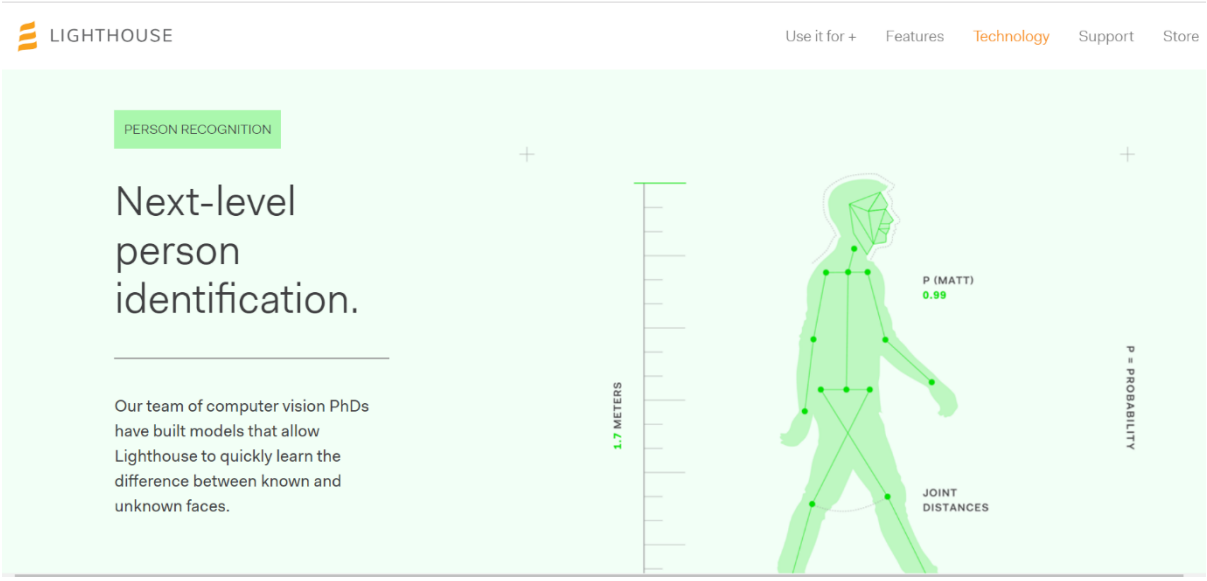


Figure 7: "Building the future of our dreams". Male activity. Lighthouse Inc. 2018, screenshot by author.

Yet a strong undercurrent of control is present. Historically, vision is linked to knowledge, but also to mastery. Consequently, pressing issues arise with regard to how access to the application is distributed within the household. Who is the "you" addressed? Moreover, the *security* feature of the website suggested a subtle militarization of the traditionally gendered feminine space of the home:

> **Get notified. Take action.**
> When you're alerted to a possible security threat, sound the built-in security siren or use two-way talk.
>
> **Night vision**
> Only Lighthouse has full HD night vision, so it keeps watch even after the lights go down.
>
> **Guest Control**
> To eliminate false security alerts and get better notifications on what's happening at home, you can invite family and trusted guests to the app – and set strict access permissions to keep your video private.

When turning to the *search* feature of the website, a persistent sense of paranoia is haunting the technology. The user could search the video feed by voice, and the system worked like an interactive assistant for patrolling the home. But the user was also reassured that "if you're the quiet type, you can instead type a brief search - just like you're Googling your home." The paranoia referred to is present in the promise of quick access to knowledge of pressing matters such as:

> What did the kids do while I was out yesterday?
> Has the cat done anything interesting since I left?
> Who did you see at the front door on Tuesday between 8 and 10am?
> Did you see Chris with the dog at the front door last week while I was away? (ibid)

Furthermore, the *Activity* section promised full control at a glance:

> **What's important, at a glance**
> Whether it's knowing when family members come and go, or what the dog's up to while you're away, get a quick rundown with the built-in Events feed. And with rich notifications, you don't even have to open the app to know what's up.

The tone of language and functionalities promised in this section stand in stark contrast to the lightness and entertainment described earlier. The tone and functionalities described here normalize behaviors that take control and surveillance within the home to the next level. Under the header "Children, pets and facial recognition", it is noted that "while facial recognition should not be used solely for security, it can be used to keep track of both familiar and unfamiliar faces, such as child too young for a cell phone or a teenager's new friend" (Lighthouse Inc. 2018). The desires and affects emanating from the text are the pleasures of control and desires for "total, perfect knowledge of the world" (Kelly 2011, 10).

Figure 8: Whose gaze? Woman, boy and pet. Lighthouse Inc. 2018, screenshot by author.

Will these systems merely be "useful and delightful in the home"? For whom? Recent reports point to how smart home surveillance systems can be used to dissolve peace of mind altogether: smart home technology is increasingly involved in cases of gender-related domestic abuse, employed to intimidate, watch, listen in on, and control current and former partners (Bowles 2018). Victims of intimate partner violence report losing control of Wi-Fi-enabled doors, speakers, thermostats, lights, and cameras in their homes (ibid). As David Michael Levin has argued, there is a strong link between vision and domination: "[t]here is a very strong tendency in vision to grasp and fixate, to reify and totalize: a tendency to dominate, secure, and control" (Levin 1993, 212). Disconcerting reports emerging on the topic of so-called 'smart abuse' suggests that connected technologies, characterized by the affordance of control and observation from a distance in real time, are attractive for perpetrators.[25] Thus affordances of control inherent to the *Lighthouse* home surveillance system is a reminder that surveillance is never neutral more often than not, surveillance reinforce inequality and power relations. Returning to Monahan's observation regarding 'masculine technologies', reminds us that, "[t]o varying degrees, many technologies, if not most […] are products designed better for use by men than by women; or, within their social contexts, they tend to empower men and disempower women" (Monahan 2010, 115). In regards to *Lighthouse*, it becomes clear that the home surveillance gaze is haunted by militarization and gendered repression.

[25] Reports on smart technologies and domestic abuse has recently emerged from the U.S., Canada, the U.K. and Denmark alike. See e.g. Bowles, 2018; Small 2019; Tanczer et al. 2018; Kulager 2019.

Indeed, many key technological advances in civil society worldwide are affiliated with U.S. military funding, as is advanced work in autonomous robots. Artist and technologist Chris Csíkszentmikhályi argues that,

> Cute robo-dogs and independent-minded vacuum cleaners notwithstanding, the field of robotics is primarily a military science. The vast majority of advanced work in autonomous robots worldwide is conducted on behalf of the U.S. military. […] After the attack on the World Trade Center in 2001, many of the promises given researchers by the military that robotic systems would not be used to kill people evaporated, and projects that had previously been built for "intelligence gathering", like the Predator unmanned aerial vehicle, turned out to have been designed to accommodate weapons as well (Csíkszentmikhályi 2006, 205).

There is an intimate connection between the tech industry in Silicon Valley and the U.S. military industrial complex. While technological developments promulgated in the field of consumption often originate in the military field, developments in the private sector also feed into the military. Particularly with regard to machine vision and image recognition software, some of the most advanced systems are developed by private tech companies, which have access to vast amounts of user's data upon which to train their technologies (Holland Michel 2019). This entanglement can be further exemplified by the close collaborations currently taking place between the U.S. Department of Defense and the private tech companies of Silicon Valley. An illustrating example is Project Maven, a military initiative to integrate artificial intelligence into battlefield technology. In March 2018 it became known that Google was collaborating with the U.S. Department of Defense on the project – also known as the Algorithmic Warfare Cross-Functional Team – with the objective of building an AI surveillance imagery analysis system. The objective was, among other things, to develop AI enabled image-recognition software for analyzing video feeds captured by Predator drones and other UAVs (ibid). This can be used to improve drone strikes on the battlefield (Frisk 2018). While months of protest and internal pressure among the employees at Google for staying out of the "business of war" lead the company to – at least officially – withdraw from renewing the contract, this "business of war" is thriving, and attractive contracts and funding opportunities with the U.S. Department of Defense are enabling close connections between the U.S. military and the tech world (D'Onfro 2018).[26] It is also worth noting that, while most of the circumstances of the program are classified, one of the other contractors on the project,

[26] However, *The Intercept* reports that Google never fully renounced work with the U.S. Defense Department, rather the collaboration continues through a venture capital arm, Gradient Ventures, which among other things provides access to Google's AI training data, as well as financial and technological support to start-ups (Fang 2019).

the computer-vision startup Clarifai, specializes in software for analyzing a person's "age, gender and cultural appearance" in videos and photographs (Holland Michel 2019). The above account shows that what is at stake is the matter of what sticks to technologies and systems of surveillance, – to its haunting historical continuities – no matter how smoothly and seemingly innocuously they integrate in the home and our everyday lives. It is against this backdrop that I explore how the concept of haunting may illuminate technologies as carriers and co-creators of atmospheres of surveillance. As the reading of *Modern Escape* will bring forth in the next section, haunting, to repeat Gordon's argument from the opening of this chapter, is one way in which "abusive systems of power make themselves known and their impacts felt in everyday life" (Gordon 2008, xvi). *Modern Escape* directly references *Lighthouse* through appropriated footage explaining the features of the surveillance system, however *Lighthouse* is also echoed in the main concept of the artwork, which is *the automated gaze*.

Modern Escape

Modern Escape (2018) is a video installation by the Danish artists Hanne Nielsen (*1959, DK) and Birgit Johnsen (*1958, DK). The artist duo Hanne Nielsen & Birgit Johnsen has collaborated since1993 and are today among the leading exponents of video and media art in Denmark (Davidsen 2019). Their oeuvre comprises a wide variety of works and themes, including a long-term interest in the formal qualities of the video medium, politics, power, gender, and surveillance. Hanne Nielsen & Birgit Johnsen's artistic explorations of the media, themes and aesthetics of the automated gaze and surveillance has been present from an early stage of their collaborative practice, which can be seen in works such as *Grenåvej* (1995), *Installations in Urban Space* (2004), and *Replay* (2004). According to art historian Louise Wolthers, Nielsen & Johnsen's art confronts a *transparency paradigm*, namely "the ideal of our age concerning objective transparency and superficial visibility" (Wolthers 2014, 170). This transparency paradigm, Wolthers argues, finds expression in "the camera's omnipresence, intensified surveillance and demarcating, the need to register and classify subjects, as well as ultimately in the notion that several media, several visual platforms and more detailed documentation creates a more and more precise and 'democratic' access to the world" (ibid). Nielsen & Johnsen confront and disturb this paradigm in their practice, for example by turning the surveillant gaze around, producing a 'counter-visuality' through critical explorations of the techniques and forms of attention of the camera and the video

medium (ibid, 171). Lately, topics of war, migration, borders, and security have moved to the center of their artistic practice with the works *Drifting* (2014), *Defense Against the Unpredictable* (2014), *Camp Kitchen* (2014), *Modern Escape* (2018) and *Ved Hegnet* (2019).

Modern Escape was created specifically for a solo exhibit at Overgaden – Institute of Contemporary Art in Copenhagen. The installation consists of a large screen with a one-channel color video with sound running in a loop, foregrounded by a podium with a robotic vacuum cleaner kept inside a grid structure of magnetic tape (figure 9). To the right of the screen stands a Verner Panton Panthella floor lamp (a popular classic of Danish Design), and to the left of the screen, an acrylic mobile shaped as the path planner of the vacuum cleaner is hanging from the ceiling. Further away from the screen on the right wall hangs a circular object in front of a small screen, which displays a recording of the rotating circle. The filmic installation itself is 21 minutes, organized in an array of fragmented scenes from inside a home. The scenes are filmed from various angles and levels, ranging from floor level to a "drone view" from above. Overall, the work exhibits a strong tension between technologies and logics of mapping, security, borders, and surveillance on the one hand, and narrative labyrinths, blind angles, distortions, mirrors, and shiny impenetrable surfaces on the other. Accordingly, the desire to map, to see, to surveil, and to know is turned inside out and distorted. Visitors are left increasingly confused. The installation evokes the haunted atmosphere of a home penetrated by an automated gaze that drifts incessantly, opening up randomly strange and awkward vantage points of the interior. The overall structure of mapping, echoes the surveying gaze of automated visualization, connecting the mapping of the home to practices of war and national security. Simultaneously, flickering news screens bring images of refugee camps, borders, and fenced walls into the home. In this home fortress, penetrated by technologies from the military surveillance complex, the boundaries between inside and outside are dissolving. The work responds to and questions the domestication of technologies of surveillance and machine vision, and the subtle militarization of the everyday that the technologies carry with them. Moreover, *Modern Escape* evokes the lingering anxieties of the privileged global north against those to be kept out – out of the home, out of the nation, and out of the collective western consciousness. Overall, the installation induces a domestic atmosphere of surveillance haunted by paranoia, control, and militarization. Furthermore, as mentioned above, the artwork directly addresses the notion of the smart surveillance home through appropriated imagery of *Lighthouse*.

Figure 9: Installation view**,** Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Photo by Anders Sune Berg. Courtesy the artists.

Darkness. The images on the screen are filmed from a low angle. White noise. The perspective moves along a floor, the reflection of a robotic vacuum cleaner passes by the shiny surface of a low shelf. This is the vantage point of the robot. The screen is simultaneously overlaid by a grid map, the path planner created by the smart vacuum cleaner as it is moving. Mapping. Searching. The steady rhythm of that. Suddenly, the lamp to my right turns on. Danish Design, the same as the one inside the video living room. I am startled by an unexpected noise close by me inside the installation space: a robotic vacuum cleaner has started moving around on the podium in front of the screen, somehow stifled. Trapped inside a grid. The living room pours out into the gallery space. I am drawn back into the visual narrative on the screen. A woman looking out the blinds of a modern home, glass windows as walls. Now the perspective is higher, slowly circling around. Flickering TV images and news, a second woman watching TV, a voice reporting on the building of a border wall. Images of barbed wire.

Overall, there is little action on the screen. For example, the opening scene starts from a low angle by the floor, accompanied by the loud white noise of a robotic vacuum cleaner. Next, the vacuum cleaner is moving along on the floor. Soon it is overlaid by a 'pacman grid', which is the AI enabled vacuum cleaner's path planner. There is an electric fan. The interior

on the screen is hard to place at first: there are large shiny pillars, art, and the reflection of the robotic vacuum cleaner (figure 10).

Figure 10: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

Shift to mid-height, an intrusive electric noise. A rotating camera angle, mid height, shift. A new electric sound. Stop. Silence. Shift. TV. Succumbed sounds. The strange electric noise again. A minimalist interior; the gaze patrolling shiny surfaces; everything is light, tasteful. Rotating past a glass table, a shiny carafe; I recognize it as a generic Scandinavian upper-middle class home. Barren. The news-stream: more border walls. A woman, an expensive design armchair, her knees, her skin, her upper body with no head; a cat lounging on a footstool. TV images of fenced walls with barbed wire. The automated gaze swiping slowly past the woman in the chair; only knees, table, carafe; a voice from the news stream uttering "elsewhere". The TV comes into sight; images from a refugee tent camp, earth, white tents, greenery, and people. The gaze is steadily circling, making its round. Shiny surfaces, glass, steel. Those who are kept out. Haunting. The cat lounging. The woman in front of the TV eating Pasta Bolognese, a bottle of beer, an empty cup, a roll of paper towel; the distance in between.

Shift. Drone view from above: dark shiny pillars in an empty space. A sinister soundscape. Strange shiny pedestals; art. The gaze slowly circling. The flat screen TV appears again, reporting on the suffering of those with no shelter. The woman in the armchair seen from above. Shift to a mid-low angle. The gaze is making its round. A review of Lighthouse *comes*

into view, AI surveillance for the modern home. The steady work of the vacuum robot, cleaning.

At first glance, what we have here is a woman standing in front of a window looking out, another woman sitting in an armchair in front of the TV, a cat, a dog, and a robotic vacuum cleaner. This pretty much sums up the cast and mode of action in the work overall. The artists themselves perform the two women in the work, embodying the passivity of the privileged western middle class, recorded by the automated gaze of the machines. Yet, the story is not so clear-cut. Fragmented glimpses of uncanny parallel narratives intervene the 'main' story: an eerie sense of paranoia materialize in a scene showing a woman dressed in tin foil peering out across the street with a small circular mirror. Outside, a man in a white protective suit peers back out from his window; she lets out a sound of fright. The anxious atmosphere intensifies in a later glimpse of two figures inside the apartment wearing the same kind of disposable protective suits (Figure 11).

Another short fragment: two women wearing shiny silver thermal blankets of the kind frequently displayed in media images of refugees after emerging from the waters of the Mediterranean. There is a hoarding up of white plastic canisters, bags of sand or flour, and large stacks of tin cans inside the apartment; bright shiny silver-colored cans with no logo. What is going on? Who is behind this? There is no clear narrative, rather events and vantage points blend in a distorted, confusing plotline. Now the home is almost filled with canisters, cans, bags, and thermal blankets. Barricaded.

While the global news audience would at the time be familiar with the white protective anti-virus suits from e.g. the 2014- 2016 Ebola outbreak in West Africa when the work was first exhibited in 2018, viewers of *Modern Escape* during and after the 2020 – (present) COVID-19 pandemic are bound to bring further associations to the work, as social distancing, home quarantines, hoarding of food and 'prepping' for the worst became a mass activity. A strange foreshadowing of how the world cannot be kept at a distance.

Figure 11: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

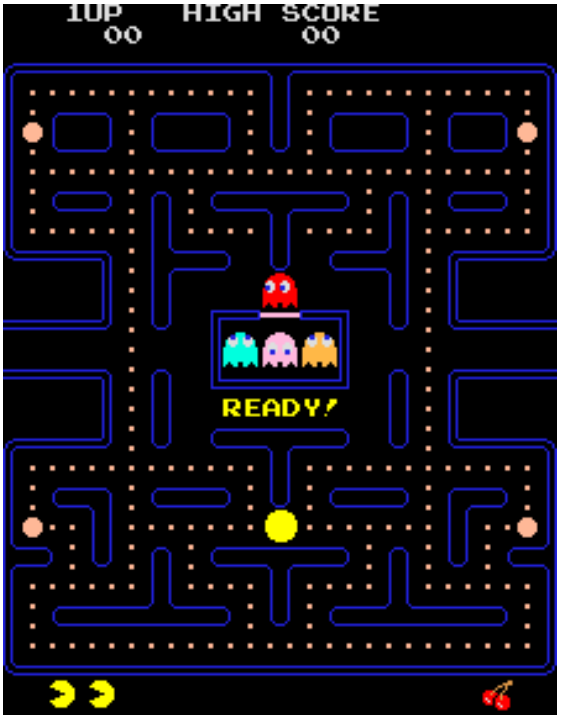


***Figure 12**: Pac-Man.* Source: *Wikipedia*

As previously suggested, there is a tension in the work between technologies and practices of surveillance, mapping, borders, and security on the one side, and labyrinths, blind angles, distortions, mirrors, and shiny impenetrable surfaces on the other. More questions are raised than answers given; desires for transparency are rejected. The mapping of the apartment made by the robotic vacuum cleaner has a resemblance to the labyrinths of the early Japanese computer game Pac -Man (figure 12). In the now classic computer game, the player is a small yellow circle, caught within a labyrinth, h(a)unted by ghosts (*Encyclopedia Britannica* Online). For every level reached, the ghosts get more advancing and harder to avoid. In the artwork, we glimpse brief fleeting images of two human figures in white protective suits. Ghosts. (Figure 11). At the end of the video artwork, almost everything is covered up with Foil Thermal First Aid Rescue Blankets. The vacuum cleaner is working day and night as the emergency supplies accumulates and fills up the space of the apartment.

Drone view from the ceiling: the robotic vacuum cleaner working in the dark, bright lights searching. A peace lily, half-deaf, caressed by the gaze and the foil thermal blankets. The shiny foil is soon about to cover everything, blowing in the wind from the electric fan. Shelter. A brief glimpse: a body underneath the foil, some human skin from the face, hair. The fan running, circling the bodies underneath the silver blankets. The gaze turns, capturing the ceiling. Activity resides with the machine.

Figure 13: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

The Installation as Bodily Experience

Modern Escape evokes an atmosphere of paranoia, an eerie yet unlocalizable feeling that something is not quite right within the western home. From a production aesthetics point of view, a number of artistic strategies address the bodies and affective involvement of spectators as they move around in the dark installation space. First, a sinister soundscape indicates the affective tone of the work. Writing on the atmospheric dimensions of music and sound, musicologist Friedlind Riedel observes how "the sonic holds some kind of affective power to penetrate situations" (Riedel 2020, 3). Riedel's observation resonates with how the soundscape of *Modern Escape* contributes to the experience of a paranoid, haunted atmosphere inside the installation space which addresses the sensing body. The cold white noise of a vacuum cleaner hits the ears, together with the steady mechanic rhythm of its expanding path planner and an undefined and unnerving electric noise as the camera is

rotating. The soundscape is further layered with a polyphony of voices from the global news stream, speaking of the building of border walls, national security, tent camps, displaced people, surveillance technologies, and gender equality. The reported news stories ground the work in our contemporary time and its politics. Second, the spatial fluidity of the installation creates a confusion when it comes to where the work starts and ends. The installation is immersive. The lamp in front of the screen switches on and off, bringing to mind the development of smart, connected technologies within the home. The robotic vacuum cleaner on the podium suddenly starts moving. Thus, the living room on the screen pours forth spatially into the gallery. The placement of the "twin" objects in the installation space which reflects the objects seen on the screen, creates a spatial extension of the surveillance home and its technologies which implicates visitors by addressing their embodied experience of the environment. There is a borderless-ness to the spectator's experience. Simultaneously, the flickering news stories from the flat screen TV inside the video living room take over the main installation screen, further dissolving the boundaries between the inside of the living room and the inside of the gallery. Third, the use of light further addresses the viewer's sensual perception of the atmosphere inside the installation, the cold light of the video screen suggests a detached and isolated mood, which contrasts with the warm light of the floor lamp inside the installation as seen in fig. 9. Through these artistic strategies, the viewer is addressed directly as a literal presence in space (Bishop 2005), as a participant and perhaps as accomplice.

The Automated Surveillance Gaze

> "We seek to problematize several layers of surveillance; our own participation as well as surveillance from the outside." (Nielsen and Johnsen 2019, Interview by author)[27]

Nielsen & Johnsen work conceptually, and the idea behind the work is usually their starting point. The main conceptual idea of *Modern Escape* is *the automated gaze*, and with only very few exceptions, all the scenes in the video are filmed without a human behind the camera.[28] As such, the work can be inscribed into a range of artistic explorations of how machines 'see'

[27] Hanne Nielsen & Birgit Johnsen. 2019. Artist Talk. *Tracking by Default: Infrastructures and Atmospheres of Surveillance* seminar co-organized by author, University of Copenhagen, Denmark, March 19, 2019.
[28] Nielsen & Johnsen, interview by author, Aarhus, Denmark, October 23, 2019. The present chapter draws on quotes and background information from a semi-structured interview conducted with the artists in their studio in Aarhus. The questions through which the interview proceeded are included in the appendix. Technical details were also clarified in personal e-mail correspondence with the artists. I have noted the places where the chapter directly draws on the interview and personal correspondence.

the world, in the tradition after Soviet filmmaker Dziga Vertov's *The Man with a Movie Camera* (1929), Canadian visual artist and filmmaker Michael Snow's *Wavelenght* (1967) and *La Région Centrale* (1971), and the contemporary Iranian-German artist Harun Farocki's *Eye/Machine* trilogy (2001–2003). Throughout *Modern Escape*, the automated gaze registers the inside of the home from multiple angles and from four strictly determined levels, simultaneously orienting and disorienting the viewer (ibid). On a formal level, the work implies surveillance through both the 'gods-eye' – or drone – point of view, and by way of the various camera angles employed in the work, which mainly consists of horizontal rotating images from different vantage points. The images show motifs of abstraction and ambiguity, and there is a lack of a clear narrative in the artwork. The artistic strategy of filming from four levels inside the home creates random and awkward images such as, for instance, the low floor angle of the robotic vacuum cleaner, and the mid-height angle capturing the woman at knee-height (figure 14). The main dogma of the work was to film most of the scenes without a human behind the camera, and this is achieved by filming the lowest and highest images with a GoPro Hero camera glued either to the robotic vacuum cleaner, or to a turntable attached to the ceiling with double-sided tape, while the mid-range angles are filmed by a professional camera placed on turntables (Nielsen & Johnsen 2019, pers. comm.).[29] Only the few vertical close ups are filmed with a human behind the camera. This affords profoundly strange images and distortions, which along with the unclear plot line take the form of an intervention to the desire of total overview or any expectation of clear answers. As spectators, we do not get the full view, resulting in an increasing confusion. Whose gaze is this? What are we seeing? What are we looking for?

[29] Personal e-mail correspondence with the artists, May 19, 2019.

Figure 14: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

Aesthetics of Surveillance

The automated gaze permeating *Modern Escape* generates what can be termed an *aesthetics of surveillance*.[30] The aesthetic of surveillance refers to a formal set of characteristics with strong connotations to surveillance imagery, which will be familiar to viewers today from the widespread use of CCTV footage in the media and popular culture. As suggested by visual culture scholar Anthony Downey,

> surveillance has its own formal aesthetic: surreptitious shots taken from above, acute angles, often grainy footage, a degree of apparent objectivity, and multiple screens. As an aesthetic form, moreover, it implicates the viewer from the outset in its panopticised rhetoric and the implication of guilt that it places (rightly or wrongly) on those who are being viewed (Downey 2010, 78).

The aesthetics of surveillance encourages a distinctive kind of looking originally afforded by the medium of photography, which is the covert, voyeuristic perspective (Sontag 1977). This perspective carries traces of a passive aggression and a transgression of the boundaries of privacy. Furthermore, there will often be a need for directions advising on what we are seeing and/or what we are looking for, and an ambivalence with regard to what is seen, or how

[30] In this first paragraph of the section I partly draw on my own previous summary of the aesthetics of surveillance in Søilen, Karen Louise Grova. 2011. *Sophie Calles Verden: Overvåkning og Selvutlevering i Samtidskunsten* [MA Thesis].

(Phillips 2010). CCTV, drone, and surveillance footage in general involve an assumed privileged relationship to veracity, tracing back to the positivist reception of photography since its official invention in 1839. From its introduction, the camera was considered an impartial instrument, "useful for recording scientific experiments and recording the phenomenal world. It was Everyman's access to a truthful report" (Phillips 2010, 12).

Yet, as art historian John Tagg has shown echoing Foucault, there are deep historical entanglements between the notion of the camera as an instrument of evidence and the emergence of the new practices of observation and record-keeping in the second half of the nineteenth century belonging to the 'new and more penetrating form' of the state, including the new disciplinary institutions of the police, prisons, hospitals, schools, and the factory, as well as the modern sciences (Tagg 1988). Thus photography – invested with a power to see and to record – formed a central technique in the emergence of the modern state and its new institutions of knowledge (ibid). Photography was first used for purposes of surveillance by the Paris police in 1871 (Sontag 1977). The will to knowledge and the "lure of objectivity" sticking to the medium of photography have transferred to the new forms of digital surveillance images and the automated vision of e.g. drones and other 'seeing machines', despite the long rehearsed argument within theory of photography that there is no such thing as a neutral image (Leslie 2015, 24). For example, philosopher and cultural theorist Susan Sontag argues that "[p]hotographs, which cannot themselves explain anything, are inexhaustible invitations to deduction, speculation, and fantasy" (Sontag 1977, 23). In a time of neo-positivist hopes regarding the promises of data systems, biometrics, facial recognition technologies, and computer vision, *Modern Escape* troubles the 'lure of objectivity' of the automated surveillance gaze through the subversion of the logics of transparency. Whether captured on film by a human photographer, or digitally by an AI enabled surveillance system, interpretation of what is seen is decisive, as is the question of the nature and status of the image.

The act of looking itself implicates looking *for* something, deviance, traces of crime, and the ambiguity and invitation to "deduction, speculation, and fantasy" add to the haunted qualities of the aesthetics of surveillance. It is haunted by the lingering inheritance of modernity's will to knowledge and the implication of guilt on behalf of what is seen. In one of the earliest theoretical considerations on photography, cultural critic Walter Benjamin notes how, while "[c]ameras are getting smaller and smaller, and ever more ready to fix fleeting and surreptitious images", these images need to be deciphered and read (Benjamin [1931] 2015,

99). “Is the caption not destined to become the essential component of the shot?”, Benjamin asks in the essay *Small History of Photography* (ibid). This haunting gaze and its implications of guilt is further enhanced by the visual appearance of surveillance images, which traditionally have been in black and white or cool bluish faded colors, often blurred and pixelated, which create sensations of shadowy ghostly traces of events. Particularly the cold bluish faded colors so distinctive of earlier surveillance footage contributed to the specific atmosphere of surveillance characteristic to surveillance artworks from the 2000s, a time when CCTV became a widespread, ordinary part of urban space and the everyday. The faded color blue radiating from surveillance footage becomes emblematic for the mood often prevalent to works from this period. Writing on synesthesia and the experienced “coldness” and “emptiness” of the color blue, Böhme has observed that “blue ‘works atmospherically’ and radiates a specific atmosphere” into the environment (Böhme 2017, 74). This is a noteworthy point for the aesthetics of surveillance discussed here – that the chilling atmosphere so often associated with surveillance footage is created, among other things, by the color scheme of the footage inherent to the technology itself, and how it makes us feel – i.e. its produced and perceived atmosphere. Two works from 2000s which have become classics within surveillance art, Jill Magid’s *Evidence Locker* (2004), and Manu Lusch’s *Faceless* (2007), both illustrate this effect. Magid and Lusch’s works appropriate real CCTV imagery made available for the artists through the UK Data Protection Act which is used to create fleeting narratives of surveillance, desire, and isolation. Nielsen & Johnsen also explored the aesthetics of surveillance in various ways in this period, in artworks such as *Installation in urban space* (Esbjerg, 2004), and *Replay* (2004), both made with low-resolution surveillance cameras set up by the artists in urban space and private homes.

Modern Escape plays with and updates the aesthetics of surveillance. The image quality of the work is high and crisp, rather than pixelated and blurry– which sets the work apart from the typical CCTV artworks of the 2000s and moves it into the drone era, thus updating the way we have come to understand surveillance imagery as a cultural trope. Nonetheless, the cold and faded color scheme of the work contributes to a detached, cold atmosphere reminiscent of the surveillance aesthetics described above. This detached and cold atmosphere is further established by the circumstance that there are no relations and no eye contact between the women in the work and the spectator. We are looking in from the outside. The humans in the work are passive and withdrawn, docile bodies (Foucault 1977) captured by the steady mapping of the automatic gaze. *Modern Escape* explores recent

developments in surveillance technology at both the formal and thematic level, and as mentioned, appropriates footage which details the features of *Lighthouse*. In the artwork, the smart surveillance assistant enters through the flat screen TV in the living room, displaying images of an AI enabled camera sending a light out to circle and measure the space – a glare. A male voice praises how "a siren with solar panel keeps it charged up" and how it has "a simple, understated design and a lot of technology inside…the experience is designed to make the innovative technology simple to use". The color scheme and sleek design of the *Lighthouse* seamlessly integrate with the modern home of the artwork. Nonetheless, despite the overall ominous atmosphere of the work, *Modern Escape* also parodies and plays with the desires for surveillance of the everyday, present in a darkly humored and unsettling scene of a restless dog entering and leaving the living room recorded from the high vantage point of a drone, accompanied by an alarming soundscape (figure 15). A hint, perhaps, to modern home surveillance systems striking preoccupation with the quotidian care of pets.

Figure 15: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

The Machine's Mirror

Modern Escape's vague sense of paranoia can be partly ascribed to the formal exploration of machine vision as decoupled from human agency, and the lack of control with regard to what is 'seen', and for what purposes. Considered as a critical artistic intervention, *Modern Escape* explores questions related to the automated surveillance gaze and perspective. Who is the creator of these images? Who is the recipient? The artwork depicts ambivalent and fleeting

views, and the act of watching is, as previously noted, an interpretative action. However, this is no longer a privileged human activity. As artist and visual theorist Hito Steyerl notes, "contemporary perception is machinic to a large degree. The spectrum of human vision only covers a tiny part of it. Electric charges, radio waves, light pulses encoded by machines for machines are zipping by at slightly subluminal speed." (Steyerl 2017b, 47). How does this shape what is "seen"? Are Benjamin's captions (the subtitle letting us know what we see and what to look for) now perhaps better recast as the literacy to read code, to assess what kind of assumptions underlie the algorithms responsible for image creation and interpretation? This formal experimentation can be seen in the light of artist and new media and communications scholar Joanna Zylinska's notion of 'nonhuman photography', and the observation that "today, in the age of CCTV, drone media, medical body scans, and satellite imaging, photography is increasingly decoupled from human agency and human vision" (Zylinska 2017, 1-2).

This decoupling from human agency and human vision contributes to another uncomfortable feeling created by *Modern Escape*, which is a vague sense of a loss of control and a loss of agency. Sociologist and theorist Benjamin Bratton has referred to this as the "reverse uncanny valley", a discomfort and disillusion experienced "when we see ourselves through the 'eyes' of a machinic Other who does not and cannot have an affective sense of aesthetics […]. We are just stuff in the world for 'distributed machine cognition' to look at and make sense of" (Bratton, n.d., n.p.n.). We are seen, recognized, or known by something which does not possess human capacities, such as emotional connection. This lack of emotional connection is emphasized by the overall lack of eye contact in *Modern Escape*. Bratton suggests that the uncomfortable recognition of ourselves in the machine's mirror reverses the 'uncanny valley' originally coined by Masahiro Mori, which was meant to describe the feeling of revulsion which can arise in us when a robot becomes *too* human-like (Mori 1970. See Chapter 2 of this dissertation for further introduction to the uncanny valley). In Bratton's reversed version, the uncanny arises when, "[i]nstead of being creeped out at how slightly inhuman the creature in the image appears, we are creeped out at how un-human we ourselves look through the creature's eyes" (Bratton n.d., n.p.n.). It is a matter of becoming aware of ourselves as "objects of perception from the position of the machines" (ibid).

Militarization and the Surveillance Gaze

The automated gaze is a haunted gaze. Through it, *Modern Escape* suggests the deep entanglement of warfare, national security, surveillance, and the technologies of the western middle-class home. As noted in the introduction to this dissertation, a range of the surveillance technologies now embedded in everyday life originates in, or is funded by, the military sphere, as is the case with Global Positioning systems (GPS), close-circuit television (CCTV) cameras, locative media, the Internet, drones, and facial recognition technologies (Morrison 2016, 3). In *Modern Escape*, one expression of this entanglement is the deliberately inserted perspective from above, which alludes to the twenty-first century 'eye in the sky', the remote vision of the drone or satellite. On a formal level, this marks a shift from the older filmic trope of mimicking the angles from surveillance cameras mounted in the corner of a room. Hanne Nielsen & Birgit Johnsen note that,

> Surveillance cameras used to be installed in the corners of a room, and employing that filmic angle in a video or film will easily associate to surveillance. Todays' satellite perspectives are a direct angle from above, and we very deliberately installed the cameras to achieve these angles (Nielsen and Johnsen 2019, Interview by author).

This formal decision evokes the association between the domestic surveillance of the everyday and the surveillance technologies of the military industrial complex. Historically, the aerial perspective's association to warfare traces back to the prominent nineteenth century photographer Nadar, who, when he took the first aerial photograph from a hot air balloon in Paris in 1855 "immediately grasped the future benefit of photography to warmakers" (Sontag 1977, 176). Practices of aerial photography and aerial surveillance greatly advanced during World War I, and historian Jeanne Haffner notes how, in France, "views from above provided a comprehensive picture of the landscape –a *vue d'ensemble* – that allowed military officers to locate troop movements, camouflaged artillery, and the trenches at a glance" (Haffner 2013, 8).[31] Significantly, Haffner argues, not only did aerial photography contribute to the allies' military achievement during WWI, it also provided a new way of seeing, "a distanced, holistic outsider's perspective", which laid the ground for new techniques of observation (ibid, 14). With the view from above, then, a synthesis between the surveillant and the military gaze takes place, or perhaps rather a militarization of the surveillance gaze.

[31] It should be noted that this *vue d'ensemble* –'holistic view' – was a combination of aerial surveillance and on-the-ground information gathering, interrogations, and analysis. Heffner 2013, 10.

Fast forward to the current era, yet another new way of seeing is conditioned. This is the disembodied and remote-controlled gaze from above, enabled by new technologies of surveillance, tracking, and targeting. Returning to Steyerl, she observes that this reorientation of the surveillance gaze is enabled by new kinds of technologies such as the satellite or drone and Google map views. Today, Steyerl argues, the linear perspective as we know it from traditional art history is increasingly replaced by the aerial perspective, as new technologies of surveillance, tracking, and targeting emphasize and normalize the god's-eye view from above (Steyerl 2011). This gaze is intimately linked to warfare, according to Steyerl, as "the past few years has seen visual culture saturated by military and entertainment images' views from above. Aircrafts expand the horizon of communication and act as aerial cameras providing backgrounds for aerial map views. Drones survey, track, and kill" (Steyerl 2011, 6). Likewise, philosopher Gregoire Chamayou asserts that the history of armed flying drones is a matter of "an eye turned into a weapon", a development driven by the U.S. military where unmanned aerial vehicles (drones) have gone from primarily being used for purposes of intelligence gathering, surveillance and reconnaissance, to actively participating in combat and strikes (Chamayou 2015, 11-12). Moreover, the shift in perspective noted by Steyerl replaces the stable and single point of view of the linear perspective which was tied to a body, with a dehumanized "perspective of overview and surveillance for a distanced, superior spectator safely floating up in the air […] which establishes a new visual normality – a new subjectivity safely folded into surveillance technology and screen-based distraction" (Steyerl 2011, 8). The subjectivity under construct is the subjectivity of the age of remote warfare. A detached, observant gaze enabled by new technologies which is inherently militaristic.

Mapping, Searching, Recognizing

The entanglement of warfare, geopolitics, surveillance, and the technologies of the western middle-class home is further established through *Modern Escape*'s formal and thematic structure of mapping and tracking practices and technologies. This organizing principle effectively articulates a connection between domesticated technologies such as the GPS-enabled robotic vacuum cleaner equipped with intelligent sensors for charting the home, and the state and military mapping and tracking practices of which these technologies are heirs. In fact, the association between the ordinary everyday object of the robotic vacuum cleaner and the military industrial complex is established right away, in the opening scene where the shape of the vacuum cleaner's path planner overlaying the image resembles a helicopter, a well-known trope of war in visual culture (figure 10). The path planner of the robotic vacuum

cleaner overlays the video in three places, “eating” itself into the image, as the robot is searching, charting, and mapping the home, effectively blurring the boundaries between the commonplace vacuum cleaner and the technologies of reconnaissance, tracking and tracing. The domestic mapping is amplified by the acrylic mobile resembling the path planner hanging from the roof inside the installation, and a similar object displayed inside the video work. Finally, another map appears in *Modern Escape* when the TV shows a Geomap image of a city, a satellite view which is soon overlaid by the grid of the vacuum cleaner. This scene alludes to aerial reconnaissance and computer vision technologies, as the green square familiar from object and facial tracking applications further overlays the geomap (figure 16). *Searching to recognize*.

Figure 16: Hanne Nielsen & Birgit Johnsen *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

The association between commonplace image recognition technology such as the green squares of mobile phone cameras and satellite and drone vision evokes the messy entanglement of familiar everyday objects and technologies of object recognition and computer vision employed by the military. To conclude this point, *Modern Escape* suggests how the violence of war haunts the surveillance technologies of everyday life. It is a matter of what sticks to technologies and systems of surveillance, – to its haunting historical

continuities – no matter how smoothly and seemingly innocently they integrate in the home and our everyday lives. What mediates and co-creates the haunting in *Modern Escape* is the automated vision of the surveillance gaze and the robotic vacuum cleaner's mapping and surveying technologies, both embedded in an inheritance of militarism, imperatives for transparency and control, and the oppressive power relations they carry with them.

Inside and Outside: Borders and Walls

In this final part of the analysis, I argue that the structure of borders and walls in *Modern Escape* draws attention to how the contemporary affluent western world is haunted by its past and present politics of exploitation, and how the logics of national security is reflected on an individual level. In the traditional western liberal sense, the home has been perceived as a space for privacy and retreat. A shelter.[32] In *Modern Escape*, the seeming tranquility of the affluent western home is juxtaposed with the flickering news screen and its images of refugee camps, borders, and walls. Steiner and Veel has noted that "[i]n our contemporary culture, where the physical spaces that surround us are interspersed with digitally distributed information, creating mediated relations with places far away from the given domestic environment, the idea of the home as a closed container is challenged in new ways" (Steiner and Veel 2017, 74). This challenge may take the shape of new materials such as glass walls opening up new views of the interior, but may also manifest itself through screens connecting us to elsewhere, and technologies for purposes of communication and surveillance embedded in the home today (Veel and Steiner 2011; Steiner and Veel 2017). On the flatscreen TV inside the artwork, we see images of fenced walls with barbed wire, and hear news voices report on national security. The contrast of inside/outside is doubled by a contrast of us and them, heightened by voices from the TV uttering the word "elsewhere", and the screen showing images from a refugee tent camp (figure 17). We hear the TV speaking of "those who have little shelter in these flimsy tents" and "more suffering for those already displaced". However, as the narrative moves on, the binary between 'elsewhere' and the safe haven of the home is disturbed as the TV images takes over the full screen of the video installation, and the soundscape layered with a polyphony of voices brings narratives from the global world into the home.

[32] This notion of the home is obviously not fitting for all, as has been rightly argued by feminist critics. Women who are victims of domestic abuse will have to seek shelter *from* the home (Martin 1981; Dobash & Dobash 1979).

Inside the (increasingly porous) home fortress, the simultaneous movements of dissolving borders between inside and outside, and paranoid attempts to upkeep the walls conflate the home and the nation at a symbolic level. The references to national security in the artwork speak of the current paradigm of securitization, fear of the Other, and post -9/11 surveillance politics. In the context of the post- 9/11 security states, feminist surveillance studies scholar Rachel Hall has argued that "spectacles and specters of the terrorist threat nourish a political culture of compulsory transparency or unquestioning support for technological solutions to the threat of international terrorism" (Hall 2015a, 128). Moreover, Hall notes how "[i]n the post-9/11 era, colonial binarism is subtly recast" (ibid). In the first decades of the twenty-first century, anxieties in response to vulnerability to terrorist attacks, environmental disasters, pandemics, economic crises, and crime form what surveillance scholar Torin Monahan has described as a "time of insecurity" (Monahan 2010). Noting how the media and political discourses play a role in the construction of insecurities, Monahan argues that "[j]ust as insecurity is constructed, so it constructs us" (Monahan 2010, 2). Discourses of insecurity shape the 'insecurity subject', who as an ideal type,

> anticipates risks and minimizes them through consumption, regulates exposure to potentially threatening Others through systems of fortification, believes that economic inequalities are natural and social exclusion justified, voluntarily sacrifices privacy and civil liberties on the altar of national security, and fully supports punitive state policies, whether against immigrants, criminals, terrorists, or the poor (Monahan 2010, 2).

Figure 17: Hanne Nielsen & Birgit Johnsen, *Modern Escape*, 2018. One channel color video installation, sound, podium, vacuum cleaner, objects. 21:00 minutes. Courtesy the artists.

Modern Escape calls upon the dialectics of the insecurity subject and the politics of national security through the measures of fortification and barricades both outside of and within the home. As already proposed, the artwork suggests a symbolic conflation of the home and the nation, which resonates with digital media studies scholar Wendy Chun's notion of "the dream of a gated community writ large", and her argument that in 'the age of the fiber optics', the paranoia so characteristic of the cold war has not disappeared, rather it has spread everywhere, seeping into the most intimate parts of our lives (Chun 2006, 2). A paranoid atmosphere is reinforced in *Modern Escape* through the evolving barricade of the home and the short glimpses of figures in protective suits and thermal blankets. Simultaneously, the binary opposition between outside world and inside home, them and us, danger and safety, is obscured. This same artistic strategy was employed in Hanne Nielsen & Birgit Johnsen's closely affiliated work *Camp Kitchen* (2014), which is a single screen filmic installation where the boundaries between the western home and the battlefield of 'elsewhere' dissolves. The screen shows two women chopping vegetables, periodically interrupted by helicopters and war literally entering the home through the news stream, which leads to violent reactions in the kitchen, before the peace and quiet of a protected western life is again re-established. *Camp Kitchen* is structured around the same dissolution of the binaries of inside/outside, home and world, individual and society as *Modern Escape*, where home is no longer a shelter or 'safe haven' but rather penetrated by the violence of the world through the global news stream (Sichel 2014). Both works employ the artistic strategy of defamiliarization, or 'verfremdungseffekt', most well-known from the dramatic theory of German director and dramatist Bertolt Brecht, and referring to the moment in an artwork "when that which used to appear natural suddenly appears historical, when that which was thought of as timeless and eternal is seen as deliberately caused and altered across time" (*The Oxford Reference* dictionary, 2020). This is a political strategy, aiming for change. Nevertheless, while there is action in the kitchen, the living room of *Modern Escape* is characterized by passivity and withdrawal from the world. Not much human agency is present in the work. The many borders and walls emerging globally as seen on the news are paralleled by the increasing barricading taking place inside the home. But still the world seeps in, the political is personal and the outside cannot be kept out – suggesting, perhaps, that there is no escape. The increasing barricades within the home seems to correspond with the anxiety levels and paranoia of the modern insecurity subject and the isolated self is vulnerable. Worlds merge, and the artwork helps us to see the historical moment we are in.

Chapter Conclusion: The Haunted House

"We are haunted by something we have been involved in", Avery Gordon writes (2008, 51), and as the reading of *Modern Escape* has shown, we are haunted by something we are still involved in. To be haunted is, as noted in the introduction to this chapter, "to be tied to historical and social effects" (ibid, 190). In *Modern Escape* the entanglements between everyday technologies and practices of surveillance and the military-industrial complex, national security, and the recast colonial binarism (Hall 2015a) of post 9/11-politics comes to the fore through the estranged home, "that quintessential space of the uncanny, the haunted house" (Gordon, 2008, 50). Sigmund Freud proposed that the category of sensations or feelings of the fearful and frightening belonging to the uncanny (das *unheimliche*) is a matter of "that species of the frightening that goes back to what was once well known and had long been familiar" (Freud [1919] 2003, 124). Along the same lines, the etymological connection between haunting and home can be traced back to one origin of the English word *haunt* which is likely to derive from the Old Norse *heimta*: "to bring home", or "to lead home" (*Online Etymology Dictionary* 2020; *Merriam-Webster* Online 2020; *Norrøn ordbok* 1975).[33] In *Modern Escape,* the warfare and suffering 'elsewhere' is brought back to the affluent western home as a troubling reminder of modernity's inheritance of 'violence and wounds' as well as current politics of exploitation. In a critique of Freud, Gordon maintains that the unconscious is collective, rather than individual, and she argues that the uncanny is fundamentally a social matter – uncanny experiences are hauntings of worldly contacts, "in the world of common reality", she writes (Gordon 2008, 54). Returning to the old Norse heimta, there is a second meaning of the word, which is "a claim", or "what one has to demand" (*Norrøn Ordbok* 1975). This second meaning opens up for a sense of the inescapability that someone might come to collect their due share, and I suggest that it is this repressed knowledge, the lingering presence of past and present social wrongs, that produce the paranoia and sense of haunting in *Modern Escape*. As an affective experience, the artwork induces an atmosphere of surveillance haunted by the violence, power relations, and inequality of the world – which are neither natural nor timeless. The historical continuities between surveillance and abusive systems of power are present here in the traces of colonialism (Browne 2015), in the violence of visuality which can be traced back to the slave

[33] This connection comes about via the Old French *hanter*. However, the etymological derivation from old Norse is unverified and a subject of ongoing academic discussion (Merriam-Webster 2020; Online Etymology Dictionary 2020).

plantations and the battlefield (Mirzoeff 2011), to current links between surveillance and securitization, borders and walls, and the construction of everyday insecurities through the media and political discourse (Monahan 2010). As Gordon further observes, haunting describes "those singular and yet repetitive instances when home becomes unfamiliar, when your bearings on the world lose direction, when the over-and-done-with comes alive, when what's been in your blind field comes into view" (Gordon 2011, 2). My closing argument in this reading is that *Modern Escape* achieves exactly this. The work calls forth the connection between the western middle class and what is kept out – out of the home, out of the privileged global north, and out of the collective western consciousness. It displays the anxieties and increasing efforts needed to barricade the home as well as the western world, and the tensions of globalization's desire for a free flow of capital and some people, while others have to be kept out. In the work, a layer of suggested complicity is added as the spectator suddenly becomes aware of her own watching presence when the lamp turns on and the automatic vacuum cleaner starts moving close by. In this way, the work questions the notion of the technologically connected surveillance home and the spatial tensions between inside and outside, home and world, work, and spectator.

The exploration of haunting as a dimension of atmospheres of surveillance in this chapter has contributed to the conceptual endeavor of this dissertation in a number of ways. The lens of haunting turns the attention towards the range of affective encounters and uncanny experiences where the weight of the past, as well as the injustices of the present, linger "in the air". Adding the lens of haunting to the concept of atmospheres of surveillance allows for the traces of the violence and power relations of surveillance to appear. Through the reading of *Lighthouse* in conjunction with the artwork, I have argued that what mediates and co-create the haunting in *Modern Escape* is the automated vision of the surveillance gaze and the robotic vacuum cleaner's mapping and surveying technologies, ordinary technologies of the modern western home which are closely entangled with the military-industrial complex. Moreover, the haunting of the automated gaze has made visible historical continuities of the entanglements of technologies of vision, surveillance, and war. On the whole, *Modern Escape*'s haunted atmosphere creates a sense of paranoia, an eerie yet unlocalizable feeling that something is not quite right within the western home. Paranoia can be recognized as a feeling without a clearly defined object (Ngai 2005), and in *Modern Escape* the haunted atmosphere of the work creates a paranoid feeling which is based in the lack of a clear narrative and the sense that there is an agency at work which does not possess human

capacities. This feeling is further emphasized by the estranged soundscape inside the installation. Literary theorist Sianne Ngai describes paranoia as a feeling which is characterized by confusion in regards to the feeling's objective or subjective status: "[i]s the enemy *out there* or *in me*?" (ibid, 19). This confusion, she argues, becomes "*inherent* to the feeling". Similarly, the haunted atmosphere of *Modern Escape* creates a confusion in regards to whether the enemy is inside or outside of the home.

Furthermore, the vignettes in this chapter performatively demonstrates how, inside the installation, the perspective of the automated surveillance gaze takes over, the body passively withdraws, and the cold, detached surveillance gaze brings forth a distanced mood. In the previous chapter, the vignettes in *Safe Conduct* gestured towards an affective experience where the atmosphere of the work went *under the skin*. Conversely, what emerges in *Modern Escape* is a sense of *the body disappearing* in favor of a detached surveillance gaze from a distance. *Modern Escape* distorts and disturbs, and a critique of the position of transparency, security and surveillance come forth.

**The title of this chapter is based on the line "The System only Dreams in Total Darkness" which I have borrowed from the rock band The National's song by the same name on the record* Sleep Well Beast*, 2017. Incidentally, the song was released on May 11, 2017 - the same date as the press release launching the* Lighthouse *technology went out of Palo Alto.*

CHAPTER 4.

Factory of the Sun

> Our best machines are made of sunshine;
> they are all light and clean because they are nothing but signals, electromagnetic waves, a section of a spectrum, and these machines are eminently portable, mobile -- a matter of immense human pain in Detroit and Singapore.
>
> […] The new machines are so clean and light.
> Their engineers are sun-worshippers mediating a new scientific revolution
>
> Donna Haraway, "A Cyborg Manifesto"

> Everything moves from enforcement to temptation and seduction, from normative regulation to PR, from policing to the arousal of desire
>
> Zygmunt Bauman, *Liquid Surveillance*

The Way We See and Feel Surveillance Now

Thus far in this study, I have argued that surveillance contains and co-produces atmospheres: affective forces which are perceived and experienced bodily in relations to persons and things or in spaces (Böhme 2017, 17). The two previous chapters have analyzed how atmospheres of surveillance can involve more or less subtle directions and repertoires for behavior, and be deliberatively *produced* in material environments, such as the airport security checkpoint, and how the notion of haunting adds a dimension to atmospheres of surveillance through which the traces of the violence, politics, and power relations of surveillance inherent to the technologies of the modern western home come forth. Thinking of surveillance through the notion of atmosphere emphasizes the *experience* of surveillance, which today increasingly takes place at the intersection of physical and digital spaces. In this chapter, I elaborate on the digital and the computational as inherent to the contemporary experience of surveillance, in accordance with the third sub-question of the study, that is, *how can 'atmospheres of surveillance' articulate affective and social experiences distinct to the present cultural and historical moment of the early decades of the twenty-first century?*

My objective is twofold. First, I aim to offer a much-needed discussion of the role of digital information technologies with regard to the conceptual understanding of atmospheres, and specifically atmospheres of surveillance. Such considerations are needed because connected

and pervasive digital technologies complicate notions of the *spatial* and embodied experience which are central to atmospheres in the phenomenological literature discussed in Chapter 1. In general, the digital tends to be inadequately treated in conceptual discussions of atmosphere, as if belonging to a different realm of existence, or as that which the turn to 'atmosphere' is a reaction against.[34] However, I suggest a move beyond the physical/digital space binary and explore how *atmospheres of surveillance* may be understood in a context where the digital intertwines with the physical, and where surveillance can be experienced in ways similar to what media phenomenologist Amanda Lagerkvist describes as "a heightened sense of embodied connective presence" (Lagerkvist 2016, 98). This argument will inform the overall interpretative horizon of the chapter.

The second objective of the chapter is to offer a further investigation into contemporary art which expresses the experience of surveillance of the present moment – a time best characterized by the synthesis of digital surveillance and late capitalism. One defining element of digitization's effect on surveillance is how it "allows the active sorting, identification, prioritization and tracking of bodies, behaviours and characteristics of subject populations on a continuous, real-time basis" (Graham & Wood 2003, 228). Today it is clear that a main development of surveillance in the first two decades of the twenty-first century is how private tech companies have shaped their business models on gathering, sorting, extracting, predicting, and monetizing personal and behavioral data, what Shoshana Zuboff has coined 'surveillance capitalism' (Zuboff 2015, 2019). A second key development is the role now played by the calculative logics of algorithms in a variety of surveillance and security practices, ranging from predictive policing to border controls, drone strikes, and new algorithmic modes of intelligence data gathering, analysis, and correlation– to the extent that algorithms have become central players in generating worlds (Amoore 2020). In my exploration of the emerging sensibilities and affects connected to the experience of contemporary digital and computational surveillance, I am primarily interested in how artworks reflect, react to, and produce *the way we see and feel surveillance now* in ways comparable to what Raymond Williams once termed 'structures of feeling' (Williams [1977]

[34] Indeed, for some phenomenologically oriented theorists on atmosphere, the notion of atmosphere seems to offer a solution *against* the processes and practices of the digital age. For instance, Böhme writes that the aesthetics of atmospheres, contrary to "the ubiquity of telecommunication, focuses attention on locality and physical presence" (Böhme 2017, 26), and within the field of architecture, atmosphere is employed as a perspective against the prevalence of architects to create their work as 3D renderings in computer programs, as a means to privilege more tactile approaches such as drawing. See e.g. Pallasmaa 2013; Pérez-Gómez 2016; Zumthor 2006.

2015). The central claim in Williams' argument is that emotions are social, forming part of the shared experience of a given period as "meanings and values as they are actively lived and felt" (ibid, 23). He argues for the importance of studying social experience as it is in process, still emergent, and these 'structures of feeling' come forth as "characteristic elements of impulse, restraint, and tone; specifically affective elements of consciousness and relationships" (ibid). In my view, this perspective allows for a consideration of atmospheres of surveillance as shared social and affective experiences distinct to a given historical and cultural moment – in this case, to the lived presence of the early decades of the twenty-first century in the connected global north, with the particular entanglements of desire, entertainment, control, and capital that make up the conflation of the contemporary participatory surveillance culture and surveillance capitalism.[35]

There are good reasons to invite the notion of 'structures of feeling' into a study on atmospheres of surveillance. It is a matter of two closely affiliated, partly overlapping concepts which both seek to articulate affective phenomena that might be elusive, yet are collectively felt, and exert influence. One way of differencing the two is to see 'structures of feeling' as having a longer temporal dimension than atmospheres, pulling more in the direction of collective moods specific to the particular cultural and historical conditions of a given period (Anderson 2014). Indeed, Williams once likened structures of feeling with a "pervasive atmosphere" (Williams 1961, 65, as quoted in Anderson 2014). I understand this in both a temporal and social way: structures of feeling are of a longer duration, they are specific to a particular cultural and historical period, and work at the level of the collective. In the analysis of Hito Steyerl's immersive video installation *Factory of the Sun* (2015) in the second and main part of this chapter, I appropriate 'structures of feeling' as a perspective to recognize atmospheres of surveillance which seems to 'stick around' for longer, in ways that come to articulate historically distinct, affective, and social experiences of the present. Importantly, this is not understood here as a matter of *one*, cohesive social experience, but rather as various concurrent structures of feeling. Hence, the notion of structures of feeling allows me to further theorize the temporal qualities of atmospheres.

Two points from Williams should be noted with regard to the analytical approach. First, structures of feeling are social experience in its liquid form. Williams describes it as "a social

[35] A premise for this argument is that the current form of surveillance culture outlined in this chapter is broadly generalizable for western late modern societies, although surveillance obviously affects different groups within the same society in different ways, and specific cultural and national differences are at stake between countries.

experience which is still *in process*, often indeed not yet recognized as social but taken to be private, idiosyncratic, and even isolating" (Williams [1977] 2015, 23). Cultural geographer and affect theorist Ben Anderson notes that collective affects condition life as "part of the background of life and living" (Anderson 2014, 106). In this regard, 'structures of feeling' is understood as unfixed and often vague, 'in solution', yet with conditional effects for how "life is lived, felt and organized" (ibid, 117). From an analytical point of view, then, identifying or suggesting specific structures of feeling that are emergent and not fully formalized is a matter of identifying their traces. Methodologically, this means that proposing a structure of feeling involves forming what Williams terms a 'cultural hypothesis': an attempt to understand the elements noted ("impulse, restraint, and tone; specifically affective elements of consciousness and relationships") and their relationships to a given historical and cultural moment, before it has solidified into fixed form (Williams [1977] 2015, 23, 24). This leads to the second notable point, because Williams argues that it is in works of art and literature one should look for articulations of the emerging social and affective experience of the present, which comes forth, for example, as "specific feelings, specific rhythms" which can be recognized and related to specific kinds of social experience (ibid, 24).

Inspired by Williams, and through the reading of *Factory of the Sun*, the chapter proposes the notion of *ambient entrapment* as an emerging sensibility towards contemporary surveillance. *Ambient entrapment,* I suggest, belongs to the vague end of the sensorium register – it picks up on something in the background, rather than that which is at the center of attention, and the chapter explores how this feeling is related to an environment of ubiquitous computing and the default data gathering practices of the digital data economy. Accordingly, the focus on spatial complications identified as the digital intertwining with the physical in the first part of the chapter will connect to the second main section of the chapter through the key role of 'ubiquitous computing' and 'the internet of things' for what Zuboff refers to as the 'prediction imperative' of contemporary surveillance capitalism: how the economic imperative to predict and guarantee consumer behavior extends data extraction operations from the online world to the physical world of everyday life, including the depths of intimate and emotional life, with the ultimate aim of shaping and producing behavior (Zuboff 2019, 201).

Spatial Complications

Before turning to the analysis, I will offer a few theoretical considerations on how digital information technologies and embedded and pervasive computing challenge the spatial and embodied experience of atmospheres established so far in the study. This will serve to further develop the understanding of atmospheres of surveillance at the conceptual level, while also establishing the foundation for the discussion of *Factory of the Sun* in this chapter. In general, the phenomenological literature on atmosphere emphasizes the spatial as a key dimension of atmospheres (Böhme 1993, 2017; De Matteis et al 2019; Griffero 2018). This notion of atmosphere is well illustrated by the idea that we can feel an atmosphere when walking into a room. Yet, digital information technologies and ubiquitous and pervasive computing complicate the spatial component of atmospheres of surveillance on the grounds that it is difficult to maintain any meaningful separation between physical and digital space as distinct realms of existence. We move and live in public and domestic environments and intelligent buildings permeated with sensors, where smart technologies chart and regulate flows of traffic and people, humidity, heat and light, and so on – environments which respond to and interact with us. Likewise, these physical spaces are often saturated with connected surveillance systems which are increasingly likely to feature facial recognition and other biometric surveillance applications. Also, we carry connected mobile devices such as the smartphone and various self-tracking tools on our person, which collect, transmit, receive, and share data. With ubiquitous and pervasive computing – also known as the third wave of computation – digital media move from the desktop and into the physical environment of the everyday, and 'online' and 'offline' worlds interweave in new ways (Weiser 1991).

In the following, I will start to unpack these spatial complications by revisiting a classic essay by digital culture and new media theorist Lev Manovich. Manovich was at the forefront of questioning the changing phenomenological experience of physical space as it intersects with layers of digital information, computation, and surveillance in "The Poetics of Augmented Space" (Manovich 2006, first version published 2002). The essay introduces the notion of 'augmented space', initially defined as "the physical space overlaid with dynamically changing information. This information is likely to be in multimedia form and is often localized for each user" (ibid, 220). The notion of 'augmented space' is a move away from the binary distinction between physical space and what Manovich alternately refers to as virtual or cyber space. Contrary to any binary distinction, augmented space refers to digital information and data embedded in physical space. These kinds of spaces are illustrated as, on

the one hand, the walls of buildings overlaid by dynamic multimedia information such as the urban shopping and entertainment environments of Tokyo, Hong Kong, and Seoul, and on the other hand, any built environment where one can access information wirelessly on a personal device. In other words, a key characteristic of augmented space is that it is a physical space filled with technological applications that "*dynamically deliver dynamic data to, or extract data from, physical space*" (ibid, 221). As a result, physical space turns into a 'dataspace' where there is a symbiotic relationship between the technologies for surveillance monitoring and tracking information *from* physical space and its dwellers, and the technologies for augmentation or bringing additional data *into* physical space (ibid, 222).

What is most striking for the purposes of this study, is how Manovich anticipates the cultural effects and phenomenological experience of the additional layering of space with connected technologies belonging to what today is often referred to under the umbrella term 'the Internet of Things',

> I will use the term "augmented space" to refer to this new kind of physical space [overlaid with dynamic data]. As I have already mentioned, this overlaying is often made possible by the tracking and monitoring of users. In other words, the delivery of information to users in space and the extraction of information about those users are closely connected. Thus, *augmented space is also monitored space* (Manovich 2006, 223).

Importantly, Manovich identifies a direct relationship between the embeddedness of connected technologies in physical space and surveillance. What is more, the combination of technologies for extracting and delivering information to physical space makes the built environment 'multidimensional', and thus complicates the notion of physical and digital space as separate realms of experience. As a result, a new challenge emerges as to how the environment can be perceived by the human senses:

> the physical space now contains many more dimensions than before, and while from the phenomenological perspective of the human subject, the 'old' geometric dimensions may still have the priority, from the perspective of technology and its social, political, and economic uses, they are no longer more important than any other dimension (ibid, 223).

In my view, these are crucial insights for the understanding of atmospheres of surveillance in the digital age. Both the notion of the spatial and embodied experience are complicated when the physical environment is embedded with connected technologies of tracking and monitoring. Moreover, the monitoring and extraction of information might well escape

human awareness. In this way, the notion of augmented space as proposed by Manovich supports my proposition that the spatial component of atmospheres of surveillance needs to include the current configuration of ubiquitous and pervasive computing, digital information technologies, and the built environment. Manovich was among the first to more thoroughly consider the spatial and experiential complications of what has been characterized as the 'third epoch' of computation, and its dialectic with surveillance. He also makes note of the historical shift from an attention to virtuality and 'cyberspace' in the 1990s, to the preoccupation with the embedding of computation in the environment and physical objects since the turn of the millennium (Ekman 2013). The notions of cyberspace and virtual worlds of the early phase of the world wide web are often related to an optimistic and utopian vibe of the internet prevalent of the time, and connected to fantasies of liberation from the body and the physical world (Bolter 2016). The term 'cyberspace' itself first appears in the fiction of American author William Gibson in the early 1980s, most famously in the cult science-fiction novel *Neuromancer* (1984), of which the persuasive cultural imaginary of an immersive, virtual world created by computer networks separate from physical reality is indebted (Bussel 2013). This cultural imaginary of cyberspace was influential in the discourse on the internet in the 1990s as it became available for popular use through the world wide web. Despite the immersive 'spatial' language used when referring to computer-mediated-communication, such as for example "sites", "addresses", and "rooms", which, as observed by Mark Nunes, effectively situates the user "*within* the medium" (Nunes 2006, xiv), there is nothing *spatial* about cyberspace. Media theorist Wendy Chun reminds us that,

> cyberspace erases all reference to content, apparatus, process, or form, offering instead a metaphor and a mirage, for cyberspace is not spatial. […] contrary to turn-of - the- century parlance, you do not meet someone in cyberspace. Not only are there at least two ''originary'' places (the sender's and the recipient's computer), data travels as discrete packets between locations and can be cached in a number of places (Chun 2006, 39)

Thus, the dream of bodiless minds acting in cyberspace falls to the ground. As embodied beings, tied to (however technologically modified) organic bodies, we remain situated, always in place. Importantly, then, the spatial complications identified in this chapter do not concern the fantasy of virtual disembodied existence in cyberspace, which today lives on in transhumanist ideas. On the contrary, the spatial complications I am referring to are understood as materially grounded in physical space as it is experienced by material bodies, where the binary between physical and digital, offline and online, dissolves in new ways.

This means that we are still in the phenomenological 'space of bodily presence', as discussed in Chapter 1 of this study, referring to "the space *within which* each of us experience our bodily existence" (Böhme 2013b, 460). In other words, it is a matter of the digital environment becoming interwoven with the material world.

The Third Epoch of Computing

The intertwining of physical and digital space discussed above has been identified by computer scientist Mark Weiser as the 'third epoch' of computing (Weiser 1991). It follows the previous identified epochs of computing: first, the physically stable location of the mainframe shared by many, and second, the desktop personal computer for the single user (ibid). In contrast to the previous two, the 'third epoch' is characterized by computing entering into the physical world and becoming a more or less invisible part of the lived environment. According to Weiser – who is also known as the father of the term 'ubiquitous computing' – computing was to become an "integral, invisible part of people's life" and "vanish into the background" (ibid, 94). Ubiquitous computing, then, was proposed as the direct opposition to the inside-the-computer world of virtual reality, which could be accessed through special glasses or gloves. On the contrary, Weiser argued, the third epoch was to become a matter of 'embodied virtuality': "drawing computers out of their electronic shells" and bringing a myriad of small and connected, embedded computational entities into the physical world (ibid, 98). Significantly, these small, connected, more or less invisible and embedded mini-computers sense and react to their environment, and communicate with each other (Ekman 2013).

The proposed invisibility of ubiquitous computing is, however, not so clear-cut. Digital culture scholar Ulrik Ekman speculates that, "[p]erhaps ubicomp technics cannot be altogether withdrawn, discrete, invisible, or indiscernible […] but must involve at the very least a certain atmosphere, an ambiance, and an affectivity quite close to 'us'" (ibid, 44). In a related manner, while we cannot necessarily see or identify surveillance and data gathering technologies by entering a room or a public space, we might still have a sense that they are present – perhaps based on abstract knowledge, subtle clues in the physical environment, or from notifications on our devices as they are interacting with other 'things'; it can be a matter of *a certain presence of something*, which influences our embodied experience of the atmosphere of the environment in question. Architecture scholar Malcolm McCullough proposes that, as mobile and situated computing technologies permeate our surroundings in

new, often subtle ways, we should understand these environmental information technologies as *ambient* (McCullough 2013). McCullough draws on the work of the philologist and literary scholar Leo Spitzer in his understanding of 'the ambient' as that which surrounds in subtle or unnoticed ways, a part of the environment as background rather than center (Spitzer 1942). Clearly, this is also of importance to how we may understand the experience of surveillance today, as I will argue later in this chapter. However, while McCullough recognizes the advantages of ambient information technologies, particularly with regard to the distribution of human attention, my emphasis is on its more problematic sides as I regard information environments of embedded sensors, mobile computing, and algorithmic processes as "fundamentally surveillant" (Monahan and Murakami Wood 2018, xxix). I return to this understanding of the ambient from the perspective of surveillance in the analysis of *Factory of the Sun.* As a preliminary conclusion to this, I note that connected mobile devices, and the increased integration of connected Internet of Things (IoT)-technologies in the built environment, also known as 'ubiquitous' or 'pervasive' computing, complicates any meaningful physical/digital space distinction. What is more, these technologies, which "weave themselves into the fabric of everyday life until they are indistinguishable from it' (Weiser 1991, 94) bring us closer to what surveillance scholar David Murakami Woods has identified as 'ambient ubiquitous surveillance societies" (Murakami Wood 2015, 281).

A Heightened Sense of Embodied, Connective Presence

Not only notions of space, but also embodied and sensory experience and notions of the body are complicated by the digital information technologies and embedded computing discussed above. Clearly, the technologies involved are increasingly hard to detect by human perception, which means that computation is integrated in everyday lives in ways that might make it almost impossible to know when and where the systems are operating (Galloway 2013). As observed in Chapter 1 of this study, digitization has consequences for the role of the body, which now stands in tension between on the one hand being the medium through which we perceive information and the world (Merleau-Ponty 1962), and on the other hand, itself increasingly becoming decorporealized into bits of divisible information or quantifiable data, turned into *dividuals*, *data doubles*, or *trace bodies* (Deleuze 1992; Haggerty and Ericson 2000; Hong 2015). Furthermore, as an increasing number of everyday activities and interactions take place online, there remains a tension between bodily experience in physical

space and the data traces and afterlives of our digital actions. Yet, as I have argued, while the physical body is becoming separated from its data to the extent that warnings are issued against data subjects becoming more real than their referent, the body simultaneously returns with new force. With the integration of biometric identification technologies for mapping and tracking the human body such as facial recognition technologies (FRT), behavioral biometrics, and affective computing, biological bodies become sources of the 'true' self, and bodily parts and behaviors are rendered as binary code for identification in real time (Magnet 2016).

However, philosopher Colin Koopman points out that we are not only "minded and embodied creatures", we are also our information, and as such who we are is "deeply interactive with data" (Koopman 2020, 8). Koopman, following a Foucauldian line of thought, argues that our data cannot simply be considered external to us as something from which we can separate a truer self; rather our data co-produce our subjectivities and form constitutive parts of us (Koopman 2020). This is to be understood quite literally, according to digital sociologist and feminist new materialist Deborah Lupton, who maintains that people and their data are inextricably entwined in "human-data assemblages" (Lupton 2020, 12). Lupton highlights the *materiality* of our lives with and as data, stating that

> While digital data assemblages are often conceptualized as immaterial, invisible and intangible, I contend that they are things that are generated in and through material devices (smartphones, computers, sensors), stored in material archives (data repositories), materialized in a range of formats that invite human sensory responses and have material effects on human bodies (documenting and having recursive effects on human flesh) (Lupton 2020, 19).

Lupton's argument proposes that not only the binary between physical and digital space is dissolving, but also the relationship of humans and their data as separate entities; understood now as a material, cyborg-like relation. Wearable computing, prostheses, implants, and 'intimate machines' (Turkle 2007) such as the smartphone bring forth new configurations of the organic body, its data, and integration with technologies. Hence the body becomes data while data also constitute parts of the body, which resonates with posthuman theory's notion of an ontological breakdown between subject and object, human and non-human (Braidotti 2006; Haraway 1991; Hayles 1999). Taken together, these considerations gesture towards a new context for how to understand the lived bodily experience of surveillance.

On this basis, I propose that *atmospheres of surveillance* should be understood in a context of physical, yet multilayered spaces where the physical and digital integrate in new ways, sometimes seamlessly and at other times less so, and where digital surveillance technologies is likely to be present, yet often invisible. Following from this, I would suggest that the embodied experience of atmospheres of surveillance in connected, multilayered space is able to include a more or less vague sense of vulnerability with regard to our digital data traces similar to what media phenomenologist Amanda Lagerkvist describes as "a heightened sense of embodied connective presence" (Lagerkvist 2016, 98). According to Lagerkvist, the lack of control over what she refers to as our 'digital surrogates' brings about insecurities and uncertainties specific to life in the digital era,

> Today, within opaque digital assemblages imbricated in our embodied existence, our being there entails insecurities as to the status of our digital data traces and an uncertainty about our capacity to gain a hold on them. This anxiety is about the possibility to secure or keep track of our memories and "trace bodies" (Hong, 2015) when we simultaneously know that they exist, that they are present, yet cannot *feel* their exact clout and whereabouts. They are confusingly (un)beknownst to us, as are (for a majority of people) the surveillance systems we have surrendered ourselves to. (Lagerkvist 2016, 105, italics added).

Where Lagerkvist is mainly concerned with the vulnerabilities arising from online activities, I would argue that corresponding vulnerabilities are present when it comes to surveillance in physical environments saturated with digital information technologies and ubiquitous and pervasive computing. Lagerkvist identifies a relationship between the heightened sense of embodied connective presence and a feeling of *anxiety* as defining for the way we experience existence and surveillance in the digital era (Lagerkvist 2016). Others, too, have identified specific feelings to describe the way we perceive and experience current surveillance environments. Murakami Wood proposes that the combination of what he describes as "passive, background, infrastructurized surveillance systems" and fast, often disguised robotic surveillance devices, change "both the spatiality and the temporality of the perception of surveillance" (Murakami Wood 2015, 290), something which "generates uncertainty" and "unsettles" (ibid). Vanishing surveillance, according to Murakami Wood, is uncanny. Similarly, when questioning what the lived reality of big data *feels* like, AI researcher Kate Crawford finds a dominant cultural affect to be *surveillant anxiety* – "the fear that all the data we are shedding every day is too revealing of our intimate selves but may also misrepresent us" (Crawford 2014, n.p.n.).

The above observations point towards particular social and affective experiences specific to the contemporary conflation of surveillance culture and surveillance capitalism, and support my current argument that the structures of feeling of present surveillance need to be considered more closely. Now, drawing on this discussion, my overall point here is a straight-forward one: theorizing 'atmospheres of surveillance' as a concept for understanding the social and cultural experience of surveillance distinct to the historical moment we are in requires attention to the digital and the computational as inherent to lived experience of surveillance. This includes attention to surveillance experienced as a "heightened sense of embodied, connective presence" in hybrid space, where the physical and the digital is entangled and interwoven. In other words, media and information technologies have become environmental (Durham Peters 2015; McCullough 2013). The same can be said about surveillance, as embodied experience now increasingly takes place in, and is formed by, digitally connected and sensor-embedded spaces attentively oriented towards us (Ekman 2016). I have now established an understanding of how digital surveillance and ubiquitous computing complicate both the notion of space and of embodied experience as crucial components of the concept of atmosphere. Moving forward, these theoretical considerations will inform the contextual horizon of the reading of *Factory of the Sun*.

The Body in the Light Grid, Lounging

Moving into darkness towards the light of the screen. Once inside the installation I find myself immersed in the all-encompassing environment of a light grid made up of blue LED light. Think the 80s sci-fi classic Tron. *The game grid. A passive body lounging in a comfortable sun chair, sunbathing in the light from the large screen. My body. The light grid. A black box. Who said Max Weber's stahlhartes Gehäuse. On the grid, off the grid, in the grid. The screen is counting down to a video game, there's house music, a bombardment of images, a bombardment of the senses, a commercial, a news story, drone surveillance, a Deutsche Bank killer drone, a YouTube dancer in a worn-down basement living room dancing on green artificial grass – confusion and numbness.*

Light is deep entertainment and destruction. Deadly transparency. A matter of intense human pain. Shiny golden dancers in a motion capture gulag: you are the raw material. Lean back and enjoy - this is the real McCoy. The words of the work and my own thoughts and

associations are intertwining, looping like mantras inside the exhibition space. Chattering echo chambers, smoothness and noise. On the screen, silver letters form a sentence: This is not a game. This is reality.

Figure 18: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Exhibition view: *All the World's Futures*, German Pavilion, 56th International Art Exhibition – La Biennale di Venezia, Venice, 2015.Courtesy the artist, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Photo © Manuel Reinartz.

Factory of the Sun (2015) is an immersive video installation by the German visual artist, filmmaker, and theorist Hito Steyerl (*1966, DE). In the artwork, the digital data economy and its relationship to 'participatory' surveillance culture is pushed to its extreme and turned into a motion-capture studio gulag, albeit a slight silver lining is left for collective resistance. In what follows, I address feelings belonging to the social and affective experience characteristic of surveillance culture here and now. I do this by exploring the overall affective experience of the installation as a pervasive atmosphere through the conception of *ambient entrapment*.

Steyerl has become influential within the field of contemporary art in recent years with a body of artworks and philosophical essays centering on the circulation of images in contemporary computational culture, surveillance, artificial intelligence, digitization, the commodification of information, and the industry of modern warfare (Christov-Bakargiev &

Vecellio 2018). Her artistic work is grounded in theory, and her philosophical writing fitsthe genre of speculation. Steyerl has published a number of essays on the politics of the image in late modern society and the contemporary political condition with a keen eye to the exploitations and complicities of the art system itself (see e.g. Steyerl 2017b). Steyerl's writing is political, activist, feminist, and often with a nod to Walter Benjamin and the Frankfurt school. Taken together, Steyerl's work as an artist and a theorist forms a complementary practice of exploration, reflection, and critique, described by curator and art scholar Carolyn Christov-Bakargiev as "ultimately thought in practice, thought in action, […] [a]lways aware of the urgent knots entangling technology, consciousness, social injustice, and violence" (Christov-Bakargiev 2018, 38). While Steyerl's early artworks can be described broadly as questioning the status and the genre of the documentary image, *Factory of the Sun* belongs to a strand of later works characterized by playful critique of surveillance and the security apparatus, such as in *Guards* (2012) and *How Not to Be Seen: A Fucking Didactic Educational MOV.File* (2013), and immersive installations centered on the pervasive nature of the digital and late capitalism, high frequency trading, and AI, such as *Liquidity Inc.* (2014), and *Hell Yeah We Fuck Die* (2016).

The video installation environment *Factory of the Sun* was originally created for the German Pavilion at the Venice Biennale in 2015.[36] The artwork consists of a single channel high-definition video shown on a large screen in a dark black box environment, illuminated by a luminescent LED grid which covers the floor, walls, and ceiling. The screen itself is installed in a frame resembling the built structures of a motion capture studio, a construction which might also bring to mind the transformer tower of an electrical grid. Multiple beach chairs invite visitors to lounge in front of the screen. The video is 23 minutes long and takes the form of a digital montage of fragmented images and plots which merge into the story of the making of a video game including the programmer's own family narrative, as well as recent events involving the killing of political protesters by a drone operated by Deutsche Bank. It makes for a flickering experience of staged levels of fact and fiction, where it is hard to distinguish between true and false. The visual narrative is composed of a hectic blend of advertising, video game images, animation, staged news footage, YouTube dancing videos, and the meta-level story of the making of the video game of the work.

[36] My analysis is based on visits to the exhibition of the work at Kunsthal Charlottenborg in Copenhagen December 8, 2016-February 19, 2017 and access to the film itself has been provided by the artist. However, the work was installed similarly in the venues in Copenhagen and Venice.

Factory of the Sun opens with a blank grey screen counting down time before the 'next round', which immediately establishes a relation between what is to come and a video game. The countdown is soon interrupted by a 'message from the sponsor", where a slick man in a black suit appears, discussing "the speed of light". The acceleration of the speed of light will optimize high frequency trading, he explains, and this is what they are currently working on at "Autobahn Equity".[37] Following this, the opening sequence comes across as an infomercial telling spectators that 'Our machines are made of pure sunlight", a message which is illustrated by a silver-colored MacBook floating seductively in the air, drizzled with golden miniature light bulbs before a glaring light. *Factory of the Sun* features Yulia, the aforementioned video game programmer, who is in the midst of coding layers for a game incidentally also called *Factory of the Sun*. "But you will not be able to play this game", she lets us know, "it will play you". Yulia reveals the mission of the game: "You start off as a forced laborer in a motion capture studio. Every movement you make will be captured and converted into sunshine." From here onwards, the video is a meta-narrative about the design of the layers of the game, interwoven with Yulia's own incoherent story of a post-soviet migrant life, fleeing the authoritarian regime of the Soviet Union with her family in childhood to end up working in the west.

The character 'Yulia' in the artwork shares name with and is played by Yulia Startsev, a real Berlin-based computer programmer who has been working with Steyerl on several projects. Other characters in the work include Yulia's brother, a YouTube dancer who started out in their family's basement in Canada, and whom we see in a Youtube dance video appropriated from the real YouTube phenomenon TSC (TakeSomeCrime), a (fictious) spokesperson from Deutsche Bank, who is trying to explain himself away from the drone murder on Deutsche Bank's Sunshine Campus, and a range of animated activists who were killed "in the future" – in other words, it is a highly eclectic mix of fact and fiction which resembles the blending machine of digital culture itself. Perhaps the main narrative of the work is the story of the workers in a motion capture studio gulag, forced to dance in tight golden suits sticking to the contours of their bodies, laboring to produce light: the source of money and information travelling through fiber optic cables in the digital data economy.

[37] In an artist talk Hito Steyerl has revealed that Autobahn Equity, improbable as it might sound, is an actual High Frequency Trading division of Deutsche Bank (Cornell and Eccles 2016).

A Sense of Ambient Entrapment

Leaning back in the beach chair, why care? I recline in front of the screen, I enjoy the soundscape driven by soft electronic house music. The pleasures of listening and watching the bodies dancing. More associations: the sun chairs, vacations, the warmth of sun and sticky sunscreen, cheap mass tourism, cruise vacation, the passive mass tourist experience par excellence. Engineered to satisfy any possible customer desire or demand. Engineered desire. And then a pervasive feeling of an environment saturated by surveillance and exploitation, where the way out is hard to find. The confined space of the grid structure and the matrix of connecting lines in a squaring of the space are both claustrophobic and seemingly endless. Inside the grid, everything is quantified and formalized, calculated and accounted for. Predicted. Yet the structure itself is dark, pitch black like space.

Factory of the Sun is structured by a complex intermingling of control, gaming, pleasure, surveillance, violence, and exploitation. The formal qualities of the artwork generate a vision of the contemporary experience of the digital age experienced as an invasion of the senses, manipulation and misinformation. The work articulates a sensual overload which leaves a certain numbness and disorientation, yet it is also a pleasurable experience. The artist has explained that "the reason why I made it so disjointed and jarring, is because it is a documentary, this is how reality works – not everything is coherent and smooth and immediately intelligible" (Steyerl 2016, n.p.n.). The numbness and pleasure referred to above is amplified by the bodily affordances inside the dark installation space, where visitors are immersed in the blue LED grid environment, encouraged to recline passively in the beach chairs which face the screen. The blue LED grid is an overt reference to the 1982 cult-film *Tron*, where the protagonist is a software engineer who is captured inside the malicious software system of a computer, trapped inside an electronic arena – the game grid – where he has to fight for his life in the oppressive system of the Master Control Program (Lisberger 1982). Today, various 3D grids (or meshes) have become increasingly familiar components of 3D renditions of all kinds of mundane tasks in everyday life, like, for instance, designing a new kitchen with Ikea's kitchen-planner. What is more, the combination of sun chairs and the visual experience on the screen of the crushing power of the digital data economy is a highly effective juxtaposition which evokes the current form of surveillance between force and participation.

Art critic Ferdinand Ahm Krag asks "Why the sun chairs?", and finds the answer to be, "because the 'sun factory' is more than anything a metaphor for the technological sun's triumph over the real sun in an accelerated capitalist endgame that aims at making light, capital and information merge to become an absolute form of power" (Ahm Krag 2017, 12). The installation is indeed a totalizing experience, dark, closed, entrapped. But it is also suggestive, pleasurable, alluring. The LED environment encapsuling the spectator creates something like that 'heightened sense of embodied, connective presence' (Lagerkvist 2016) referred to in the first part of this chapter: a feeling that the digital environment becomes indistinguishable from the physical environment, enclosing us, while everything is connected. As such, our contemporary condition is of the kind art critic and curator Karen Archey has described as 'digital-physical liquidity' (Archey 2014, 223). What is perceptible as time passes inside *Factory of the Sun* is a vague, yet pervasive feeling of a controlled environment saturated by surveillance and exploitation, where the way out is hard to find. This is at the core of what I conceptualize as *a sense of ambient entrapment* – it is a sensation of something working and conditioning in the background, of technologies extracting and exploiting our personal data, while at the same time encompassing desire and the lure of these technologies and devices. It is an ambivalent feeling. It speaks of invisible walls, of the rewards of desire, and of the ways in which the tech industry deliberately works with psychological and socio-biological insights on human reward mechanisms in their design practices. *Ambient entrapment* speaks of 'tuning' and 'nudging' as a strategies to shape, manipulate, direct, and produce intended consumer behavior (Zuboff 2019, 200, 293).

The first word in this compound term, 'ambient', can be traced back to the Latin verb 'ambire', to "go around", "visit in rotation," "inspect," "solicit," "canvass," "encircle," or "embrace" (McCullough 2013, 20). Ambiance refers to "things which surround, envelop and influence us" (Thibaud 2020; n.p.n.). It is grounded in the sensory world, as a background phenomenon. It is, as noted in Chapter 1 of this study, often used interchangeably with 'atmosphere'. Yet if any distinction is to be made, it could be that 'ambiance' tends to be discussed more frequently in terms of operating in the background, while 'atmospheres' are ascribed with qualities which may exert a stronger authority on experience (see e.g. Thibaud 2020; Griffero 2018). McCullough has proposed that with pervasive and situated computing, our surroundings have become ambient information environments; and he writes that "there is a close relation between ambience and *ubiquity* in the sense that ambient fields are experienced as 'total fields', all over and ubiquitous" (McCullough 2013, 177). *Ambient*

entrapment, I propose, belongs to the vague end of the sensorium register – it picks up on something in the background, rather than that which is at the center of attention. Yet this background phenomenon surrounds us as a whole. The second word, 'entrapment', refers to a sense of being 'caught in the net', lured in by shiny devices and our own desires. It is a sense of being enmeshed, and deliberately so.

Indeed, *Factory of the Sun* evokes pleasure and desire in multiple ways. As previously mentioned, there is pleasure in listening and being carried away by the soft electronic house music inside the installation, and in watching the bodies on the screen dancing. Moreover, desire is visually present through the overall color scheme of the video work which is shimmering gold and silver. There is the familiar silver shade coating of the Apple MacBook–like laptop which is floating in the air, and the luminous gold of the miniature light bulbs which surrounds it, the golden tight suits worn by Yulia and the dancers, and shiny golden digital Stalin busts floating over water in one of the video game levels.

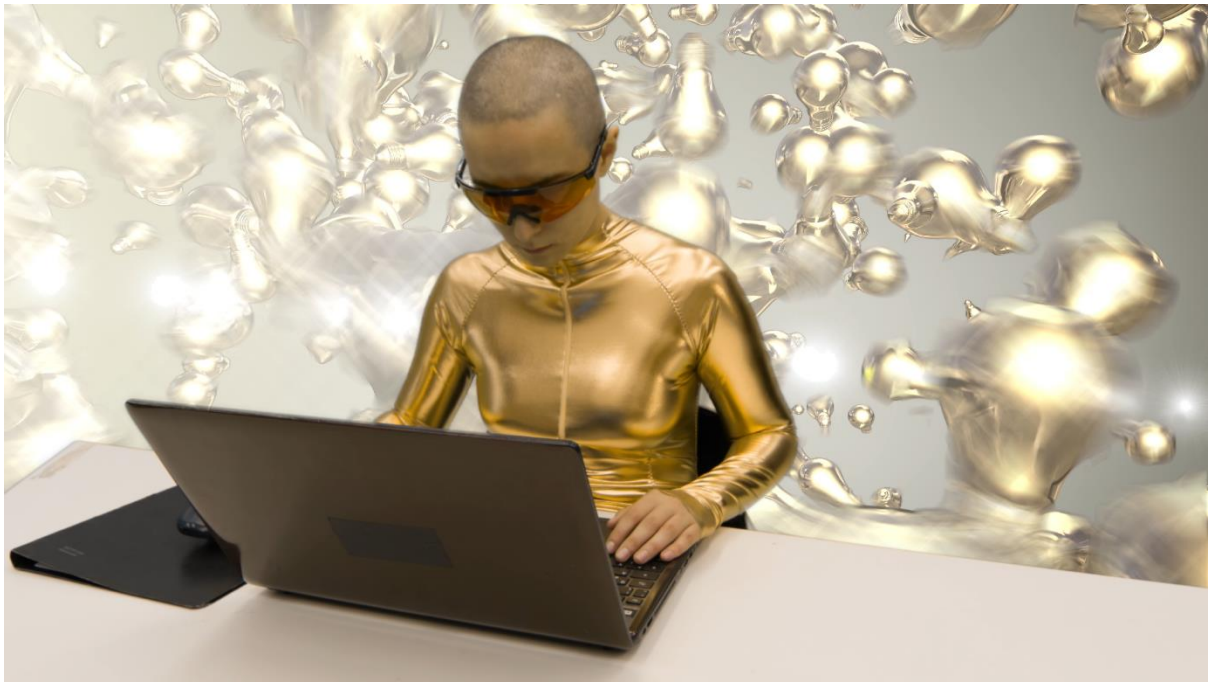


Figure 19: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high-definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Courtesy the artist, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Film still © Hito Steyerl

Simultaneously, there is the aforementioned numbness of the senses. This feeling is further induced inside the installation by the bombardment of images and sound, hitting the body as it is passively reclining in the sun chair, along with Yulia's assertion that "you will not be able to play this game. It will play you". Simultaneously, the all-encompassing light grid inside the installation suggests the connection of everything with everything else – the dream

of the Internet of Things – where communication is constant and in real-time, and all things becomes laid bare to be searched and found. Inside the grid structure everything is connected in position to each other; the light grid may evoke associations to algorithmic correlation, where profiles are created based on the preferences and habits of someone who could have been us.

Returning to the conception of *ambient entrapment*, my suggestion is that it is a feeling specific to the invisible and unaccountable structures of digital surveillance, algorithmic predictions, and the digital data economy. It emerges at a time when "surveillance spills out all over", and weaves into the background rather than standing out at the center (as Bentham's tower), and at a time when surveillance is particularly present in the soft realm of the consumer sphere (Bauman and Lyon 2013). In an artist talk on *Factory of the Sun*, Steyerl related the work to her notion of smart and ubiquitous computing in a landscape looking back, and the future of autonomous systems,

> Basically most or many objects, even if you don't notice, have some kind of smart function and they report back on you all the time. If you look at something on the screen, your eye movements might be tracked, or conversations monitored or images captured. So basically whatever you are looking at is looking back at you, and feeding that back into corporate or other data archives. […] most data that is being transmitted now […] is not accessible to human senses. Basically, if you want to see them or hear them or read them, they need to be translated. So we are dealing with a world of information that we cannot see or hear. (Steyerl, Cornell, Paglen 2017, 178).

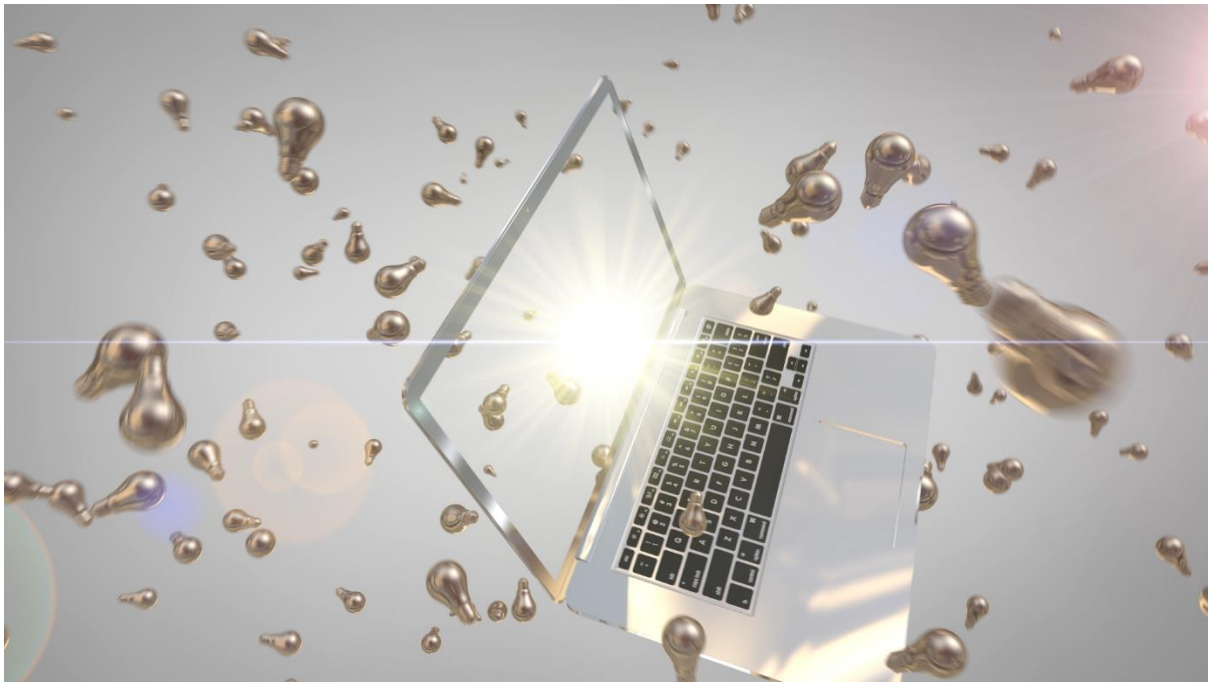


Figure 20: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Courtesy the artist, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Film still © Hito Steyerl

In this posthuman 'world of information that we cannot see or hear', machine perception and algorithmic processes are hard at work to gather, sort, sift, correlate, calculate, and predict. Hence the grid also becomes an image of the manipulations of a structure of measurement and coordination of desired outcome. *Factory of the Sun,* by way of its formal qualities as an installation artwork, articulates how the logics of the grid space is interacting with and at work in the physical environment we are placed in. It is the digital, automated, and algorithmic confirmation of Foucault's assertion that *visibility is a trap* (Foucault 1977).

All that was Work has melted into Sunshine

The nexus of light, capital and information as crushing violence is established right from the beginning in *Factory of the Sun* through the notion of a motion capture studio 'gulag'. In the opening scene which depicts a laptop floating in a golden light, a voice tells us that,

> Our machines are made of pure sunlight.
> Electromagnetic frequency
> Light pumping through fiber glass cables
> All that was work has melted into sunshine
> Sunshine is our factory.
> All that was work has melted into sunshine
> Into deadly transparency

The echo of Karl Marx and Friedrich Engels' revolutionary dictum, "all that is solid melts into air", perhaps the most famous lines of the *Communist Manifesto*, merges with Donna Haraway's observation in the contemporary classic *A Cyborg Manifesto*, that "[o]ur best machines are made of sunshine" (Marx and Engels [1848] 1955 ,13; Haraway 1991, 153). In the artwork, the repetition of the line "all that was work has melted into sunshine" becomes a demand for attention to the forces of production and capital in the digital data economy, which is emblematic for the artistic voice of Steyerl, who is known for her political activism, both as an artist and theorist. *Factory of the Sun* draws on Haraway's observation that machines are now running on light, which is simultaneously becoming the new universal currency in an information economy where capital and information flow through the infrastructure of fiber-optic cables made of glass (Haraway 1991; Steyerl 2016, n.p.n.). *Factory of the Sun* turns into a parable of the current informational regime, where human creativity, emotions, and movements are tracked, exploited, and capitalized upon. In her analysis of 'surveillance capitalism', Shoshana Zuboff describes this as the phase of late capitalism which "claims human experience as free raw material" (Zuboff 2019, 8). Inside the installation, we learn that the movements of the forced laborers in the motion capture studio are used as a resource to create artificial sunshine. It is all shimmering: the golden suits; the dancing; and the crushing violence of the world. Or, as put by Yulia, "it turns out you are your own enemy and you have to make your way through a motion capture studio gulag where everyone is working happily, the sun is shining, it is totally awful".

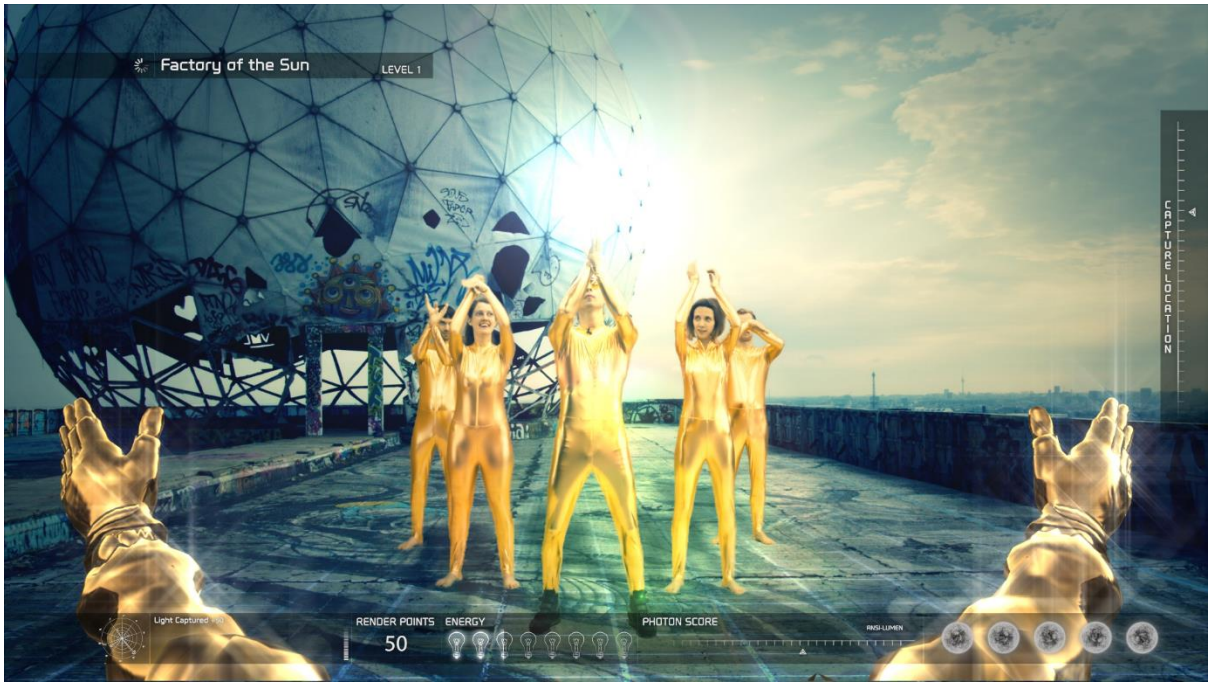


Figure 21: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high-definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Courtesy the artist, Andrew Kreps Gallery, New

York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Film still © Hito Steyerl

The references to Haraway's *A Cyborg Manifesto* throughout *Factory of the Sun* draws attention to the material conditions of labor in the information economy. Haraway very effectively juxtaposes the "light and clean" machines of new information technology with the "immense human pain in Detroit and Singapore", precarious labor which is increasingly moved out of sight for consumers in the western world. Haraway's cyborg is "a fiction mapping our social and bodily reality", however it is also "an imaginative resource" (Haraway 1991, 150). Steyerl performs a similar gesture in *Factory of the Sun*, by using the motion capture studio as well as YouTube dancing videos as sites of twenty-first century labor. As a matter of fact, the movements seen on characters in computer generated imagery (CGI imagery) in films and video games are captured from the physical bodies of humans working in motion capture studios, where they manually perform movements which are then captured and transferred to a digital character in real time.[38] In *Factory of the Sun*, the motion capture studio is associated to the phenomenon of YouTube dancing videos as variations of labor in the digital data economy. From a Harawayian perspective it is a matter of labor moving from "all work to all play", which is "a deadly game" (Haraway 1991, 161). In an interview, Steyerl speaks on her vision of the motion capture studio as a metaphor for the driving forces of the digital data economy,

> I came up with this motion capture idea, which is used as a sort of mental image to talk about the total capture of people's emotions and motions, which provides fuel for this machine to keep functioning. So motion capture becomes a way to extract energy from people, and this would be the motivation of this videogame, which is also a reality; forcing people to constantly generate energy through their motions. (Steyerl 2016, n.p.n.)

[38] For a technical explanation of this process, see, for instance, http://www.audiomotion.com/blog/what-is-motion-capture.html, accessed November 19, 2020.

Figure 22: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Courtesy the artist, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Film still © Hito Steyerl

This materialist thinking is also present in the artwork. The metaphor of the motion capture studio as a factory site of the digital data economy creates a temporal connection between the exploitation of labor and bodies in the twenty-first century and the efforts to streamline and optimize time, work and bodies a century earlier in the heyday of the 'scientific management' and time and motion studies of Frederick Winslow Taylor and Frank and Lillian Gilbreth. At the core of these early twentieth century techniques was the imperative to discipline worker's movements so work could be performed as effectively and profitable as possible according to a standardized schedule. The guiding principle was modernity's quest for control and reason by way of the absence of anything redundant, what sociologist Zygmunt Bauman has described as the rule of reason: "a *complete, incontestable* and *unchallenged* order", which have "spent its apprenticeship years in Jeremy Bentham's panopticon, and just at the threshold of our lifetime settled in the innumerable factory buildings haunted by the ghosts of Frederick Winslow Taylor's 'time and motion measurements'," and "by the spectre of Henry Ford's 'conveyor belt' ", (Bauman 2011, 80). This "dream of the neatness, purity, clarity and transparency of ultimate perfection" found, according to Bauman, its ultimate violent and destructive fulfillments in the nazi and communist projects of the twentieth century. However, Bauman warns that the dream returns and finds its expression today in the high-tech rule of order of distancing, remoteness and automation (ibid, 84). Similar connective

thinking is present in *Factory of the Sun*, which contains traces of former totalitarian regimes with references to Stalin's crushing rule in the Soviet Union, Hitler's Germania, the Cold War and the presence of the old NSA listening station at the Teufelsberg in the forests of the former West Berlin. The motion capture studio 'gulag' in *Factory of the Sun* is situated on the old listening station with its characteristic white 'radomes' (radar domes), now an abandoned, haunting place. Past and present dreams of control and destruction come together.

Press A for Total Capture

Back in the motion capture studio gulag in *Factory of the Sun*, the dancing bodies as tools to produce light and currency to be captured by financial corporations' point to a leaky relationship between game and reality, which is further highlighted by text overwriting the image, stating that "this is not a game –this is reality". *Factory of the Sun* articulates the digital data economy's exploitation of human bodies and minds, but also how online worlds and gamification enter our lifeworld in new ways. For example, as already briefly mentioned, contemporary motion capture is the process of translating a live performance in the real world into a digital performance by capturing data that represent motion – e.g. recording a live motion event such as dancing or performing a dying scene in a motion capture studio - and then translating it into usable mathematical terms and combining them to make a 3D representation of the performance (Menache 2011). It is one of the fast-growing industries of the twenty-first century, and it plays a key role in CGI-generated images used in films and computer games to create more realistic character movements than what can be made in animation programs alone. However, it is also used in simulation programs used by the military.[39] Towards the end of *Factory of the Sun*, Yulia tells us that "in this map it turns out that you can't play any of the characters. I didn't have enough time to program all of the environments. So actually the game is real".

Why Games?

"Have our lives become like a computer game?" Hito Steyerl asks in the 2017 essay "On Games. Or, Can Art Workers Think". The essay suggests a positive reply. We are currently experiencing a leakage from the virtual world of computer games into our own, a

[39] For instance, the University of Iowa Technology Institute hosts The Virtual Soldier Research (VSR) program, which specializes in digital human modeling and simulation for the U.S. military, https://iti.uiowa.edu/our-research/centers/virtual-soldier-research-program/about-vsr, accessed January 28, 2021.

transference of logics and creation of realities through simulations – what Steyerl refers to as 'generative fictions'. The leakage of worlds is also present in current forms of labor. Steyerl illustrates this with an example from the sweatshop-like working conditions for workers in a makeshift factory in Fuzhou, China, where gamers work 12 hours a day, seven days a week accumulating virtual assets for video games for resale online. "It seems that", she writes, "automation didn't necessarily free people from labour. Instead, it turned some workers into robots." (Steyerl 2017a, 102). A key argument of the essay, which I regard as a companion piece to *Factory of the Sun*, and which Steyerl gave as a lecture when the installation opened at Kunsthal Charlottenborg in Copenhagen, is that the mechanisms of gaming is going offline. They enter bodies through repetitions and movements, which is what happens in the motion capture studio, and in the sweatshop in China. Moreover, 'gamification' – or 'play applied to non –play spaces' (Whitson 2013) becomes, according to Steyerl, productive for new realities. Thus, they are "generative fictions for new subjectivities" and "training grounds for habits" inducing "response patterns and muscle memory" (Steyerl 2017a, 106).

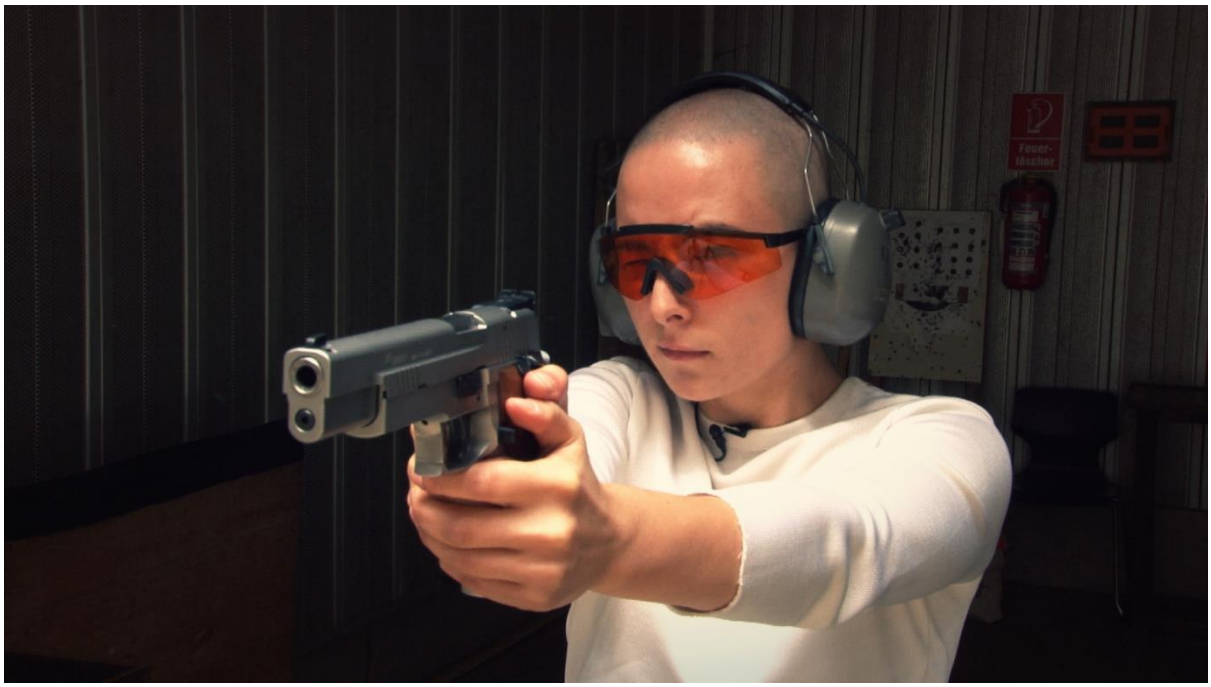


Figure 23: Hito Steyerl, *Factory of the Sun*, 2015. Single channel high definition video environment, luminescent LED grid, beach chairs. Duration: 23 min. Courtesy the artist, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. © VG Bild-Kunst, Bonn, 2020. Film still © Hito Steyerl

Above all, Steyerl is troubled by the use of computer game simulations for military training purposes, combined with the logics of remote warfare where drone operators conduct strikes increasingly resembling the operations of playing a computer game: "It is in this sense that

we live in ‘gamespace’, where digital video games are more than just an emergent form of cultural narrative. Instead, specific forms of games […] in many cases embody ideal variations of what came to be realized in more random, sometimes catastrophic ways” (ibid, 106). Yet, ‘gamification’ does not just pertain to the military or warfare. Steyerl notes how it also penetrates our lifeworld through the ranking systems of e.g. academia and the art world, and in the new social credit score system currently in place in China. It would be easy to add numerous examples to that observation, as credits and rating systems drive multiple platforms in the digital data economy. The logics of games are spreading. In this line of thought and art practice, Steyerl acknowledges the influence of the Iranian-German artist and documentarist filmmaker Harun Farocki, and particularly his four-part video series *Serious Games* (2009-2010). In the two-channel video *Serious Games IV: A Sun with No Shadow* (2010), Farocki depicts how digital images shape human vision and perception in the realm of the military industrial complex. The work shows American soldiers training for battle as first-person shooters in computer-generated landscapes of Afghanistan, as well as how military psychologists use similar virtual reality simulations to treat PSTD in those returned from war (Respini 2018).

A Cartography of the Emerging New Sensibility

The Italian philosopher Franco “Bifo” Berardi has described Steyerl’s essays as “a cartography of the emerging new sensibility” (Berardi 2012, 11). This, I would add is an observation equally applicable for her artworks – and perhaps particularly applicable to *Factory of the Sun*. The work expresses an emerging new sensibility towards surveillance as intimately entangled with entertainment, play, and participation, while simultaneously containing a crushing violence. It is an emerging sensibility towards the interconnectedness of “deep entertainment and destruction”.

In this chapter, I have proposed that the overall affective experience of *Factory of the Sun* is an articulation of *a sense of ambient entrapment*. I suggest that *a sense of ambient entrapment* can be identified as one emerging cultural affect – or ‘structure of feeling’ – distinct to the digital surveillance economy of the twenty-first century. Recalling Yulia’s words, it is a feeling characterized by ambivalence: “at this point in the game everything flips, it turns out you are your own enemy and you have to make your way through a motion capture studio gulag where everyone is working happily, the sun is shining, it is totally awful”. I started this chapter by suggesting that a search for the emerging, affective and social experiences of

surveillance requires a sensitive attention to the specific conflation of desire, entertainment, control, and capital that make up contemporary digital surveillance culture. Critical theorist and law scholar Bernard E. Harcourt asserts that the digital age is characterized by the 'expository society', dependent on participating subjects – all of us – who are mesmerized by the flickering lights of the screen, producing content and data to be extracted and monetized upon (Harcourt 2015). Harcourt likens the expository society to the architectural structure of the mirrored glass pavilion,

> Part crystal palace, part high-tech construction, partly aesthetic and partly efficient, these glass and steel constructs allow us to see ourselves and others through mirrored surfaces and virtual reflections. They are spaces in which we play and explore, take selfies and photograph others. At times they resemble a fun house; at other moments they make us anxious. They intrigue and amuse us. They haunt us. And they hide pockets of obscurity (Harcourt 2015, 107).

Harcourt argues that power in the digital age works through a combination of "fun house entertainment", and "the desire and technology of total awareness" (Harcourt 2015, 122). This view reflects the artistic vision of *Factory of the Sun*. Furthermore, Harcourt finds digital exposure to involve "a wild cacophony of emotions", including "fetishism and exhibitionism", "discomfort, hesitation, and phobia", "curiosity, experimentation, play, lust, some distance, resistance, uncertainty", "disgust and loathing" (Harcourt 2015, 110). Indeed, desire, seduction, and pleasure are returning key words in contemporary analysis trying to understand the willing participation in the exploitation and surveillance practices of the digital data economy. Seduction and desire lure us into buying devices which simultaneously afford exposure and data mining, the 'DIY mini-panopticons' of 'liquid surveillance' (Bauman and Lyon 2013). While the relationship between surveillance and capitalism is nothing new, its current form is. This form is a participatory surveillance culture closely entangled with the new digital data economy where control, exploitation, and the monetization of personal digital data conflate with seduction, desire, play, and communication. The entanglement can be illustrated by the sociologist Christian Fuchs' notion of the web 2.0 'prosumer', namely users of 'free' social media platforms who are themselves both the producers and consumers of content. This user-generated content delivers huge amounts of personal data and information on usage behavior which become a commodity generating high profits for the tech corporations, chiefly in relation to third-party advertisers (Fuchs 2011). Fuchs argues that "[t]he combination of surveillance and prosumption is at the heart of capital accumulation on web 2.0" (ibid, 276). Today, it can be

added that it is at the heart of capital accumulation as such. Steyerl has made a similar observation, writing that "[i]n the past few years many people – basically everybody – have noticed that the internet feels awkward, too. It is obviously surveilled, monopolised and sanitized by common sense, copyright, control and conformism" (Steyerl 2013, 33). This unenthusiastic notion of the internet is present in *Factory of the Sun*, where it is coupled with a sinister vision of the mechanisms behind the capital accumulation of algorithmically based high frequency trading.

Factory of the Sun opens with an advertisement for Deutsche Bank's high frequency trading division, 'Autobahn's Equity', which refers to researchers at CERN in Switzerland who thought they managed to accelerate the speed of light – which is key to High Frequency Trading Algorithms. For those familiar with the history of the world wide web, the reference to CERN – the European Organization for Nuclear Research – is telling. This is where the British scientist Tim Berners-Lee invented the world wide web (today the most widespread way to access the internet) in 1989. CERN's slogan is, incidentally, "Accelerating science" (https://home.cern/). The early optimism surrounding the web to a certain degree originated from Berner-Lee's utopic intention of the web as a site of "shared, royalty-free information developed by a community of like-minded peers" (Kholeif 2018, 97).

The turning point has long slipped for this optimistic vision of the web, which is clearly articulated in *Factory of the Sun*. In the 2013 essay "Too Much World: Is the Internet Dead?", Steyerl poses the question "what happened to the internet after it stopped being a possibility", and answers that it is indeed more potent than ever: "[n]ever before have more people been dependent on, embedded into, surveilled by, and exploited by the web" (Steyerl 2013, n.p.n.). The exploitative mode of the digital data economy is not confined to digital space as such, however, rather, it has moved offline to pervade our environment: "[t]he internet persists offline as a mode of life, surveillance, production and organisation – a form of intense voyeurism coupled with maximum nontransparency" (ibid). The idea that the logics of online surveillance and data exploitation have moved into the 'real world', is also key to Zuboff's analysis of the economic logics of surveillance capitalism: when generating economic surplus by exploiting and predicting online activities such as browsing history, likes and clicks are no longer enough; surveillance capitalism is driven out to "the state of play in the real world among real people and things" to shape behavior through interventions which "nudge, tune, herd, manipulate, and modify behavior in specific directions" to gain economic profit (Zuboff 2019, 200). This 'reality business', as Zuboff calls it, is the capitalist

fulfillment of Weiser's 'ubiquitous computing', and it is deeply intertwined with and dependent on the Internet of Things (ibid).

This is an important point: In *Factory of the Sun*, we are not immersed in a virtual world, or caught inside a benevolent computer program. Rather, it is the other way around: the logics of computation and particularly gamification have entered the physical world. Yet, while Steyerl's art practice and writing represent one of the most persistent warnings against the current exploitation of the digital data economy and surveillance, in her art as in her philosophical essays, she makes room for other possible paths. Hence, her critique seems to derive from a slightly hopeful and playful place, where there is agency and room for resistance. Perhaps alternative generative fictions are possible? The references to Donna Haraway's "A Cyborg Manifesto" throughout *Factory of the Sun* support this interpretation. Haraway's posthuman theoretical classic advocates for new configurations of humans and machines and proposes the transgressive figure of the cyborg – "a hybrid of machine and organism" (Haraway 1991, 150) – as a productive myth to generate alternative political futures for our relationships with science and technology. Likewise, *Factory of the Sun* leaves a slight silver lining of agency and collective resistance through the animated characters of political protesters who "where killed in the future". These animations are "nonplayable characters", who dancingly announce that they "cannot be played." Finally, the last words of the video are given to anonymous hackers, who announce that "this platform was hacked by Bot Underground Bunch" and publish a "Bot Manifesto", which declares: "Resist total capture!"; "Be a non-playable character!"; and "Sun belongs to everyone!". The artwork thus ends on a hopeful note. Resistance is possible. As a source of generative fiction, art has a long tradition for imagining other possible ways, and playing a part in producing them too, and this, it seems, is the final strategy of *Factory of the Sun*. The final manifesto sends a revolutionary nod to the 1913 Russian futurist opera *Victory over the sun* – most famous as the event where the first version of the iconic painting *Black Square* (2015) by the artist Kazimir Malevich appeared as part of the design for a stage curtain– where a group of protagonists step into the future to abolish reason, by capturing and destroying its foremost symbol in western culture, i.e. *the sun* (Bartlett and Dadswell, 2011).

Chapter Conclusion

This chapter has addressed the question of the digital and the computational with regard to the conceptual understanding of atmospheres of surveillance. I have shown why it is

necessary to move beyond the physical/digital space binary and why *atmospheres of surveillance* should be understood in a context where the digital intertwines with the physical in new ways. Moreover, the chapter has been an investigation into emerging sensibilities and affects towards the experience of contemporary surveillance. Drawing on Raymond William's notion of 'structures of feeling', I have explored how it allows for a recognition of those atmospheres of surveillance which seem to 'stick around' for longer, as historically distinct, affective, and social experiences of the present. This has allowed me to further expand on the temporal dimension of the concept of atmospheres of surveillance. Through a reading of Hito Steyerl's immersive video installation environment *Factory of the Sun*, I have suggested that one such structure of feeling is an emerging sensibility towards surveillance in the second decade of the twenty-first century onwards which I identify as *a sense of ambient entrapment.* This particular sense of surveillance is emerging at a time well beyond the utopian vibe of 'cyberspace' of the nineties, and as the optimism which carried on in a different configuration with the 'web 2.0' of the first decade of the new millennium – when sharing and connecting renewed a certain sense of agency and hope – seems to be receding. Rather, the feeling I have proposed is related to a historical and cultural moment where a new awareness of the logics of exploitation driving the data economy appears to be moving from smaller activist and academic circles to the wider public with more strength. I have proposed that *a sense of ambient entrapment* is a vague sense of something working and conditioning in the background, of technologies extracting and exploiting personal data, of processes of nudging and modulation, while we at the same time desire and feel the lure of the said technologies and devices. Finally, the vignettes in this chapter also brings forth a *numbness of the senses*. They gesture towards an atmosphere inside the installation space of *Factory of the Sun* where echoes and loops mix together, realities conflate, and a numbness and confusion emerge.

However, affects and sentiments about surveillance is not only reflected, but also produced by contemporary art. Returning to the notion 'structures of feeling', Raymond Williams' interest revolves around how art and culture not only mirror, but also produce historical change by affecting the way we experience our lifeworld. Understood this way, structures of feeling should be studied as social and lived experiences and cultural expressions of the present in its liquid form (Sharma & Tygstrup 2015). In other words, it is a matter of analyzing the emergent as it is happening, "those moments when new patterns of experience emerge, when people start to think differently, when new sensibilities arise, when habits

swerve" (ibid, 4). This chapter has turned to the contemporary artwork *Factory of the Sun* and prescribed it the status of a laboratory for emergent sensibilities. In various ways, the artwork articulates an emerging digital surveillance culture where exploitation and entrapment come to the fore. Nevertheless, I would like to again emphasize that various structures of feeling coexist, and that a suggested structure of feeling remains a 'cultural hypothesis' in its own time. What is more, individuals and groups might be more or less in sync with them (Anderson 2014; Williams [1977] 2015).

In the wake of Williams, the notion of 'structures of feeling' has been generative for a number of strong, related concepts which privilege aesthetic experience. For example, literary theorist Sianne Ngai proposes that the 'tone' of an artwork articulates feelings and affects connected to real social experiences (Ngai 2005). According to Ngai, the aesthetic concept of tone cannot be reduced to representations of feeling within the artwork, nor solely to the emotional response of the reader or spectator (ibid, 28). Rather; Ngai defines the 'tone' of literary works and cultural artifacts as its "feeling tone: its global or organizing affect, its general disposition or orientation towards its audience and the world" (ibid). Tone, then, is the 'perceived feeling' of a literary work or cultural artefact (ibid). In other words, it is the overall 'perceived feeling' of the artwork that is the crux of the matter. To illustrate her point, Ngai notes that tone is the reason why we might describe the totality of a work as 'melancholic', or 'paranoid', for example. Tone resembles collective mood, yet it should simultaneously be understood as belonging to the artwork (ibid, 43): present in its totality rather than reducible to its specific parts. This brings it close to Mikel Dufrenne's notion of the singular 'affective quality', or 'atmosphere' which constitutes an artwork as a whole, as discussed in Chapter 2 of this study (and to refresh that discussion, it might not always be so clear-cut: *Safe Conduct*, for example, evoked various and changing feelings as time passed by inside the installation). Nevertheless, pushing 'atmospheres of surveillance' in the direction of 'structures of feeling' and the concepts in its wake, such as tone, also brings it in closer proximity to the way literary scholar Hans Ulrich Gumbrecht – who, like Dufrenne, draws on the philosopher Martin Heidegger's notion of 'Stimmung' (mood) – connects the mood of a literary work or painting to the political and cultural 'climate' of its time. One example of Gumbrecht's readings is how he connects the "nervous" tone in songs written around 1200 to the medieval climate of political instability and religious uncertainty of the period (Gumbrecht 2012). To Gumbrecht, too, the particular meanings and dimensions of Stimmung are activated by different historical and cultural conditions. In conclusion then, stretching the

concept of atmospheres of surveillance in the direction of the intimately connected, partly overlapping concept of ‘structures of feeling’ allows for a recognition of those atmospheres of surveillance which seem to ‘stick around’ for longer, as historically distinct, affective and social experiences of the present.

CONCLUSION.

Sensing Surveillance

> Investment in the look is not as privileged in women as in men. More than any sense, the eye objectifies and it masters. It sets at a distance, and maintains a distance.
>
> Luce Irigaray, in *Les Femmes, la pornographie et l'erotisme*

> Vision cannot be taken […] as an isolated form of perception, but rather must be understood as inseparable from other senses.
>
> Orit Halpern, *Beautiful Data*

Metaphors of sight and vision occupy a central position in surveillance studies. Likewise, sight has been privileged as the principal sense in modern western cultural and intellectual history at large, where vision, knowledge, and mastery are intimately linked. Yet, while the ocular – for plausible reasons – has been significant to the study of surveillance, this dissertation has argued that a move beyond the visual is necessary in order to allow for indispensable knowledge of the bodily, emotional, and multisensory experiences of surveillance. Hence, the approach taken in this dissertation privileges perspectives on surveillance grounded in the lived body and everyday experience in order to show how surveillance contains and co-produces atmospheres. To put it simply: if we, as embodied beings, are always situated and emplaced (Casey 1996), then it is possible to argue that we, moreover, are always bodily enveloped by atmospheres. Some atmospheres might be intense while others are barely noticeable; some might be unintentional or tuned by the weather, while others are instrumentally produced. Some might be atmospheres of surveillance. When referring to atmospheres, what is referred to can be described as the "something-more" of situations and places (Griffero 2018, 79). Atmospheres are experienced through the senses, felt but hard to define. An atmosphere may permeate an overall situation, as when surveillance 'thickens' the air, when throats gets narrow and dry and breaths quicken. Atmospheres of surveillance may also be at work when behavior is "shaped" and "directed" in barely noticeable ways. The present study has proposed 'atmospheres of surveillance' as a concept attentive to the embodied and affective experiences of surveillance, and as an

analytical lens through which it becomes possible to question and grasp the deliberate intentions at work in shaping and directing behavior through environmental qualities. As observed in the introduction to this dissertation, contemporary everyday life takes place in physical, social, political, and affective environments of surveillance. This is the first main reason why atmospheres of surveillance matters: it is a concept which opens up for the question of how one 'feels' in this environment. The argument that surveillance contains and co-produces atmospheres has been pursued through the framework of Gernot Böhme's theories of atmosphere as a 'new aesthetics'. I have found Böhme's 'new aesthetics' particularly relevant for the phenomenon of surveillance because of the double perspective it affords on atmospheres as *perceived* and *produced*. On the one hand, Böhme's 'new aesthetics' is a theory of perception, understood as "the experience of the presence of persons, objects and environments", and on the other, it is a theory of the production of atmospheres in "the full range of aesthetic work", from art to the production of atmospheres in everyday life (Böhme 1993, 116). In fact, since atmospheres can be described by their particular characteristics, which may range, for instance, from tense and oppressive to calm or seductive, the concept allows us to identify and grasp the many different nuances of our encounters with current practices and places of surveillance. Moreover, since atmospheres are necessarily sensed, it is a perspective on surveillance anchored in the lived body on the ground, with its partial, embodied and situated perspective.

Crucially, the interest in atmospheres of surveillance in this study is closely linked to a focus on the workings of power. According to Böhme, since atmospheres are experienced as an emotional effect, their production is also an exercise of power" (Böhme 2017). Furthermore, this power uses "neither physical violence nor commanding speech but engages the affectivity of people; it affects their minds, manipulates moods, and evokes emotions" (Böhme 2020, 28). If atmospheres can induce a certain mood in you, it follows that this might entail attractive potential for manipulation. Similarly, drawing on key insights on surveillance from the perspective of performance studies, I have argued that atmospheres of surveillance can induce repertoires for behavior. These observations form the second main reason why atmospheres of surveillance matters: the concept opens up for the question of how power works in an environment of surveillance. I have argued that the concept has potential as a critical tool for questioning how atmospheres of surveillance may be a result of deliberate aims, produced, or staged, based on objectives and politics of surveillance.

Through a closer examination of the instrumental staging of atmospheres, I have suggested that what is revealed is a subtle form of environmental power exercised to govern behavior, desires, and experiences (Allan 2006; Borch 2014; Böhme 2017; 2020; Massumi 2010). To reiterate this argument, it is a mode of power which works through "conditioning experiences and rendering some behaviours more likely than others" (Borch 2014, 85). Drawing on this argument, I have proposed the necessity of recognizing atmospheres of surveillance as a form of power that seeks to work through the senses. To grasp the embodied experience of surveillance, attention is needed to how atmospheres move us, and to whether or not there are deliberate intentions at work. Accordingly, a conceptual vocabulary to grasp atmospheres of surveillance turns out to be essential.

On this basis, I have argued that contemporary art offers a realm to attune to and experience atmospheres of surveillance. The readings in this dissertation demonstrate how various atmospheres of surveillance are articulated in the artworks through, for instance, the way the artists employed tactics to defamiliarize the well-known, or tactics to magnify some aspects which otherwise might go unnoticed. Employing the lens of atmospheres of surveillance, I have shown how tactics of defamiliarization are at work both with regard to the rituals of the airport security check depicted in Ed Atkin's *Safe Conduct*, and the technologies of the modern home as they appear in Hanne Nielsen and Birgit Johnsen's *Modern Escape*. Likewise, I have illuminated how Hito Steyerl's *Factory of the Sun* exaggerates the conditions of labor and strategies of capital accumulation in the digital data economy characterized as surveillance capitalism. In all three artworks, insistent atmospheres came forth inside the installation space, as did feelings of aggression, pleasure, paranoia, passivity, numbness, fun, and entrapment. The readings in this dissertation show how artistic interventions can make atmospheres of surveillance available to the senses. In fact, recalling the argument from media and cultural theorist Thomas Y. Levin presented at the end of Chapter 1 in this dissertation, by employing the "aesthetic as tactic", surveillance artworks can advance the perceptual tools required to grasp surveillance in its various manifestations (Levin 2010, 191). In other words, artworks can amplify and trigger the sensorial experience of atmospheres. Accordingly, the implication here is that a heightened critical awareness of atmospheres of surveillance may emerge. This is why I in chapter 1 suggested a productive relationship between Griffero's call for learning how to both 'deeply feel' but also 'immunize' against atmospheres, and the realm of contemporary art.

This is the central research contribution of this dissertation: it offers a conceptualization of atmospheres of surveillance developing a theoretical vocabulary grounded in Böhme 'new aesthetics'; a methodology of written vignettes of *atmospheric writing*; and a manifestation of how atmospheres of surveillance are articulated in a selection of contemporary artworks. Atmospheres are perceived by and resonates in the lived (or felt) body, and thus the notion of atmospheres of surveillance pertains to the lived, embodied experience of surveillance. Turning to phenomenological theories of atmosphere and the lived body for theorizing surveillance implicates a 'return of the body' as a key site for understanding contemporary surveillance. However, the body now moves and lingers in connected environments of ubiquitous computing and biometric and behavioral surveillance, where spatial, digital, and infrastructural surveillance are intertwined. For this reason, the conception of atmospheres of surveillance offered here redirects attention from the rather extensive focus given to dataveillance in recent years, and back to lived, bodily experience in environments of surveillance.

Revisiting the Research Questions

The dissertation has been informed by the overall question *in what ways may the concept 'atmospheres of surveillance' contribute to our understanding of the embodied, multisensory experience of contemporary surveillance culture?* The question has been addressed through an introduction, four chapters, and this conclusion.

In the introduction, I situated the study within the field of surveillance studies, and more specifically within its recent cultural turn. I discussed and defined the genre of surveillance art, and suggested why installation artworks can be exemplary sites of atmospheres of surveillance. In Chapter 1, I identified and discussed key definitions of surveillance in conjunction with the notion of ambient power, before turning to a thorough theoretical outline of the key theories and conceptual insights on the qualities of atmosphere in phenomenology, feminist and affect studies. Drawing on these theories and in particular the new aesthetics of Gernot Böhme, I provided a first formulation of concept 'atmospheres of surveillance' at the end of the chapter. I revisit the initial contours of the concept here:

'Atmospheres of surveillance' directs attention to embodied, multisensory, and affective *experiences* of places and practices of surveillance. The concept privileges attention to the body as the site where spatial, emotional, and infrastructural surveillance practices merge,

and for which surveillance generates a more or less subtle emotional and behavioral 'repertoire'. Atmospheres of surveillance 'shape' and 'direct' through environmental qualities which seek to determine experience. Sometimes this shaping and directing come in the form of nudging and soft surveillance in the consumer realm of ubiquitous computing and the Internet of Things, while at other times it manifests itself at the hard edges of security such as at the airport or the border. Simultaneously, the concept draws attention to the affective dimension of surveillance, and offers a lens to grasp how we 'feel' in the environments of everyday life with surveillance. Furthermore, atmospheres of surveillance are perceived bodily in more or less explicit ways, they are a vague power perceived by and resonating in the lived body. As a result, atmospheres of surveillance can be felt before we are consciously aware of their presence; this can be part of their intention. Atmospheres of surveillance emerges in-between subject and object, they are simultaneously spatial and emotional. Yet atmospheres of surveillance may be differently distributed and not necessarily similarly shared, and at the collective level they are emergent and changing. Attunement helps explain why atmospheres of surveillance are experienced differently. Moreover, atmospheres of surveillance can be intentionally produced to manipulate and modify moods and behavior; in such cases they are an expression of power with specific aims. Atmospheres of surveillance can also be produced by artists as part of their craft. This provides opportunities to become more attentive to their existence, as they intensify in aesthetic experience. As a critical tool, atmospheres of surveillance can make the manipulative character of surveillance present.

In the subsequent chapters, I developed the concept further in dialogue with readings of a selection of contemporary artworks. The selection of artworks was determined by their perceived atmospheric qualities and engagements with surveillance. However, I have also strongly emphasized the different angles the artworks would offer to the conceptual development of atmospheres of surveillance. Overall, it has been the approach of this study to develop the concept in dialogue with artworks, and thus it was crucial that the works would contribute to nuance and expand the theoretical foundation. Specifically, I turned to the artworks to further explore, nuance, and develop the concept through a series of what I refer to as 'immersive readings', which combine interpretive strategies with written vignettes responding to the atmospheres of the works.

As the artworks differ in their expressions, so does my approach differ in each reading. In chapter 2, analyzing Ed Atkins *Safe Conduct*, my point of departure was Böhme's notion of

atmospheres as perceived and produced. At the same time, my objective was also to explore how the work could be approached methodologically. In chapter 3, Hanne Nielsen and Birgit Johnsen's work *Modern Escape* was read through the notion of haunting as a dimension of atmospheres of surveillance. In order to explore a notion of the technologies of the modern western home as haunted, I analyzed the artwork in the light of a technology – the *Lighthouse* surveillance system – which figures in the artwork through appropriated footage and forms the starting point for the main concept of the artwork. In the fourth and final chapter, a reading of Hito Steyerl's *Factory of the Sun* addressed the need to discuss the intertwining of physical and digital space and its role for atmospheres of surveillance to open up and unpack the artwork. The analysis of the artwork opened for a further consideration of how to theorize the atmospheres which seem to linger. Therefore, I expanded the concept of atmospheres of surveillance by turning to the closely affiliated notion of structures of feeling. In addition to pursuing the overarching research question, each of the readings (Chapters 2-4) addressed one of the sub- questions of this dissertation.

Chapter 2 addressed the question: *what bodily, emotional, and sensory experiences of surveillance surface through the prism of contemporary art, and how can 'atmospheres of surveillance' be explored methodologically?* First, the chapter introduced and discussed the methodology of written, atmospheric vignettes. I argued that the written vignettes strive for an attunement to the atmospheres perceived in the artwork, while simultaneously being attentive to the situated experience of surveillance. This methodological approach continued throughout the analytical chapters, and accordingly, I will return to a reflection on its findings at the end of this conclusion. Secondly, taking Böhme's double perspective on atmospheres as perceived and deliberatively produced as a point of departure, the analysis of Ed Atkin's *Safe Conduct* found that the artwork effectively opens up new perspectives on how atmospheres of surveillance suggestively penetrate everyday life. In particular, I explored how *Safe Conduct* illuminates how the atmospheres of the airport security check shape and direct behavior. I argued that a choreography of control surfaces in the work, where the rhythms of repetition and rehearsal amplify how the protocols of the post 9/11 security check have produced new bodily repertoires. Through the concept of atmospheres of surveillance, the reading showed how surveillance have effects on our feelings by invoking a perceived threat. Importantly, the analysis brought fort how the airport is one of the spaces of everyday life where the surveillance apparatus is at its most visible, while simultaneously being a site where the discriminatory practices of surveillance are brought out in the open. Thus, the

chapter illuminated how we move differently through airports. Finally, the reading showed the atmospheres of surveillance in this chapter had a temporal dimension, namely that of futurity; the pre-emptive rituals of the airport security check speaks of perceived threat in the future. At the conceptual level, the dialogue between the theory and the artwork in this chapter pushed towards the development of vignettes of atmospheric writing which, along with the conceptual analysis, constitutes part of the research contribution of this dissertation by contributing to the development of a more nuanced theoretical vocabulary of atmospheres, emphasizing the heterogeneity of experience.

The third chapter addressed the second sub-question: *what traces of the violence and power relations of surveillance come forth through the notion of 'atmospheres of surveillance'?* The chapter further elaborated the conceptual framework of the study through an exploration of Gordon's notion of 'haunting' as a dimension of atmospheres of surveillance. Accordingly, the chapter proposed that haunting may add an additional layer of receptivity to the violence, politics, and power dimensions of surveillance and their historical continuities. I argued that being attentive to the haunting dimension of atmospheres of surveillance involves a listening to the workings of power. Informed by a first close reading of the surveillance system *Lighthouse*, the chapter suggested that 'haunting' is mediated by the everyday technologies of the western home in Hanne Nielsen & Birgit Johnsen's *Modern Escape*. Following this, the analysis found that the modern western home is entangled with the violence and repressive politics of national security and the military industrial complex. Finally, the temporal dimension of atmospheres of surveillance in this chapter pertained to the traces of the past in the present. At the conceptual level, the dialogue between the theory and the artwork in this reading expanded the notion of atmospheres of surveillance by engaging theoretically and methodologically with a dimension of haunting. Thus, the concept of atmospheres of surveillance becomes equipped with the ability to address traces of the violence and power relations of surveillance in the present.

Chapter 4 addressed the final sub-question: *how can 'atmospheres of surveillance' articulate affective and social experiences distinct to the present cultural and historical moment of the early decades of the twenty-first century?* In this chapter, the reading of Hito Steyerl's *Factory of the Sun* continued to explore the theoretical contours of atmospheres of surveillance, this time through an appropriation of Raymond William's notion of 'structures of feeling' as a means to theorize how certain atmospheres of surveillance 'stick around' for

longer. Hence, the chapter discussed atmospheres of surveillance as historically distinct, affective and social experiences of the present, and identified an emerging sensibility towards surveillance in the second decade of the twenty-first century onwards which came forth in the artwork as *a sense of ambient entrapment. Ambient entrapment,* I proposed, belongs to the vague end of the sensorium register – it picks up on something in the background, rather than that which is at the center of attention. Moreover the analysis of *Factory of the Sun* showed how this background phenomenon surrounds us as a whole, as a sense of being enmeshed through desire. I related this feeling specifically to the ambivalent entanglements of desire, entertainment, control, and capital which are characteristic of surveillance capitalism. To reiterate the argument in the chapter, a sense of ambient entrapment is a vague sense of something working and conditioning in the background, of technologies extracting and exploiting personal data, of processes of nudging and modulation, while at the same time desiring and feeling the lure of the said technologies and devices. As such, it is an ambivalent feeling. Finally, the temporal dimension of atmospheres of surveillance in the final chapter pertained to the atmospheres that are of a longer duration, which can be theorized as belonging to the social and affective experience of the historical and cultural present. At the conceptual level, the chapter moreover raised the question of the digital and the computational in relation to the spatial understanding of atmospheres. Thus, the analysis theoretically and methodologically expanded the initial conceptual formulation of atmospheres of surveillance by contributing a spatial understanding that goes beyond the physical/digital space binary and recognizes how these spaces are intertwined.

"Something More"

Returning to the written vignettes as a strategy of 'presencing' the atmospheres encountered and experienced in the artworks, "something-more" came forth which I will also address here. In chapter 2, the vignettes illuminated how *Safe Conduct*, through the avatar's humming voice and intense presence, beaten-up face and staring gaze, gets *under the skin* in ways ranging from dread to pleasure. The rhythms of the work enter the body of the spectator and awaken the knowledge of the bodily repertoire of the airport. Likewise, amplified by the insisting rhythm of the music, the surveillance machine comes forth as that which directs and shapes bodies, from the inside. By comparison, in chapter 3, the vignettes perform how, in *Modern Escape*, the perspective of the automated surveillance gaze takes over and *the body withdraws,* only to reappear as the lamp or vacuum cleaner nearby inside the installation

turns on and implicates the watching spectator in the entanglements of the western home. Finally, in chapter 4, the vignettes allows for a *numbness of the senses* to come forth, while free-floating associations mirror the echoes and loops mixed together in the artwork, where realities conflate, and numbness and confusion emerges.

In conclusion, then, the analytical approach allowed each of the artworks to challenge, inform, and contribute to a further development of the concept atmospheres of surveillance in specific ways. Together, the readings of artworks in this dissertation add a temporal dimension to the notion of atmosphere that is not addressed much in the theories of atmosphere by Böhme. In fact, the readings of artworks showed how atmospheres can be theorized as more than ephemeral and evasive, rather they have temporal dimensions such as future threats, hauntings of the past, and finally persistence over time which may form a structure of feeling. Likewise, the written vignettes of atmospheric writing form an essential part of the dissertation's research contribution. The vignettes and the first-person perspective actively avoid universalizing the experience of atmospheres, while simultaneously performing how they *can* be felt so that they may strike an affective chord. The tension inherent to this endeavor is tangible throughout the study.

On the whole, the dialogue between the theoretical foundation and the immersive readings of artworks shapes and develops the concept atmospheres of surveillance. Thus, the research contribution of this dissertation is a methodological one as well as a conceptual and analytical one. Furthermore, the dissertation contributes to the cultural turn within surveillance studies a concept for understanding the embodied and multisensory experiences of contemporary surveillance culture, which is anchored in aesthetics and contemporary art. The aesthetically informed analyses contribute with perspectives attentive to the multisensory and affective experiences of surveillance, and allow us to pose questions about how the sites of surveillance in our everyday life *feels* like, as well as about how power works through engaging our affectivity. Finally, the aesthetically informed analyses of surveillance in this dissertation allow for art as a realm for new insights of the many different manifestations of contemporary surveillance. Or, put differently: it allows for art to show us how surveillance is 'in the air'.

Epilogue

Writing in Pandemic Time

As I was writing this dissertation, the world changed. How could I not hear Foucault's words on the quarantine as the lockdown of the world unfolded?

"…the closing of the town and its outlying districts…the killing of all stray animals…on the appointed day, everyone is ordered to stay indoors…each family will have made its own provisions…if it is absolutely necessary to leave the house, it will be done in turn, avoiding any meeting... Each individual is fixed in his place…The plague is met by order; its function is to sort out every possible confusion…of the disease, which is transmitted when bodies are mixed together..."

It became clear that the rules of the plague had returned as the main operational logic

Pandemic time reminds us how bodies are intimately connected to other bodies, human and nonhuman

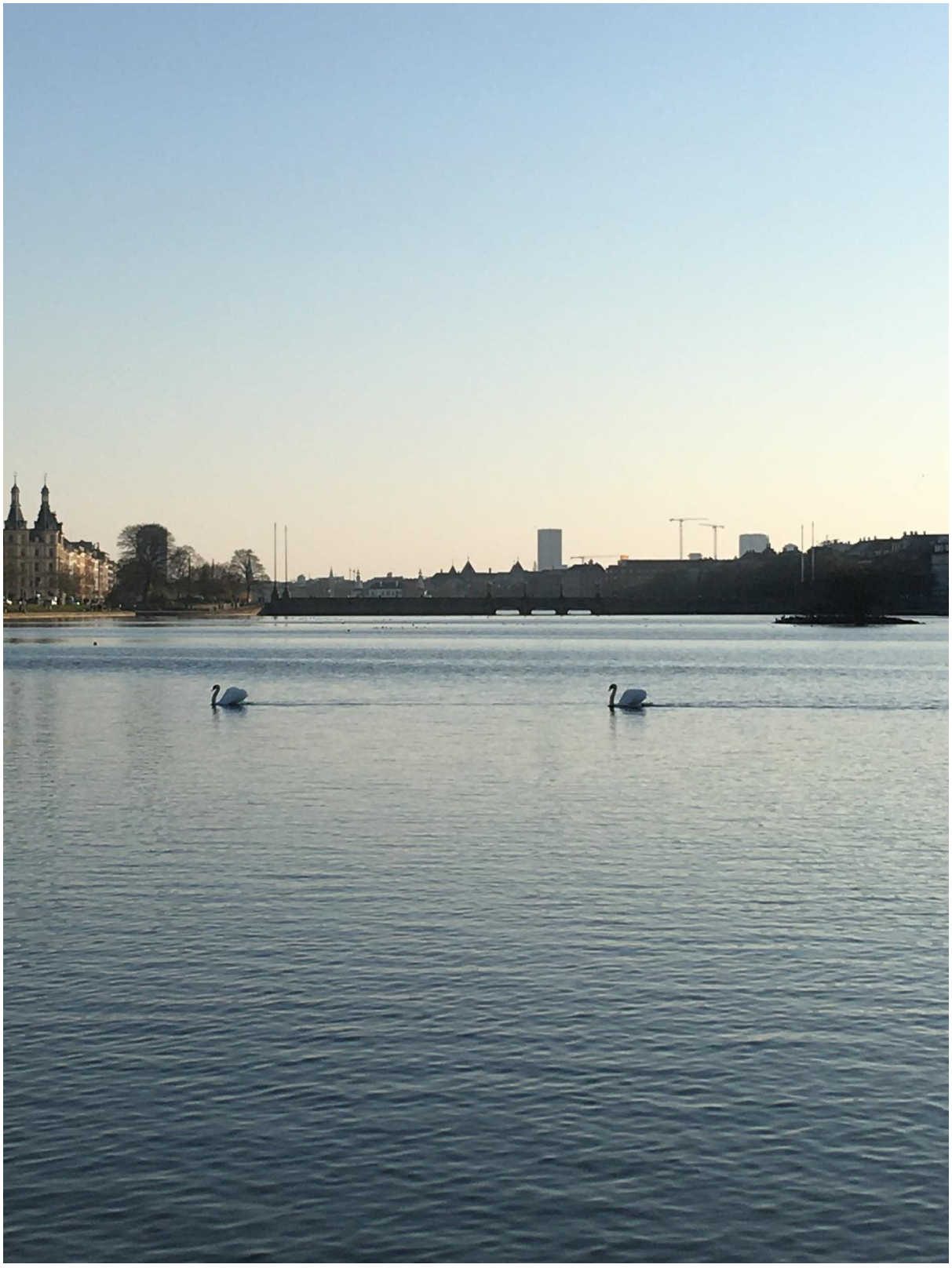
In the wake of 9/11, the poet Juliana Spahr wrote a collection of poems called This Connection of Everyone with Lungs. Yet this time it is not the dust of "pulverized glass and concrete" from the twin towers that connects us

In the time of terror, the airport became the site where the new protocols of surveillance revealed themselves most clearly. Now airports have emptied

What we learned from 9/11: states of exception quickly become the new everyday in terms of surveillance

New rhythms, new bodily gestures

…"Segmented, immobile, frozen space…"



Copenhagen 2020. Photograph: Karen Louise Grova Søilen.

References

Aaltola, Mika. 2005. “The International Airport: The Hub-and-Spoke Pedagogy of the American Empire.” *Global Networks* 5, no. 3: 261-278. https://doi.org/10.1111/j.1471-0374.2005.00118.x.

Adey, Peter. 2008. “Airports, Mobility and the Calculative Architecture of Affective Control.” *Geoforum* 39, no. 1: 438-451. https://doi.org/10.1016/j.geoforum.2007.09.001.

Adey, Peter. 2014. “Security Atmospheres or the Crystallisation of Worlds.” *Environment and Planning D: Society and Space* 32, no. 5: 834-851. https://doi.org/10.1068/d21312.

Adey, Peter, Laure Brayer, Damien Masson, and Patrick K. Murphy. 2013. “ ‘Pour votre tranquillité’: Ambiance, atmosphere, and surveillance.” *Geoforum* 49: 299-309. https://doi.org/10.1016/j.geoforum.2013.04.028.

Agostinho, Daniela, Catherine D’Ignazio, Annie Ring, Nanna Bonde Thylstrup, and Kristin Veel. 2019. “Uncertain Archives: Approaching the Unknowns, Errors, and Vulnerabilities of Big Data through Cultural Theories of the Archive.” *Surveillance & Society* 17, no. 3/4: 422-441.https://doi.org/10.24908/ss.v17i3/4.12330.

Ahmed, Sara. 2010. “Happy Objects.” In *The Affect Theory Reader*, edited by Melissa Gregg and Gregory J. Seigworth, 29-51. Durham: Duke University Press.

Ahmed, Sara. 2014. *The Cultural Politics of Emotion*, second edition. Edinburgh: Edinburgh University Press.

Aikens, Nick, ed. 2014. *Too Much World: The Films of Hito Steyerl*. Berlin: Sternberg Press.

Albrechtslund, Anders. 2008. “Online Social Networking as Participatory Surveillance”. *First Monday* 13, no. 3: n.p.n, https://doi.org/10.5210/fm.v13i3.2142.

Amoore, Louise. 2020. *Cloud Ethics: Algorithms and the Attributes of Ourselves and Others*. Durham: Duke University Press.

Anderson, Ben, and James Ash. 2015. “Atmospheric Methods”. In *Non-Representational Methodologies: Revisioning Research*, edited by Phillip Vannini, 34-52. New York: Routledge. Anderson, Ben. 2009. “Affective Atmospheres”. *Emotion, Space and Society* 2, no. 2: 77-81. https://doi.org/10.1016/j.emospa.2009.08.005.

Anderson, Ben. 2014. *Encountering Affect: Capacities, Apparatuses, Condition*. Abingdon: Routledge.

Andrejevic, Mark. 2015. "Foreword." In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shoshana Amielle Magnet, viiii-xviii. Durham: Duke University Press.

Archey, Karen. 2014. “Hyper-Elasticity Symptoms, Signs, Treatment: On Hito Steyerl’s *Liquidity Inc*.”. In *Too Much World: The Films of Hito Steyerl*, edited by Nick Aikens, 221-228. Berlin: Sternberg Press.

Ball, Kirstie, Kevin D. Haggerty, and David Lyon, eds. 2012. *Routledge Handbook of Surveillance Studies*. Abingdon: Routledge.

Barnard-Wills, Katherine, and David Barnard-Wills. 2012. "Invisible Surveillance in Visual Art." *Surveillance & Society*, 10, no. 3/4: 204-214. https://doi.org/10.24908/ss.v10i3/4.4328.

Bartlett, Rosamund, and Dadswell, Sarah. 2011. "Introduction". *In Victory Over the Sun: The World's First Futurist Opera*, edited by Rosamund Bartlett and Sarah Dadswell, 1-16. Exeter: University of Exeter Press.

Bauman, Zygmunt. 2011. *Collateral Damage: Social Inequalities in a Global Age*. Cambridge: Polity.

Bauman, Zygmunt, and David Lyon. 2013. *Liquid Surveillance*. Cambridge: Polity.

Benjamin, Walter. (1931) 2015. "Small History of Photography." Translated by Esther Leslie. In *On Photography*, edited by Esther Leslie, 59- 105. London: Reaktion Books.

Bentham, Jeremy. (1791) 2008. *Panopticon Or: The Inspection House.* UK: Dodo Press.

Berardi, Franco "Bifo". 2012. "Introduction." In *The Wretched of the Screen* by Hito Steyerl, 9-11. Berlin: Sternberg Press.

Bille, Mikkel, Peter Bjerregaard, and Tim Flohr Sørensen. 2015. "Staging Atmospheres: Materiality, Culture, and the texture of the in-between." *Emotion, Space and Society* 15: 31-38. https://doi.org/10.1016/j.emospa.2014.11.002.

Bille, Mikkel. 2018. "Review: Gernot Böhme, 2017, *The Aesthetics of Atmospheres*. Edited by Jean-Paul Thibaud. London, Routledge". *Ambiances*: *International Journal of Sensory Environment, Architecture and Urban Space* 4: n.p.n. https://doi.org/10.4000/ambiances.1065.

Bissel, David, Maria Hynes and Scott Sharpe. 2012. "Unveiling seductions beyond societies of control: affect, security, and humour in spaces of aeromobility." *Environment and Planning D: Society and Space* 30: 694- 710. https://doi.org/10.1068%2Fd22510.

Bjørnsten, Thomas Bøgevald, and Mette-Marie Zacher Sørensen. 2017. "Uncertainties of facial emotion recognition technologies and the automation of emotional labour." *Digital Creativity* 28, no. 4: 297-307. https://doi.org/10.1080/14626268.2017.1383271.

Blackman, Lisa. 2012. *Immaterial Bodies: Affect, Embodiment, Mediation.* London: Sage.

Borch, Christian. 2014. "Atmospheres, Art, Architecture: A Conversation between Gernot Böhme, Christian Borch, Olafur Eliasson, and Juhani Pallasmaa." In *Architectural Atmospheres - On the experience of Politics of Architecture*, edited by Christian Borch, 90-107. Basel: Birkhäuser.

Bottery, Mike. 2000. *Education, Policy and Ethics*. London: Continuum.

Böhme, Gernot. 1993. “Atmosphere as the Fundamental Concept of a New Aesthetics.” *Thesis Eleven* 36: 113-126. https://doi.org/10.1177%2F072551369303600107.

Böhme, Gernot. 2006. “Atmosphere as the Subject Matter of Architecture.” In *Herzog and Meuron: Natural History*, edited by P. Ursprung, 398-407. London: Lars Müller Publishers.

Böhme, Gernot. 2013a. “The Art of the Stage Set as a Paradigm for an Aesthetics of Atmospheres.” *Ambiances: International Journal of Sensory Environment, Architecture and Urban Space*: n.p.n. https://doi.org/10.4000/ambiances.315.

Böhme, Gernot. 2013b. “The Space of Bodily Presence and Space as a Medium of Representation.” In *Throughout: Art and Culture Emerging with Ubiquitous Computing*, edited by Ulrik Ekman, 457-463. Cambridge, MA: MIT Press.

Böhme, Gernot. 2017. *The Aesthetics of Atmospheres*, edited by Jean-Paul Thibaud. London: Routledge.

Böhme, Gernot. 2020. *Atmospheric Architectures. The Aesthetics of Felt Spaces*. Edited and translated by A.-Chr. Engels-Schwarzpaul. [first published in English 2017]. London: Bloomsbury.

Braidotti, Rosi. 2006. "Posthuman, All Too Human: Towards a New Process Ontology" *Theory, Culture & Society* 23, no. 7-8: 197-208. https://journals.sagepub.com/doi/pdf/10.1177/0263276406069232.

Brennan, Teresa. 2004. *The Transmission of Affect.* Ithaca: Cornell University Press.

Brighenti, Andrea M. 2010. “Artveillance: At the Crossroads of Art and Surveillance.” *Surveillance & Society* 7, no. 2: 175-186. https://doi.org/10.24908/ss.v7i2.4142.

Brink, Dennis Meyhoff. 2013. ”Dantes litterære atmosfærologi.” *K&K - Kultur Og Klasse*, *41*, no. 116: 17-32. https://tidsskrift.dk/kok/article/view/15888/13751.

Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness.* Durham: Duke University Press.

Bucher, Taina. 2019. "Bad Guys and Bag Ladies: On the Politics of Polemics and the Promise of Ambivalence." *Social Media + Society* 5, no. 3:1-4. https://doi.org/10.1177%2F2056305119856705.

Buolamwini, Joy, and Timnit Gebru. 2018. “Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification.” *Proceedings of Machine Learning Research* 81: 1–15. http://proceedings.mlr.press/v81/buolamwini18a.html.

Buser, Michael. 2017. “The time is out of joint: Atmosphere and hauntology at Bodiam Castle.” *Emotion, Space and Society* 25: 5-13. https://doi.org/10.1016/j.emospa.2017.09.006.

Cahill, Susan. 2019. “Visual Art, Corporeal Economies, and the ‘New Normal’ of Surveillance Policing in the War on Terror.” *Surveillance& Society* 17, no. 3/4: 352 - 366. https://doi.org/10.24908/ss.v17i3/4.8661.

Chamayou, Grégoire. 2015. *Drone Theory*. Translated by Janet Lloyd. London: Penguin Books.

Christov-Bakargiev, Carolyn. 2016. “Giving an Account of Oneself. Talk about That in 5516 words.” In *Ed Atkins*, edited by Carolyn Christov-Bakargiev and Marianna Vecellio, 13-17. Exhibition catalogue. Milan: Skira.

Christov-Bakargiev, Carolyn and Marianne Vecellio, eds. 2018. *Hito Steyerl: The City of Broken Windows*. Exhibition catalogue. Milan: Skira.

Christov-Bakargiev, Carolyn. 2018. “They are Oblivious to the Violence of Their Acts. Windows, Screens, and Pictorial Gestures in Troubled Times.” *Hito Steyerl: The City of Broken Windows*, edited by Carolyn Christov-Bakargiev and Marianne Vecellio, 36-45. Exhibition catalogue. Milan: Skira.

Chun, Wendy Hui Chyong. 2006. *Control and Freedom: Power and Paranoia in the Age of Fiber Optics*. Cambridge, MA: The MIT Press.

Clarke, Roger. 1988. “Information Technology and Dataveillance.” Communications of the ACM 31, no. 5: 498-512. https://doi.org/10.1145/42411.42413.

Csíkszentmikhály, Chris. 2006. “Robotics.” In *Sensorium: Embodied Experience, Technology, and Contemporary Art*, edited by Caroline A. Jones, 202-206. Cambridge, MA: The MIT Press.

De Matteis, Frederico, Mikkel Bille, Tonino Griffero, and Andrea Jelić. 2019. “Phenomenographies: describing the plurality of atmospheric worlds.” *Ambiances* 5: n.p.n. https://doi.org/10.4000/ambiances.2526.

Deleuze, 1992. “Postscript on the Societies of Control.” *October* 59: 3-7. URL: http://www.jstor.org/stable/778828.

D’Ignazio, Catherine and Lauren F. Klein. 2020. *Data Feminism*. Cambridge, MA: MIT Press.

Dobash, R. Emerson, and Russel Dobash. 1979. *Violence Against Wives: A Case Against the Patriarchy*. New York: Free Press.

Downey, Anthony. 2010. “The Lives of Others: Artur Zmijewski’s *Repetition*, The Stanford Prison Experiment, and the Ethics of Surveillance.” In *Conspiracy Dwellings: Surveillance in Contemporary Art*, edited by Outi Remes and Pam Skelton, 67-82. Newcastle upon Tyne: Cambridge Scholars Publishing.

Dufrenne, Mikel. 1973. *The Phenomenology of Aesthetic Perception*. Translated by Edward S. Casey. Evanston: Nortwestern University Press.

Ekman, Ulrik, ed. 2013. *Throughout: Art and Culture Emerging with Ubiquitous Computing*. Cambridge, MA: MIT Press.

Ekman, Ulrik, Jay David Bolter, Lily Días, Morten Søndergaard, and Maria Engberg, eds. 2016. *Ubiquitous Computing, Complexity, and Culture*. New York: Routledge.

Ellis, Darren, Ian Tucker, and David Harper. 2013. “The Affective Atmospheres of Surveillance.” *Theory & Psychology* 23, no. 6: 716 -731. https://doi.org/10.1177%2F0959354313496604.

Enloe, Cynthia. 2004. *The Curious Feminist: Searching for Women in a New Age of Empire*. Berkeley: University of California Press.

Falkenhayner, Nicole. 2019. *Media, Surveillance, and Affect: Narrating Feeling-states.* London: Routledge.

Finn, Jonathan. 2012. "Surveillance Studies and Visual Art: An Examination of Jill Magid's Evidence Locker." *Surveillance & Society* 10, no. 2: 134-149. https://doi.org/10.24908/ss.v10i2.4144.

Flynn, Susan, and Antonia Mackay, eds. 2018. *Surveillance, Race, Culture*. London: Palgrave Macmillan.

Foucault, Michel. (1977) 1991. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan. Reprint, London: Penguin Books. First published in French 1975.

Freud, Sigmund. 2003. "The Uncanny". Translated by David Mclintock. London: Penguin Books. First published in German 1919.

Frølund, Sune. 2016. "Fornemmelse for atmosfære." *Gränsløs. Tidskrift för studier av Öresundsregionens historia, kultur och samhällsliv* 7: 16-30. https://journals.lub.lu.se/index.php/grl/article/view/16312/14789.

Frølund, Sune. 2018. "Gernot Böhme's Sketch for a Weather Phenomenology." *Danish Yearbook of Philosophy* 51: 142-161. Leiden: Brill.

Fuchs, Christian. 2011. "Web 2.0, Prosumption, and Surveillance." *Surveillance & Society* 8, no. 3: 288-309. https://doi.org/10.24908/ss.v8i3.4165.

Galloway, Anne. 2013. "Affective Politics in Urban Computing and Locative Media." In *Throughout: Art and Culture Emerging with Ubiquitous Computing*, edited by Ulrik Ekman, 351-364. Cambridge: MIT Press.

Gandy, Oscar H. Jr. 2009. *Coming to Terms with Chance: Engaging Rational Discrimination and Cumulative Disadvantage*. Burlington: Ashgate.

Gates, Kelly A. 2011. *Our Biometric Future: Facial Recognition Technology and the Culture of Surveillance*. New York: NYU Press.

Gibbs, Anna. 2015. «Writing as Method: Attunement, Resonance, and Rhythm." In *Affective Methodologies: Developing Cultural Research Strategies for the Study of Affect*, edited by Britta Timm Knudsen and Carsten Stage, 222- 236. New York: Palgrave Macmillan.

Gilliom, John, and Torin Monahan. 2013. *SuperVision: An Introduction to the Surveillance Society*. Chicago: University of Chicago Press.

Gordon, Avery. (1997) 2008. *Ghostly Matters: Hauntings and the Sociological Imagination.* Minneapolis: University of Minnesota Press.

Gordon, Avery. 2011. “Some Thoughts on Haunting and Futurity.” *Borderlands* 10, no. 2: 1-21.

Graham, Stephen, and David Wood. 2003. "Digitizing Surveillance: Categorization, Space, Inequality.” *Critical Social Policy* 23, no. 2: 227-248. https://doi.org/10.1177%2F0261018303023002006.

Griffero, Tonini. 2018. “Introduction.” In *Atmosphere/Atmospheres: Testing a New Paradigm*, edited by Tonini Griffero and Giampiero Moretti, 11-14. Milan: Mimesis International.

Griffero, Tonini. 2018. “Something More. Atmospheres and Pathic Aesthetics.” In *Atmosphere/Atmospheres: Testing a New Paradigm*, edited by Tonini Griffero and Giampiero Moretti, 75-89. Milan: Mimesis International.

Gumbrecht, Hans Ulrich. 2012. *Atmosphere, Mood, Stimmung: On a Hidden Potential of Literature*. Translated by Erik Butler. Stanford: Stanford University Press.

Haffner, Jeanne. 2013. *The View from Above: The Science of Social Space*. Cambridge, MA: MIT Press.

Haggerty, Kevin D., and Richard V. Ericson, 2000. “Surveillant Assemblage.” *British Journal of Sociology* 51, no. 4: 605–622. https://doi.org/10.1080/00071310020015280.

Hall, Rachel. 2015a. “Terror and the Female Grotesque: Introducing Full-Body Scanners to U.S. Airports.” In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shoshana Amielle Magnet, 127-149. Durham: Duke University Press.

Hall, Rachel. 2015b. *The Transparent Traveler*: *The Performance and Culture of Airport Security*. Durham: Duke University Press.

Haraway, Donna. 1988. “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective.” *Feminist Studies* 14, no. 3: 575-599. https://doi.org/10.2307/3178066.

Haraway, Donna J. 1991. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." in *Simians, Cyborgs and Women: The Reinvention of Nature*, 149-181. New York: Routledge.

Haraway, Donna J. 2016. *Staying with the Trouble: Making Kin in the Chthulucene.* Durham: Duke University Press.

Harcourt, Bernard E. 2015. *Exposed. Desire and Disobedience in the Digital Age*. Cambridge, MA: Harvard University Press.

Harding, James M. 2018. *Performance, Transparency, and the Cultures of Surveillance.* Ann Arbor: University of Michigan Press.

Hayles, N. Katherine. 1999. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press

Hickey-Moody, Anna. 2013. “Affect as Method: Feelings, Aesthetics and Affective Pedagogy.” In *Deleuze and Research Methodologies*, edited by Rebecca Coleman and Jessica Ringrose, 78-95. Edinburgh: Edinburgh University Press.

Hong, S-h. 2015.”Presence, or the sense of being-there and being-with in the new media society”. *First Monday* 20, no. 10: n.p.n. https://doi.org/10.5210/fm.v20i10.5932.

Ingold, Tim. 2015. “Foreword”. *In Non-Representational Methodologies: Re-Envisioning Research*, edited by Phillip Vannini, vii-x. New York: Routledge.

Jay, Martin. 1994. *Downcast Eyes*: *The Denigration of Vision in Twentieth-Century French Thought*. Berkeley: University of California Press.

Jonas, Hans. 1982. “The Nobility of Sight: A Study in the Phenomenology of the Senses”. In *The Phenomenon of Life: Toward a Philosophical Biology*. Chicago. Cited in Jay, Martin. 1994. *Downcast Eyes*: *The Denigration of Vision in Twentieth-Century French Thought*. Berkeley: University of California Press.

Kammerer, Dietmar. 2008. *Bilder der Überwachung*. Frankfurt am Main: Suhrkamp Verlag.

Kammerer, Dietmar. 2018. “Why Should We Talk About Culture, When We Want to Understand ‘Surveillance’?” *On_Culture: The Open Journal for the Study of Culture* 6: 2-8. https://doi.org/10.25969/mediarep/4076.

Kamp, Annette, Obstfelder, Aud, and Katarina Andersson. 2019. “Welfare Technologies in Care Work.” *Nordic Journal of Working Life Studies* 9, S5: 1-12. https://doi.org/10.18291/njwls.v9iS5.112692.

Kazig, Rainer. 2016. “Presentation of Hermann Schmitz’ paper, ‘Atmospheric Spaces’.“ *Ambiances* April 27, 2016: 1-5. https://doi.org/10.4000/ambiances.709.

Klauser, Fransisco. 2017. *Surveillance and Space*. Los Angeles: Sage Publications Ltd.

Knudsen, Britta Timm, and Carsten Stage. 2015. “Introduction: Affective Methodologies.” In *Affective Methodologies: Developing Cultural Research Strategies for the Study of Affect*, edited by Britta Timm Knudsen and Carsten Stage, 1- 22. New York: Palgrave Macmillan.

Koopman, Colin. 2019. *How We Became Our Data: A Genealogy of the Informational Person*. Chicago: The University of Chicago Press.

Koskela, Hille. 2000. “‘The Gaze without Eyes’: Video-Surveillance and the Changing Nature of Urban Space.” *Progress in Human Geography* 24, no. 2: 243–265. https://doi.org/10.1191%2F030913200668791096.

Koskela, Hille. 2014. “ ‘Capture every moment’–the profane semiotics of surveillance advertisements.” *Social Semiotic* 24, no. 3: 324-344. https://doi.org/10.1080/10350330.2014.929249.

Krag, Ferdinand Ahm. 2017. ”Sun, Sky, Screen and Cloud”. In *Factory of the Sun* by Hito Steyerl. Exhibition catalogue, 12-14. Copenhagen: Billedkunstskolernes Forlag.

Lagerkvist, Amanda. 2016. “Existential media: Toward a theorization of digital thrownness.” *New Media & Society* 19, no. 1: 96–110. https://doi.org/10.1177%2F1461444816649921.

Lanford, Michael. 2011. “Ravel and 'The Raven': The Realisation of an Inherited Aesthetic in ‘Boléro’ ”. *The Cambridge Quarterly* 40, no. 3: 243-265. URL: https://www.jstor.org/stable/43492354.

Latour, Bruno, and Emilie Hermant. 1998. *Paris ville invisible*. Paris: La Découverte-Les Empêcheurs de penser en rond. English translation: *Paris: Invisible City*, by Liz Carey-Libbrecht. http://www.bruno-latour.fr/virtual/PARIS-INVISIBLE-GB.pdf.

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. York: Palgrave Macmillan.

Lauritzen, Peter. 2011. *Big Brother 2.0. Danmark som Overvågningssamfund*. København: Informations Forlag.

Lax, Thomas J. 2018. “Modern Problems.” *In Art in the Age of the Internet: 1989 to Today,* edited by Eva Respini, 74-81. Exhibition Catalogue. New Haven: Yale University Press.

Lefebvre, Henri. 2004. *Rhythmanalysis: Space, Time, and Everyday Life.* Translated by Stuart Elden and Gerald Moore. London: Continuum.

Levin, David Michael. 1993. “Decline and Fall – Ocularcentrism in Heidegger’s Reading of the History of Metaphysics.” In *Modernity and the Hegemony of Vision*, edited by David Michael Levin, 297-339. Los Angeles: University of California Press.

Levin, Thomas Y. 2010. “Surveillance, Aesthesis, Literacy.” In *Twenty-Five: An Anthology for the 25th Anniversary of BIT Teatergarasjen*, edited by Marie Nerland, 189-193. Bergen: BIT Teatergarasjen.

Levin, Thomas Y., Ursula Frohne, and Peter Weibel, eds. 2002. *CTRL [SPACE]: Rhetorics of Surveillance from Bentham to Big Brother*. Cambridge, MA: MIT Press

Lupton, Deborah. 2020. *Data Selves.* Cambridge: Polity Press.

Lyon, David.1994. *The Electronic Eye: The Rise of Surveillance Society.* Minneapolis: University of Minnesota Press. In *Surveillance Studies: A Reader*, edited by Torin Monahan and David Murakami Wood, xix –xxxiv. Oxford: Oxford University Press.

Lyon, David, ed. 2003. *Surveillance as Social Sorting: Privacy, Risk, and Digital Discrimination.* London: Routledge.

Lyon, David. 2007. *Surveillance Studies: An Overview*. Cambridge: Polity.

Lyon, David. 2017. “Surveillance Culture: Engagement, Exposure, and Ethics in Digital Modernity.” *International Journal of Communication* 11: 824-842.

Lyon, David. 2018a. *The Culture of Surveillance: Watching as a Way of Life*. Cambridge, UK: Polity. https://ijoc.org/index.php/ijoc/article/view/5527.

Lyon, David. 2018b. “Exploring Surveillance Culture.” *On_Culture: The Open Journal for the Study of Culture* 6: 2-11. URL: http://geb.uni-giessen.de/geb/volltexte/2018/13899/

Magnet, Shoshana. 2016. “Biometric Emotions: Affect for the Purposes of Security.” In *Watched! Surveillance, Art and Photography*, edited by Louise Wolthers, Dragana Vujanovic and Niclas Östlind, 328-243. Köln: Verlag der Buchhandlung Walther König.

Manovich, Lev. 2006. “The Poetics of Augmented Space”. *Visual Communication* 5, no. 2: 219–240. https://doi.org/10.1177%2F1470357206065527.

Marklund, Andreas and Laura Skouvig. [forthcoming]. “Introduction: Histories of Surveillance from Antiquity to the Digital Era”. In *Histories of Surveillance from Antiquity to the Digital Era: The Eyes and Ears of Power*, edited by Andreas Marklund and Laura Skouvig. Abingdon: Routledge.

Martin, Del.1981. *Battered Wives: Revised, Updated*. Volcano: Volcano Press.

Marx, Karl, and Friedrich Engels. (1848) 1955. *The Communist Manifesto*. Edited by Samuel H. Beer. New York: Appleton –Century-Crofts Inc.

Maša Galič, Tjerk Timan and Bert-Jaap Koops. 2016. “Bentham, Deleuze and Beyond: An Overview of Surveillance Theories from the Panopticon to Participation.” *Philosophy & Technology* 30: 9-37. https://doi.org/10.1007/s13347-016-0219-1.

Massumi, Brian. 2010. “The Future Birth of the Affective Fact: The Political Ontology of Threat.” In *The Affect Theory Reader*, edited by Melissa Gregg and Gregory J. Seigworth, 52-70. Durham: Duke University Press.

McCullough, Malcolm. 2013. *Ambient Commons: Attention in the Age of Embodied Information*. Cambridge, MA: The MIT Press.

McGrath, John E. 2004. *Loving Big Brother: Performance, Privacy and Surveillance Space*. London: Routledge.

McGrath, John E. 2012. “Performing Surveillance.” In *Routledge Handbook of Surveillance Studies*, edited by Kirstie Ball, Kevin D. Haggerty and David Lyon, 83-90. London: Routledge

Merleau-Ponty, Maurice. 1962. *Phenomenology of Perception*. Translated by Colin Smith. New York: Routledge & Keegan Paul Ltd.

Michel, Arthur Holland. 2019. *Eyes in the Sky: The Secret Rise of Gorgon Stare and How It Will Watch Us All*. Boston: Houghton Mifflin Harcourt.

Militz, Elizabeth, and Carolin Schurr. 2016. “Affective Nationalism: Banalities of Belonging in Azerbaijan.” *Political Geography* 54: 54-63. https://doi.org/10.1016/j.polgeo.2015.11.002.

Mirzoeff, Nicholas. 2011. “The Right to Look.” *Critical Inquiry* 37, no. 3: 473-496. https://doi.org/10.1086/659354.

Monahan, Torin. 2010. *Surveillance in the Time of Insecurity*. New Jersey: Rutgers University Press.

Monahan, Torin. 2011. “Surveillance as Cultural Practice.” *The Sociological Quarterly* 52: 495–508. https://doi.org/10.1111/j.1533-8525.2011.01216.x.

Monahan, Torin. 2018. “Ways of Being Seen: Surveillance Art and the Interpellation of Viewing Subjects.” *Cultural Studies* 32, no. 4: 560-581. https://doi.org/10.1080/09502386.2017.1374424.

Monahan, Torin, and David Murakami Wood. 2018. “Introduction.” In *Surveillance Studies: A Reader*, edited by Torin Monahan and David Murakami Wood, xix –xxxiv. Oxford: Oxford University Press.

Monahan, Torin, and David Murakami Wood, eds. 2018. *Surveillance Studies: A Reader.* Oxford: Oxford University Press.

Mori, Masahiro. 2012. “The Uncanny Valley.” Translated by Karl F. MacDorman and Norri Kageki. *IEEE Robotics & Automation Magazine* 19, no. 2: 98-100. doi:10.1109/MRA.2012.2192811.

Morrison. Elise. 2016. *Discipline and Desire: Surveillance Technologies in Performance*. Ann Arbor: University of Michigan Press.

Nellis, Mike. (2009) 2018. “Since *Nineteen Eighty Four*: Representations of Surveillance in Literary Fiction.” In *Surveillance Studies: A Reader*, edited by Torin Monahan and David Murakami Wood, 394 – 397. Oxford: Oxford University Press.

Nielsen, Hanne, and Birgit Johnsen. 2014. *Inklusion/Ekslusion Exclusion/Inclusion*. Exhibition catalogue. Aarhus: Aros.

Nunes, Mark. 2006. *Cyberspaces of Everyday Life*. Minneapolis: University of Minnesota Press.

Ott, Brian L., Hamilton Bean, and Kellie Marin. 2016. “On the aesthetic production of atmospheres: the rhetorical workings of biopower at The CELL.” *Communication and Critical/Cultural Studies* 13, no. 4: 346-362. https://doi.org/10.1080/14791420.2016.1195505.

Paglen, Trevor, and Thompson, A.C. 2006. *Torture Taxi: On the Trail of the CIA's Rendition Flights*. New York: Melville House.

Pallasmaa, Juhani. 2013. *The Eyes of the Skin: Architecture and the Senses*. Third edition. Chichester: John Wiley & sons Ltd.

Parks, Lisa. 2007. “Points of Departure: The Culture of the US Airport Screening.” *Journal of Visual Culture* 6, no. 2: 183-200. https://doi.org/10.1177/1470412907078559.

Patton, Jason W. 2000. “Protecting privacy in public? Surveillance technologies and the value of public places.” *Ethics and Information Technology* 2: 181–187. https://doi.org/10.1023/A:1010057606781

Pérez-Gómez, Alberto. *Attunement: Architectural Meaning After the Crisis of Modern Science.* Cambridge, MA: MIT Press.

Peters, John Durham. 2015. *The Marvelous Clouds: Toward a Philosophy of Elemental Media.* Chicago: University of Chicago Press.

Phillips, Sandra S. 2010. “Looking Out, Looking In: Voyeurism and its Affinities from the Beginning of Photography”. In *Exposed. Voyeurism, Surveillance and The Camera*, edited by Sandra S. Phillips, 11-15. Exhibition catalogue. London: Tate Publishing.

Phillips, Sandra S, ed. 2010. *Exposed. Voyeurism, Surveillance and The Camera*. London: Tate Publishing.

Picard, Rosalind. 1995. *Affective computing*. MIT Media Laboratory Perceptual Computing Section Technical Report, no. 321. https://affect.media.mit.edu/pdfs/95.picard.pdf.

Pink, Sarah. 2015. *Doing Sensory Etnography*, second edition. London: Sage

Rapoport, Michele. 2012. “The Home Under Surveillance: A Tripartite Assemblage.” *Surveillance & Society* 10, no. 3/4: 320-333. https://doi.org/10.24908/ss.v10i3/4.4280.

Rendell, Jane. 2010. *Site-Writing: The Architecture of Art Criticism*. London: I.B. Tauris.

Riedel, Friedlind. 2020. “Atmospheric relations: theorising music and sound as atmosphere.” In *Music as Atmosphere: Collective Feelings and Affective Sounds*, edited by Friedlind Riedel and Juha Torvinen, 1-42. London: Routledge.

Ring, Annie. 2015. *After the Stasi: Collaboration and the Struggle for Sovereign Subjectivity in the Writing of German Unification*. London: Bloomsbury.

Rosa, Hartmund. 2020. *The Uncontrollability of the World*. Cambridge, UK: Polity Press.

Schmidt-Burkhardt, Astrit. 2002. “The All-Seer: God’s Eye as Proto-Surveillance.” In *CTRL [SPACE] Rhetorics of Surveillance from Bentham to Big Brother*, edited by Thomas Y. Levin, Ursula Frohne, and Peter Weibel, 16-31. Cambridge, MA: MIT Press.

Schmitz, Hermann. 1964. *System der Philosophie* vol. III. Bonn: Bouvier.

Schmitz, Hermann, Rudolf Owen Müllan, and Slaby, Jan. 2011. “Emotions outside the box—the new phenomenology of feeling and corporeality.” *Phenomenology and the Cognitive Sciences* 10: 241–259. https://doi.org/10.1007/s11097-011-9195-1.

Schmitz, Hermann. 2016. “Atmospheric Spaces.” Translated by Margret Vince. *Ambiances*, April 27, 2016: 1-11. https://doi.org/10.4000/ambiances.711.

Schmitz, Hermann. 2017. *Kort indføring i den nye fænomenologi.* Translated by Sune Frølund. Aalborg: Aalborg Universitetsforlag.

Schmitz, Hermann. 2019. *New Phenomenology: A Brief Introduction*. Translated by Rudolf Owen Müllan and with introduction by Tonino Griffero. Milan: Mimesis International.

Sharma, Devika, and Frederik Tygstrup. 2015. “Introduction”. In *Structures of Feeling: Affectivity and the Study of Culture*, edited by Devika Sharma and Frederik Tygstrup, 1-19. Berlin: De Gruyter.

Sichel, Berta. 2014.“About the World, About Others and About Artistic Practices” in Hanne Nielsen & Birgit Johnsen, *Inklusion/Ekslusion Exclusion/Inclusion*. Aarhus, Denmark: Aros, pp. 61- 67.

Smith, Andrea. 2015. “Not Seeing: State Surveillance, Settler Colonialism, and Gender Violence.” In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shoshana Amielle Magnet, 21-38. Durham: Duke University Press.

Sontag, Susan. (1977) 1979. *On Photography*. London: Penguin Books Limited.

Spitzer, Leo. 1942. “Milieu and Ambiance: An Essay in Historical Semantics.” *Philosophy and Phenomenological Research* 3, no. 1:1-42. URL: https://www.jstor.org/stable/2103127.

Steiner, Henriette, and Kristin Veel. 2017. “I’ve changed my mind: I don’t want to go home.” *Home Cultures* 14, no. 1: 73-94. https://doi.org/10.1080/17406315.2017.1319596.

Stewart, Kathleen. 2011. “Atmospheric attunements.” *Environment and Planning D: Society and Space* 29: 445-453. https://doi.org/10.1068%2Fd9109.

Stewart, Kathleen. 2015. “New England Red.” In *Non-Representational Methodologies: Re-Envisioning Research*, edited by Phillip Vannini, 19-33. New York: Routledge.

Steyerl, Hito. 2011. “In Free Fall: A Thought Experiment on Vertical Perspective.” *e-flux* journal # 24, April 2011: 1-11. https://www.e-flux.com/journal/24/67860/in-free-fall-a-thought-experiment-on-vertical-perspective/.

Steyerl, Hito. 2013. “Too Much World: Is the Internet Dead?” *e-flux Journal* #49, November 2013. https://www.e-flux.com/journal/49/60004/too-much-world-is-the-internet-dead/.

Steyerl, Hito. 2017a. “On Games. Or, Can Art Workers Think?” *New Left Review* 103: 101-116. https://newleftreview.org/issues/II103/articles/hito-steyerl-on-games.pdf

Steyerl, Hito. 2017b. *Duty-Free Art: Art in the Age of Planetary Civil War*. London: Verso.

Søilen, Karen Louise Grova. 2011. *Sophie Calles Verden: Overvåkning og Selvutlevering i Samtidskunsten*. MA Thesis. Copenhagen, Denmark: University of Copenhagen. Available from The Royal Danish Library, order no: 4790-441-4.

Søilen, Karen Louise Grova. 2020. “Safe is a Wondeful Feeling: Atmospheres of Surveillance in Contemporary Art.” *Surveillance & Society* 18, no. 2: 170-184. https://doi.org/10.24908/ss.v18i2.12756.

Tagg, John. 1988. *The Burden of Representation: Essays on Photographies and Histories*. London: Macmillan Education UK.

Thibaud, Jean-Paul. 2020. “A Brief Archaeology of the Notion of Ambiance.” *Unlikely – Journal for Creative Arts* 6: n.p.n. https://unlikely.net.au/issue-06/notion-of-ambiance.

Trigg, Dylan. 2020. “The role of atmosphere in shared emotion.” *Emotion, Space and Society* 35: 1-7. https://doi.org/10.1016/j.emospa.2020.100658.

Turkle, Sherry. 2007. *Evocative objects: Things that matter*. Cambridge, MA: MIT Press.

Urry, John, Anthony Elliott, David Radford and Nicola Pitt, 2016. "Globalisations Utopia? On airport atmospherics." *Emotion, Space and Society* 19: 13-20. https://doi.org/10.1016/j.emospa.2016.03.003.

Vannini, Phillip. 2015. "Non-Representational Research Methodologies: An Introduction". In *Non-Representational Methodologies: Re-Envisioning Research*, edited by Phillip Vannini, 1-18. New York: Routledge.

Veel, Kristin, and Henriette Steiner. 2011. "Living Behind Glass Facades: Surveillance Culture and New Architecture." *Surveillance and Society* 9, no. 1-2: 215-232. https://doi.org/10.24908/ss.v9i1/2.4111.

Veel, Kristin. 2013. "Surveillance Narratives: Overload, Desire and Representation in Contemporary Narrative Fiction." In *Readings in twenty-first-century European Literatures*, edited by Michael Gratzke, Margaret-Anne Hutton, and Claire Whitehead, 19-37. Oxford: Peter Lang.

Wasihun, Betiel, ed. 2019. *Narrating Surveillance - Überwachen erzählen*. Baden-Baden: Ergon Verlag.

Weibel, Peter. 2002. "Pleasure and the Panoptic Principle." In *CTRL [SPACE] Rhetorics of Surveillance from Bentham to Big Brother*, edited by Thomas Y. Levin, Ursula Frohne and Peter Weibel, 206 -223. Cambridge: MIT Press.

Weiser, Mark. 1991. "The Computer for the 21st Century". *Scientific American* 265, no. 3: 94-105.URL: https://www.jstor.org/stable/10.2307/24938718.

Williams, Raymond. (1977) 2015. "Structures of Feeling". *Marxism and Literature*, pp. 128-135. Reprinted in *Structures of Feeling: Affectivity and the Study of Culture*, edited by Devika Sharma and Tygstrup, Frederik, 20-25. Berlin: De Gruyter.

Wolf, Jakob. 2017. *Krop og atmosfærer: Hermann Schmitz' nye fænomenologi*. København: Eksistensen

Wolthers, Louise. 2014. "The Inappropriate." In *Inklusion/Ekslusion Exclusion/Inclusion* by Hanne Nielsen & Birgit Johnsen, 169-197.Exhibition catalogue. Aarhus: Aros.

Wolthers, Louise, Dragana Vujanovic, and Niclas Östlind, eds. 2016. *WATCHED! Surveillance, Art and Photography* Köln: Verlag der Buchhandlung Walther König.

Wood, David Murakami. 2014. "Vanishing Surveillance: Ghost-Hunting in the Ubiquitous Surveillance Society." In *Invisibility Studies: Surveillance, Transparency and the Hidden in Contemporary Culture*, edited by Henriette Steiner and Kristin Veel, 281-300. Bern: Peter Lang.

Wood, David Murakami, and Debra Mackinnon. 2019. "Partial Platforms and Oligoptic Surveillance in the Smart City." *Surveillance and Society* 17, no. 1/2: 176-182. https://doi.org/10.24908/ss.v17i1/2.13116.

Zbikowski, Dörte. 2002. "The Listening Ear: Phenomena of Acoustic Surveillance." In *CTRL [SPACE] Rhetorics of Surveillance from Bentham to Big Brother*, edited by Thomas Y. Levin, Ursula Frohne and Peter Weibel, 33-49. Cambridge: MIT Press.

Zimmer, Katherine. 2015. *Surveillance Cinema*. New York: New York University Press.

Zuboff, Shoshana. 2015. "Big other: Surveillance Capitalism and the Prospects of an Information Civilization." *Journal of Information Technology* 30, no. 1: 75-89. https://doi.org/10.1057%2Fjit.2015.5.

Zuboff, Shoshana. 2019. *The Age of Surveillance Capitalism*. London: Profile Books.

Zumthor, Peter. 2006. *Atmospheres: Architectural Environments - Surrounding Objects*. Basel: Birkhäuser

Zylinska, Joanna. 2017. *Nonhuman Photography*. Cambridge, MA: The MIT Press.

Artworks and Exhibitions

Atkins, Ed. 2016. *Safe Conduct.* Three channel HD video with 5.1 surround sound. 9 min 5 sec loop. March 17-September 4, 2016. *X-Rummet*, Statens Museum for Kunst. Copenhagen, Denmark. In the collection of Museum of Contemporary Art Kiasma, Finnish National Gallery, Helsinki, Finland.

Bausch, Pina. 2010. *Café Müller. A Piece by Pina Bausch Tanztheater Wuppertal*. DVD. Paris: L'Arche.

Bosch, Hieronymus. 1500-05. *Das Felt hat Augen, der Wald hat Ohren*. Pen and ink on paper (20.5 x 13 cm). In the collection of Staatliche Muzeum zu Berlin, Kupferstichkabinett, Berlin, Germany. https://smb.museum-digital.de/singleimage.php?resourcenr=114791, accessed February 1, 2021.

Crawford, Kate, and Trevor Paglen (curators). 2019. *Training Humans*. *Osservatorio*, Fondazione Prada. Milan, Italy, September 12, 2019-February 24, 2020.

Nielsen, Hanne, and Birgit Johnsen. 2018. *Modern Escape*. One-channel video installation with podium and objects. 21 min 12 sec. Part of the solo exhibit *REVISIT: HANNE NIELSEN & BIRGIT JOHNSEN*. Overgaden Institute for Contemporary Art. Copenhagen, Denmark, November 10, 2018-January 6, 2019. In the collection of the artists.

Steyerl, Hito. 2015. *Factory of the Sun*. Single channel high definition video environment, luminescent LED grid, beach chairs. 23 min. Kunsthal Charlottenborg. Copenhagen, Denmark, December 8, 2016-February 19, 2017. In the collection of Museum of Contemporary Art, Chicago; San José Museum of Art; and Hammer Museum, Los Angeles, U.S.

Steyerl, Hito. 2015. *Factory of the Sun*. "Transcription of video speak". Kunsthal Charlottenborg, https://kunsthalcharlottenborg.dk/wp-content/uploads/2016/09/Factory-of-the-Sun-Transcription.pdf.

Entries:

Cambridge German –English Dictionary Online. S.v. "heimsuchen". https://dictionary.cambridge.org/dictionary/german-english/heimsuchen, accessed October 23, 2020.

Duden Online. 2020. S.v. "heimsuchen". https://www.duden.de/rechtschreibung/heimsuchen#herkunft, October 23, 2020.

Encyclopedia Britannica Online. 2020. S.v. "Cyberspace". https://www.britannica.com/topic/cyberspace, accessed December 2, 2020.

Encyclopedia Britannica Online. 2020. S.v. "Pac-Man". https://www.britannica.com/topic/Pac-Man-1688279, accessed 31 January 2021.

Norrøn Ordbok. 1975. S.v. "Heimta". Edited by Heggstad, Leiv, Finn Hødnebø, and Erik Simensen, Erik. Oslo: Det Norske Samlaget.

Merriam-Webster. 2020. S.v. "haunt", (v). https://www.merriam-webster.com/dictionary/haunt, accessed July 6, 2020.

Merriam –Webster. 2021. S.v. "safe-conduct", (n). https://www.merriam-webster.com/dictionary/safe-conduct, accessed January 23, 2021.

Oxford English Dictionary Online. 2019. S.v. "atmosphere", (n). http://www.oed.com/viewdictionaryentry/Entry/12552, accessed September 5, 2019.

Oxford English Dictionary Online. 2020. S.v. "haunt", (v). https://www.oed.com/view/Entry/84641#eid2131159, accessed April 29, 2020.

Online Etymology Dictionary 2020. S.v. "haunt", (v). https://www.etymonline.com/word/haunt, accessed April 29, 2020.

Oxford Living *Dictionaries* Online. 2018. S.v. "atmosphere", (n). https://en.oxforddictionaries.com/definition/atmosphere, accessed December 19, 2018.

Oxford Reference Online, 2020. S.v. "estrangement -effect". https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095758798, accessed March 23, 2020.

Stanford Encyclopedia of Philosophy Online. 2021. "Phenomenological Approaches to Self-Consciousness". First published Feb. 19, 2005, revision May 23, 2019. https://plato.stanford.edu/entries/self-consciousness-phenomenological/, accessed January 15, 2021.

Techopedia. 2021. S.v. "rendering". https://www.techopedia.com/definition/9163/rendering, accessed January 10, 2021.

Epigraphs:

Atkins, Ed. 2016. “Safe Conduct: Ed Atkins in the x-room.” By SMK – Statens Museum for Kunst. YouTube, July 11. https://www.youtube.com/watch?v=yY17qZLMUcg.

Bauman, Zygmunt, and David Lyon. 2013. *Liquid Surveillance*, 53. Cambridge: Polity.

Clover, Joshua. 2006. “Poem”. In *The Totality for Kids*, 44. Oakland: University of California Press.

Eliasson, Olafur. 2014. “Atmospheres, Art, Architecture: A Conversation between Gernot Böhme, Christian Borch, Olafur Eliasson, and Juhani Pallasmaa.” In *Architectural Atmospheres: On the Experience of Politics of Architecture*, edited by Christian Borch, 93. Basel: Birkhäuser.

Halpern, Orit. 2015. *Beautiful Data. A History of Vision and Reason since 1945*, 21. Durham: Duke University Press.

Haraway, Donna J. 1991. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." In *Simians, Cyborgs and Women: The Reinvention of Nature*, 153. New York: Routledge.

Irigaray, Luce. 1978. “Interview”. In *Les femmes, la pornographie et l’eroticsme*, edited by Marie- Francoise Hans and Gilles Lapouge, 50. Paris: Editions du Seuil. Quoted in Jay, Martin. 1994. *Downcast Eyes*: *The Denigration of Vision in Twentieth-Century French Thought*. Berkeley: University of California Press.

Marx, Karl. (1856) 1978. “Speech at the anniversary of the people's paper.” In *The Marx-Engels Reader*, edited by Rovert C. Tucker, second edition, 577. London: Norton. Quoted in Anderson, Ben. 2009. “Affective Atmospheres”. *Emotion, Space and Society* 2: 77-81.

Merleau-Ponty, Maurice. 1968. *The Visible and the Invisible*, 84. Edited by Claude Lefort, translated by Alphonso Lingis. Evanston: Northwestern University Press.

Woolf, Virginia. (1927) 2001. *To The Lighthouse*,n.p.n. A Projekt Gutenberg Australia eBook, http://gutenberg.net.au/ebooks01/0100101h.html.

Epilogue:

Foucault, Michel. (1977) 1991. *Discipline and Punish*: *The Birth of the Prison*, 195. Translated by Alan Sheridan. Reprint, London: Penguin Books.

Spahr, Juliana. 2005. *This Connection of Everyone with Lungs*, 10. Berkeley: University of California Press.

Other Sources:

ACLU, American Civil Liberties Union, n.d. *The NYPD’s Discriminatory Surveillance of Muslim Communities*. https://www.aclu.org/other/factsheet-nypd-muslim-surveillance-program, accessed 08.01.2021.

Ahmed, Sara. 2014. “Atmospheric Walls.” *Feministkilljoys* (blog). September 15, 2014. https://feministkilljoys.com/2014/09/15/atmospheric-walls/.

Atkins, Ed. 2016a. “*Safe Conduct*: Ed Atkins in the x-room.” By SMK—Statens Museum for Kunst. YouTube, July 11, 2016. https://www.youtube.com/watch?v=yY17qZLMUcg.

Atkins, Ed. 2016b. ”Hollywood Structuralism in a Collapsed Age.” Interview with Ed Atkins by Toke Lykkeberg. *Kunstkritikk* March 23, 2016. http://www.kunstkritikk.no/artikler/hollywood-structuralism-in-a-collapsed-age/.

Bowles, Nellie. 2018. “Thermostats, Locks and Lights: Digital Tools of Domestic Abuse.” *The New York Times* June 23, 2018. https://www.nytimes.com/2018/06/23/technology/smart-home-devices-domestic-abuse.html.

Böhme, Gernot. n.d. “Critique of Aesthetic Capitalism: A Short Interview with Gernot Bohme.” *Mimesis International*. http://mimesisinternational.com/a-short-interview-with-gernot-bohme-author-of-critique-of-aesthetic-capitalism/, accessed September 5, 2019.

Bratton, Benjamin. n.d. “Machine Vision. Benjamin Bratton in conversation with Mike Pepi and Marvin Jordan.” *DIS Magazine*. http://dismagazine.com/discussion/73272/benjamin-bratton-machine-vision/, accessed 5.8.2020.

Cornell, Lauren and Tom Eccles. 2016. “In the Realm of Posthuman Documents: Lauren Cornell in Conversation with Trevor Paglen and Hito Steyerl.” In *Invisible Adversaries*, edited by Lauren Cornell and Tom Eccles. Annandale-on-Hudson: Center for Curatorial Studies, Hessel Museum of Art, Bard College. Pages 246-47 and 250-51 reprinted in Christov-Bakargiev, Carolyn, and Marianne Vecellio (editors). 2018. *Hito Steyerl: The City of Broken Windows*, 178-179. Exhibition catalogue. Milan: Skira.

Crawford, Kate. 2014. “The Anxieties of Big Data.” Essay. *The New Inquiry*, May 30, 2014. https://thenewinquiry.com/the-anxieties-of-big-data/.

Crawford, Kate, and Trevor Paglen. 2019a: “Excavating AI: The Politics of Training Sets for Machine Learning.” The AI Now Institute, NYU, September 19, 2019. https://excavating.ai.

Crawford, Kate, and Trevor Paglen. 2019b: “A Conversation.” *Quaderno Series* #26, *Training Humans*. Milan: Fondazione Prada.

DARPA, Defense Advanced Research Projects Agency, n.d. “About Darpa”, https://www.darpa.mil/about-us/about-darpa, accessed May 11, 2020.

Davidsen, Camilla. 2019. “Ugens kunstner: Hanne Nielsen & Birgit Johnsen.” *Kunsten.nu*, November 13, 2019. https://kunsten.nu/journal/ugens-kunstner-hanne-nielsen-birgit-johnsen/.

Decalf, Guillame. 2017. “10 (little) things you might not know about Ravel's Boléro.” *France Musique*, December 4, 2017. https://www.francemusique.fr/en/10-little-things-you-might-not-know-about-ravel-s-bolero-15565.

D'Onfro, Jillian. 2018. "Google will not renew controversial Pentagon contract, cloud leader Diane Greene tells employees." *CNBC* June 1, 2018. https://www.cnbc.com/2018/06/01/google-will-not-renew-a-controversial-pentagon-contract.html.

"Faceshift: Markerless Motion Capture." 2013. YouTube, August 13, 2013. https://www.youtube.com/watch?v=24qUFDdZAG8.

Fang, Lee. 2019. "Google Continues Investments in Military and Police AI Technology through Venture Capital Arms". *The Intercept*, July 23, 2019. https://theintercept.com/2019/07/23/google-ai-gradient-ventures/.

Fondazione Prada. 2019. *Training Humans.* Exhibition leaflet.

Frisk, Adam. 2018. "What is Project Maven? The Pentagon AI project Google employees want out of". *Global News*, April 5, 2018. https://globalnews.ca/news/4125382/google-pentagon-ai-project-maven/.

Gershgorn, Dave. 2017. "The Data That Transformed AI Research—and Possibly the World." *Quartz*, July 26, 2017. https://qz.com/1034972/the-data-that-changed-the-direction-of-ai-research-and-possibly-the-world/.

Google. 2020. "Google Nest Help. Familiar face detection and how to manage your library". https://support.google.com/googlenest/answer/9268625?co=GENIE.Platform%3DAndroid&hl=en, accessed December 10, 2020.

Hu, Cameron. 2016. "Hito Steyerl: Factory of the Sun". Exhibition review. *C: International Contemporary Art* 130 (Summer): 58-59.

Kulager, Frederik. 2019. "'Det er virkelig noget, der griber om sig.' Smartphones er blevet stalkeres smarteste våben". *Zetland*, December 3, 2019. https://www.zetland.dk/historie/soBPrNZl-aOZj67pz-a50e5.

Lighthouse. 2017. "Press release: Introducing the Lighthouse Interactive Assistant: *Company Brings Advances in AI to the Home.*" May 11, 2017.

Lighthouse AI, Inc. 2018. www.light.house, Web archive captured by author 18.12.2018.

Lisberger, Steven. 1982. *Tron*. Burbank: Walt Disney Productions.

Newman, Jared. 2018. "Lighthouse is the Perfect Security Camera for Surveilling Your Own Family." *Fast Company* February 22, 2018. https://www.fastcompany.com/40534482/lighthouse-is-the-perfect-security-camera-for-surveilling-your-own-family.

Nielsen, Hanne and Birgit Johnsen. n.d. *Modern Escape*. *Videoraum* (artists' website), https://videoraum.dk/en/works/modern-escape, accessed March 23, 2020.

Nielsen, Hanne, and Birgit Johnsen. 2019. Interview by author (unpublished). Aarhus, Denmark, October 19, 2019.

Nielsen, Hanne, and Birgit Johnsen. 2019. Personal e-mail contact between author and the artists, May 2019.

Saby, Jan. 2019. "Haunted atmospheres: on affect, temporality, and the weight of the past" Paper presentation at *Atmospheres of Shared Emotions* workshop, University of Vienna, April 25, 2019.

Small, Takara. 2019. "How Smart Home Systems & Tech Have Created A New Form Of Abuse" *Refinery 29*, Jan 9, 2019. https://www.refinery29.com/en-ca/2019/01/220847/domestic-abuse-violence-harassment-smart-home-monitoring.

Steyerl, Hito. 2016."Why games? Interview with Hito Steyerl." Interview by Nina Wöhlk, *Kopenhagen Magasin*, December 13, 2016. http://kopenhagen.dk/magasin/magazine-single/article/why-games-interview-with-hito-steyerl/, accessed December 19, 2016.

Tanczer, Leonie, Isabel Lopez Neira, Simon Parkin, Trupti Patel, and George Danezis. 2018. *Gender and IoT Research Report: The rise of the Internet of Things and implications for technology-facilitated abuse*. https://www.ucl.ac.uk/steapp/sites/steapp/files/giot-report.pdf.

Tillman, Jill. 2020. "What is a ToF Camera? The Time-of-Fligth Sensor Explained." *Pocket-lint*, March 8, 2020. https://www.pocket-lint.com/phones/news/147024-what-is-a-time-of-flight-camera-and-which-phones-have-it.

United States Government Accountability Office. 2013. *Report to Congressional Requesters. Aviation Security: TSA Should Limit Future Funding for Behavior Detection Activities*. November 2013, https://www.gao.gov/assets/660/658923.pdf.

Wood, Charlie. 2019. "Apple quietly absorbed a company that makes AI cameras for people's homes." *Business Insider*, March 28, 2019, https://www.businessinsider.com/apple-reportedly-absorbed-lighthouse-a-firm-that-makes-ai-cameras-2019-3?r=US&IR=T

Appendix 1. Semi-Structured Interview Guide

Interview with the artist duo Hanne Nielsen and Birgit Johnsen conducted by the author in their studio in Risskov, Aarhus, Denmark, on October 23, 2019. A sound file of the interview (in Danish) can be made available for relevant parties upon request. The interviewees have approved all quotes and other information from the interview which is used in chapter 3.

- How do you work with installations in space?
- What characterizes the home in *Modern Escape*?
- How do you work with relations within the work? (humans/animals/the spectator/work)
- What is the relation between outside/inside in the work?
- What is the relation between the technologies of the home in the work and the military-industrial complex?
- How do you work with mapping in *Modern Escape*?
- The automated gaze; what is seen and what sees?
- Surveillance and the lighthouse – why this idea?
- What is the idea behind the prepping activities inside the home?
- How do you work with the color scheme of the work?
- How do you work with the body and its angles?
- Why is there no action in the work?
- How do you work with sound?
- What is the relation between this work and *Camp Kitchen*?
- How do you work with the body and perception of the spectator?
- How did you technically achieve the various camera angles inside the living room?
- *Modern Escape* is – similarly to *Camp Kitchen* – a full production. Is this your preferred format these days?
- What is your interest in surveillance, and how is it differently articulated in *Modern Escape* and your previous works?
- How does an idea for a new work emerge?
- How do you work conceptually?
- What are your work processes like? What makes them collaborative?
- Will the installation be installed in a similar fashion in different venue?
- What is the role of humor in your works, and in *Modern Escape*?