

Living with toxicity

Making slow violence noticeable in the surroundings of Amsterdam Airport Schiphol



Nienke C.P.J. van Baal

Living with Toxicity:

Making slow violence noticeable in the surroundings of Amsterdam
Airport Schiphol

Master Thesis – Cultural Anthropology: Sustainable Citizenship

Author: Nienke van Baal (9592008)

Email: n.c.p.j.vanbaal@students.uu.nl

Telephone number: +31 6 42563669

Course: Ethnographic Fieldwork & Thesis

Supervisor: Nikkie Wiegink

Wordcount: 21571

Utrecht, 03-07-2022

Universiteit Utrecht



Cover photo (Recht op Bescherming tegen Vliegtuighinder, n.d)

Abstract

Residents of the surroundings of Schiphol are living with toxicity, as they are facing noise pollution and air pollution originated by Schiphol. In this thesis, I will examine the long-lasting social, environmental, and health effects of living with toxicity and the concept of slow violence (Nixon 2011) to provide insight and a language to understand what living in a toxic world means, and to show how this is violent in many ways. As I will argue, it is insightful to regard toxicity as a form of slow violence, as this emphasizes the power imbalances and struggles of the residents who try to resist this. Within this examination of living with toxicity in the surroundings of Schiphol, I will also debate Nixon's (2011) standard definition of slow violence and propose to expand this by focusing on the noticeability of slow violence and how this influences the way people understand, perceive and act upon living with toxicity and slow violence. To regard toxicity as slow violence and focusing on the influence of noticeability, allows aspects such as insecurity and resistance to be explored through the notion of slow violence as well.

Keywords: Slow violence, Toxicity, Noticeability, Noise pollution, Air pollution, Resistance, Amsterdam Airport Schiphol

Acknowledgements

This thesis is written as part of the graduation program of the master studies Cultural Anthropology: Sustainable Citizenship. The data for this thesis has been collected during my fieldwork between February 2022 and May 2022, in the surroundings of Amsterdam Airport Schiphol. I want to thank everyone who has been involved in this research project.

First of all, I want to thank all of my research participants, for their time and openness, and allowing me to learn about your experiences of living with toxicity in the surroundings of Schiphol. I look back at an enjoyable period of fieldwork full of valuable and interesting conversations.

I would also like to say thank you to all the professors of the program of Cultural Anthropology: Sustainable Citizenship for the insightful perspectives and everything I have learned the past two years during the premaster and master. I would like to give special thanks to my supervisor Dr. Nikkie Wiegink for insightful feedback, suggestions, and the guidance during the process of my thesis.

Finally, I would like to thank my boyfriend, my family, and my friends for all their support during the past two years.

Nienke van Baal

Contents

- Introduction 1**
 - (Slow) Violence 2*
 - The field 4*
 - Methodology 6*
 - Positionality and ethics 8*
 - Outline 9*

- Chapter One: The Violence of Noise Pollution 11**
 - Noticing noise pollution 13*
 - Regarding aviation noise as (slow) violence 15*
 - Measuring noise 18*
 - Mitigation of noise pollution 20*
 - Conclusion 21*

- Chapter Two: Living with Air Pollution 23**
 - Regarding air pollution as (slow) violence 23*
 - Trying to mitigate life with air pollution 27*
 - Noticing air pollution 29*
 - Conclusion 32*

- Chapter Three: Between Powerlessness and resistance 34**
 - Schiphol, a powerful entity 34*
 - A sense of powerlessness 36*
 - Representing and resisting slow violence 38*
 - Climate crisis 41*
 - Conclusion 44*

- Conclusion 46**

- Epilogue 50**

- Bibliography 51**

Introduction

In the distance, I see a plane approaching. The closer the plane gets, the louder the sound. I look up and I can clearly see that it is an airplane of Singapore Airlines. It flies very low, as it is about to land on the Aalsmeerbaan of Amsterdam Airport Schiphol. With the app Explain in my hand, I measure that the plane is producing 90 decibels. The sound is overwhelming. It is louder than I had ever experienced before or expected it to be. I watch and observe the planes, which come over like a kind of train, one after the other. There is about two minutes between each airplane. Consequently, there is almost a continuous sound, as one has barely left when the next one arrives. From measuring the sound, I learn that each passing airplane produces between 80-90 decibels. I notice that after about ten to fifteen minutes observing the airplanes, my ears started to hurt. It took about an hour for that feeling in my ears to go away (Fieldnotes, participant observation, 27 March 2022).

During the moment I just described, I was standing in Aalsmeer, close to the Aalsmeerbaan. I was trying to experience some of the noise of airplanes in the surroundings of Schiphol myself. On Google Maps, I searched for a place as close as possible to the point where planes land or depart from the Aalsmeerbaan, which is one of Schiphol's runways. I ended up in a street less than a kilometer from this point. This is not a so-called spotter's area for airplanes, it is a residential area with dozens of houses and some shops, such as a home and kitchen store and nurseries. Thus, it is an area where people live and work. I stood on this spot for approximately 20 minutes. I left feeling overwhelmed and astonished. This is a street where people live. This made me wonder; how do people manage to live with such noise? How is such noise allowed in a residential area?

A few weeks later, I went back to the exact same street, almost to the exact same point. This time for an interview with Anna, who is one of the many people affected by the noise and air pollution in this area. Anna was born in the surroundings of Schiphol and has lived there her entire life. She has witnessed Schiphol and its associated noise pollution grow over the years. During the last few years, the nuisance in the area has increased immensely. The impact of Schiphol on Anna's life is enormous, as becomes evident in this quote from our interview:

It depresses me. I am a very cheerful person by nature, I think. And it also makes me very tense, which means I shake from it. It costs me a lot of energy and I do not sleep well. It feels like you are going to cry, I do not cry, but I have that feeling. The tears are so high. And I find it all hardest I love nature and animals so much. We are trying to arrange a kind

of ecosystem here in the garden. We have a hedgehog, and we have all kinds of birds nesting here, and I cannot enjoy it anymore. When I am working in the garden all kinds of things fly above me. As a result, I just go inside. It has basically destroyed my whole life (Anna, interview, 21 April 2022).

Anna is not the only one experiencing disruption that is caused by Schiphol. There are thousands of people living close to one of Schiphol's runways or underneath one of Schiphol's flight routes, as the airport is built in one of the Netherlands' most densely populated areas. The area and the number of people affected by the disruption that is caused by Schiphol, has increased in recent years. If Schiphol's plans to continue to grow proceed, the area and the number of affected people will continue to increase. All these people deal with noise and air pollution from Schiphol on nearly a daily basis. Since the disruption, frustration and worries regarding the toxicity are mainly caused by noise pollution and air pollution, this thesis will focus on these two forms of pollution.

In this thesis, I conceptualize noise and air pollution as toxic. I argue that it is insightful to regard the toxicity caused by Amsterdam Airport Schiphol as a form of slow violence (Nixon 2011), since this draws attention to the temporal and hidden aspects of toxicity. In addition, seeing toxicity as violent emphasizes the power imbalances and struggles of people trying to counteract them. Within this thesis, I will demonstrate what it means to live with toxicity and slow violence, and how this impacts the lives of people such as Anna.

(Slow) Violence

In this thesis, I will examine the long-lasting social, environmental, and health effects of living with toxicity in the surroundings of Schiphol through the concept of slow violence, while also debating the standard definition provided by Nixon (2011). Rob Nixon (2011, 2), professor in Humanities and Environment, wrote the book *Slow Violence and Environmentalism of the Poor*, in which he added the notion of slow violence to our vocabulary about violence, with which he refers to “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all”. Throughout this thesis, I have used the notion of slow violence to provide insight and a language to understand what living in the toxic surroundings of Schiphol means, and to show how this is violent in many ways. Therefore, I want to start with theorizing violence and slow violence.

According to sociologist and geographer Thom Davies (2022, 412), who has done research about slow violence and toxic geographies in a postcolonial region of Louisiana, violence is a difficult concept to pin down, as it has an ontological status. In addition, Galtung (1969, 168) states that “it is not so important to arrive at anything like *the* definition, or *the* typology – for there are obviously many types of violence”. Within the anthropology of violence, one of the main concepts is the notion of structural violence (Galtung, 1969). To account for the suffering caused by the denial of basic needs, sociologist Johan Galtung (1969) introduced the concept of structural violence. He stated that violence “is present when human beings are being influenced so that their actual somatic and mental realizations are below their potential” (Galtung 1969, 168). Anthropologist Paul Farmer (2004, 407) defines structural violence as “violence exerted systematically—that is, indirectly—by everyone who belongs to a certain social order: hence the discomfort these ideas provoke in a moral economy still geared to pinning praise or blame on individual actors”.

Davies (2022, 413) argues that structural violence is inextricably linked to slow violence. By drawing closely from the work of Galtung (1969), Nixon (2011) makes it evident that slow violence is an inherently structural concept (Davies 2022). Furthermore, by doing this, Nixon (2011) acknowledges the overlap between structural and slow conceptualizations of violence (Davies 2022, 413). Nixon (2011, 2) added the notion of slow violence to our vocabulary about violence, as he argued that environmental violence had not yet been recognized as a form of violence. The concept of slow violence concerns a form of violence that is generally not seen as violent at all (Nixon 2011, 2). Instead of thinking of violence as an immediate, spectacular, and explosive event or action that erupts into immediate sensational exposure, Nixon (2011, 2) proposes to engage with a different kind of violence, a form of violence which is neither spectacular nor instantaneous, but rather incremental and accretive, its calamitous repercussions playing out across a range of temporal scales. According to Nixon (2011), forms of slow violence are underrepresented in media and politics, and as a result, these problems become underrepresented in public and political debates. Lidström et al. (2015, 3) therefore argue that representing cases in which slow violence occur, is a vital mission. Ahmann (2018, 144) adds to this that slow violence is hard to represent due to the unspectacular and slow way it develops.

As I have used the concept of slow violence in this thesis, it provides a way to examine the long-lasting social and environmental effects of living with pollution. Furthermore, the notion of slow violence encourages to think about what constitutes harm in new ways, and to “look beyond the immediate, the visceral, and the obvious in our explorations of social

injustice” (Davies 2022, 410). In line with Davies (2022, 411), I suggest not to accept the standard definition of slow violence but to expand the concept. Davies (2022, 411) argues that slow violence is not out of sight to the people that are impacted by slow violence. Building further on Davies (2022) proposal, I want to suggest to not only focus on the (in)visibility of slow violence, but also focus on the noticeability. Pezzullo (2007, 147) argues that “witnessing also exceeds the visual”, which is why I argue that it is important to focus on noticing, as this draws the focus on other sensual experiences and the embodiment of slow violence. Moreover, this focus on noticing allows us to regard noise and air pollution in the surroundings of Schiphol as a form of slow violence.

Noticing, in this thesis, is about making toxicity observable and about becoming conscious of living with toxicity, through making it noticeable. Tsing (2015, 22) introduced the concept of “arts of noticing” as “looking around rather than ahead”. Mathews (2020, 73) adds to this that “these “arts of noticing” are attuned to the details of intertwined ecological and social processes”. Davies (2022, 411) conceptualized ways to make slow violence noticeable and knowable as “slow observations”. According to Davies (2019, 11), people living with the consequences of slow violence are “often able to gradually observe the incremental changes to their local surroundings”. Uncovering this reveals the visual, embodied and lived experiences of toxic places (Davies 2019, 11).

Focusing on the noticeability of slow violence provides an insightful framework for the examination of living with toxicity in the surroundings of Schiphol. Hence, it provides a language to understand what living in a toxic world means, how people perceive and act upon this and to reveal how this is violent in many ways, as I will show throughout this thesis. In addition, in this thesis, I will examine the long-lasting social, environmental, and health effects of living with toxicity in the surroundings of Schiphol, through the concept of slow violence (Nixon 2011) and I seek to answer the following question:

How is living with toxicity as a form of slow violence understood, experienced, and acted upon by residents of the surroundings of Amsterdam Airport Schiphol?

The field

Nading (2020, 210) states that there is “no escaping the toxic world”. This thesis focuses on one specific case of toxicity, the surroundings of Schiphol. Therefore, I conducted the fieldwork for this research in the surroundings of Amsterdam Airport Schiphol, the largest Dutch airport. Schiphol is located in the province of North Holland, south-west of the Dutch capital,

Amsterdam. As Anna nicely put it, you can think of Schiphol as a "spider's web" (Anna, Interview, 21 April 2022), where thousands of flights converge to depart and to land on six different runways: the Polderbaan, the Zwanenburgbaan, the Kaagbaan, the Aalsmeerbaan, the Buitenveldertbaan and the Oostbaan (LVNL, n.d.).

These runways are not all in use at the same time. Generally, during the day, between 6:00 and 22:30, two runways are used simultaneously: one for landing airplanes and one for departing airplanes, at so-called peak hours, three or even four runways are used simultaneously (LVNL, n.d.). During the night, 22:30 to 6:00, one runway is in use for departing and one for landing traffic (LVNL, n.d.). There is no way to predict which runways would be used, as such decisions depend on various external factors, such as the wind (LVNL, n.d.).

Because of the unpredictability of the use of runways, and since the range of the produced toxicity by Schiphol covers a large part of the Netherlands, I decided not to focus my research on an area close to one runway. Instead, I decided to focus my research on all areas close to Schiphol's runways and on places that are located underneath flight routes, which meant that my research was not focused on one specific city or municipality. Because I did not focus on a specific city or municipality, my research brought me to a wide range of places. This included places just a few kilometers from the runways at Amsterdam Airport Schiphol, but also, to Baarn, which is located 37 km from Schiphol. I visited Baarn because a flight route passes over there. In figure 1, the purple areas show where the complaints about aviation nuisance originate from.

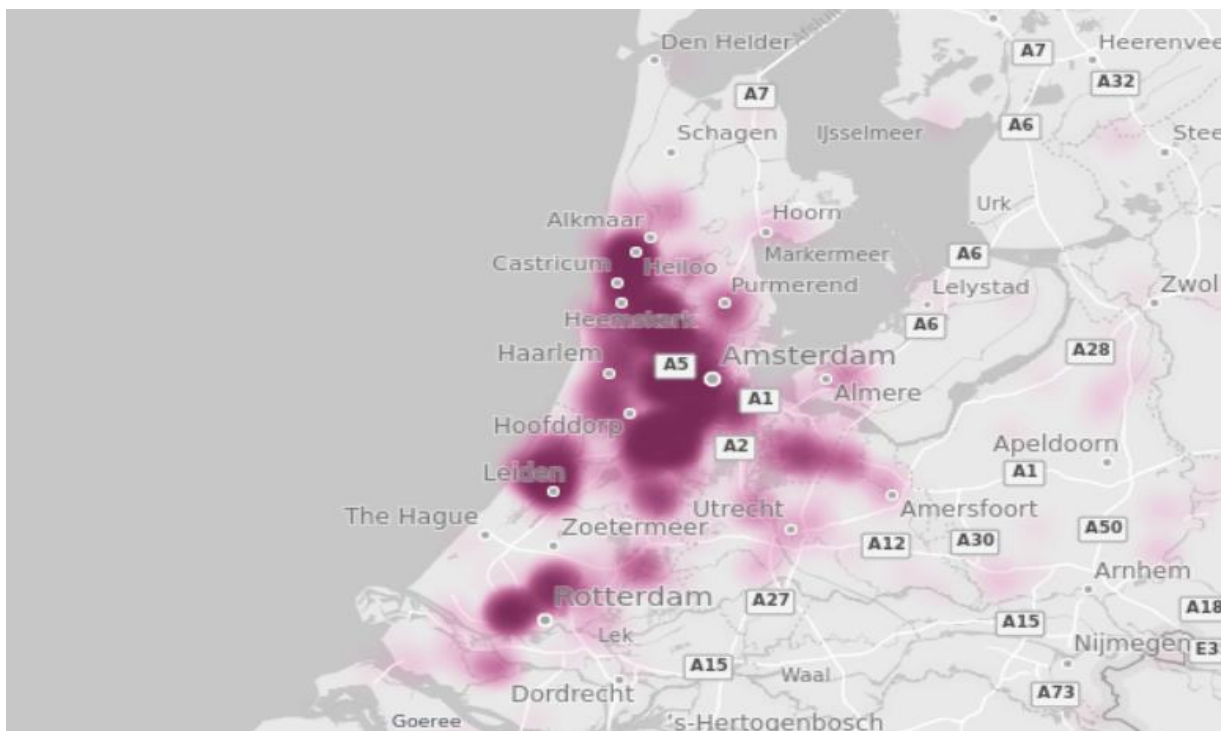


FIGURE 1: MAP OF WHEREABOUTS COMPLAINTS AVIATION NUISANCE, (SCHIPHOL WATCH 2021).

Over the past 100 years, Amsterdam Airport Schiphol has grown into one of the largest airports worldwide. Nowadays, the airport is considered as one of the largest hubs in Europe, being Europe's fourth largest airport in passenger numbers, and Europe's third largest airport in cargo in 2020 (Royal Schiphol Group, n.d. a). In 2019, before the COVID-19 pandemic, Amsterdam Airport Schiphol counted almost 500.000 flights and 72 million passengers (Royal Schiphol Group 2020). The airport has considerable prestige in the Netherlands, since the activities at and around Schiphol are an important source of employment and are benefiting the Dutch economy (Royal Schiphol Group, n.d. b). Schiphol and the Dutch government continue making plans to grow (NOS 2019). Without growth, Schiphol would lose the competition with other aviation hubs in Europe, according to the Dutch minister of Infrastructure and Water Management (NOS 2019). The plans to grow are controversial and opposed, in particular by the residents in the vicinity of Schiphol. Some residents even argue that the area will become unlivable if more flights will take off and land at the airport, since a larger number of flights will cause more toxicity through the emission of ultrafine dust and nitrogen dioxide and noise pollution in the area (NH Nieuws, 2021).

This research focuses on the residents living in the vicinity of Schiphol, people who live close to one of Schiphol's runways or in places located underneath one of the flight routes, and experience disturbance from the toxicity they live in. I got into contact with my research participants through the website www.vliegherrie.nl. On this website, my research participants have reported one or more complaints about the toxicity in their environment. As I wanted to acquire insight into what living in a toxic world means, I wanted to have a diverse research population. Therefore, I spoke to a wide variety of people, as there were no restrictions based on gender or age. The only restriction was that participants had to be 18 years or older, because of ethical reasons.

Methodology

In order to answer the research question of this thesis, I have used qualitative and ethnographic fieldwork methods. Wenzel Geissler and Prince (2020, 4) state that “ethnographic work on toxic worldings may start from objects, materials, assemblages, relations, policies or practices, to generate perspectives on ways of seeing, sensing and knowing toxicity and forms of evidence”. As the research question of this study focuses on how toxicity as a form of slow violence is understood, experienced, and acted upon, I used an ethnographic approach to study the toxic surroundings of Amsterdam Airport Schiphol to generate those perspectives. Ortner

(1995, 173) defined ethnographic research as an attempt “to understand another life world using the self – as much of it as possible – as the instrument of knowing”. O’Reilly (2012, 86) states that ethnographic research is a methodology that is used to “learn about people’s lives (or aspects of their lives) from their own perspective and from within the context of their own lived experience”. For this reason, I aimed to do fieldwork, including participant observation, with residents in the surroundings of Amsterdam Airport Schiphol.

In the start of my fieldwork, I contacted the administrator of the website www.vliegherrie.nl. This website positions itself as an addition to the regular websites for complaints about air traffic that are managed by the aviation industry itself or by government bodies, such as BAS (Bewoners Aanspreekpunt Schiphol, which translates to Residents Contact Centre Schiphol), who seem to give little priority to the complaints. The website provides a space for people to complain unlimitedly and freely about all forms of aircraft nuisance. The website states that it is open and transparent and that, in this way, they make personal stories visible and provide insight into the suffering of air traffic nuisance (Meld Vliegherrie, n.d.). To get insight into the suffering and communication of air traffic nuisance, I conducted an online ethnography on this website. This involved observing online what was happening in terms of nuisance by reading what people were saying about it and how they reacted to certain aspects of the toxicity (Pink et al. 2016, 3). I observed the complaints that people posted on this website to learn more about the origins of complaints and about how people are experiencing living with toxicity, by examining what kind of nuisance they are experiencing, how they are experiencing it, and how they are affected by it.

Besides offering a platform to post complaints about aircraft nuisance, the website also functions as a gatekeeper for scientists and journalists who are interested in the personal stories of the people who have filed the complaints (Meld Vliegherrie, n.d.). Throughout my fieldwork, I have kept contact with one of the administrators of the website. He became, as O’Reilly (2012, 114) defines it, my gatekeeper. Through this gatekeeper, I gained access to the field and came into contact with my participants. I could forward him complaints that appealed to me or complaints which I wanted to learn more about, after which he would contact the people who wrote the complaints and asked them if they were willing to participate in my research. In this way, the privacy of the reporters was guaranteed.

I completed twenty semi-structured interviews with people living near one of Schiphol’s runway or underneath one of Schiphol’s flight routes. It is important to note that I conducted all my interviews in Dutch. Therefore, the quotes that I use are (my own) translations. Of the twenty interviews, four were held online. The other interviews were conducted in the living

environments of the research participants, during a walk or at their home. I chose to do as many interviews as possible in the area of residence of the research participants, in order to experience and notice some of the toxicity in their environment during the interviews. This allowed me to observe how the research participants reacted to the overflying airplanes. In addition, this allowed the research participants to compare the amount of noise to the “regular” amount of noise pollution they experience. Moreover, being there made it easier to see aspects like the flight routes. In some of the interviews, I have tried to use the life-history method, which are “interviews in which an individual is interviewed on a specific topic in the context of their whole life story” (O’Reilly 2012, 128). However, most participants were so imbued with the nuisance they were experiencing in the present, that using this method proved to be more difficult than I had anticipated. In addition to the twenty interviews with residents of the surroundings of Schiphol, I have conducted one interview with someone from the GGD, who has done research on (the health effects of) noise pollution in the surroundings of Schiphol.

Alongside the digital ethnography and the interviews, I used the method of participant observation, which is considered to be the main method of ethnographic fieldwork (O’Reilly 2012, 86). I have spent several days and nights in the surroundings of Schiphol, mostly in Uilenstede, Amstelveen. Uilenstede is a student campus located underneath the approach route to the Buitenveldertbaan. The method of participant observation also involved sensory ethnography, which Sarah Pink (2015, 8) describes as focusing on “how sensory ways of experiencing and knowing are integral both to the lives of people who participate in our research and to how we ethnographers practice our craft”. Additionally, I have attended the “shrink the aviation” manifestation on the 14th of May 2022. I attended the manifestation in front of Schiphol Plaza, where I have observed the protestors and have spoken to several people attending this manifestation.

Positionality and ethics

DeWalt and DeWalt (2011, 93) argue that all researchers and investigators are biased. Therefore, it is important to reflect on how they are biased, by reflecting on their position, “the place from which the observer observes” (DeWalt and DeWalt 2011, 40). In addition, it is important to reflect on the researcher’s histories and socialization, and how this influences their research (Madden 2017, 23). Hence, it is important to note that this thesis assumes the frame of reference of a 22-year-old, white, Dutch woman. I love to travel. Therefore, I often fly more than once a year. I have never lived close to Schiphol and had never experienced any nuisance

from air traffic before I started this research. My background made me an outsider to my research participants. I believe that being an outsider helped me to conduct this research with an open view.

Since I am not from the area around Schiphol and have never lived here, and therefore do not know what it is like to live with toxicity caused by Schiphol, I noticed that some research participants were curious how I came up with this topic and where I stand within the whole debate around Schiphol. Sometimes, I felt it was difficult to express my opinion regarding this debate, as I am not against the existence of Schiphol. I make use of the airport and do not want it to disappear from the Netherlands. However, I do believe that there should be fewer flight movements. During some conversations, I was hesitant to express this, as I did not want my opinion to influence the conversation. Nevertheless, most participants did not seem to be bothered by my opinion or with me being an outsider. In fact, most research participants were glad that someone was paying attention to the toxicity within their living environment and that I would listen to their experiences and stories. Some research participants even seemed to have an extra urge to let me experience some nuisance or made extra effort in explaining the impact and their experiences, to make sure that I would understand, that I would “get it”, since I had never lived with Schiphol’s toxicity.

Regarding the ethics of this research, I have followed the Ethical Guidelines from the Dutch Anthropological Association (2019). As the guidelines and Hammersley and Atkinson (2019, 216) describe, “it is frequently argued that people must consent (in an unconstrained way) to being researched if any inquiry is to be ethical; that they must make this decision on the basis of comprehensive and accurate information about the study involved; and that they should be free to withdraw at any time”. Therefore, I have always asked informed consent from all my participants. In addition, before the start of the interviews, I have indicated that the research participants were free to quit an interview at any time. In addition, as the Ethical Guidelines from the Dutch Anthropological Association (2019) states, I have asked my research participants if they wish to remain anonymous or receive recognition within this thesis. Some participants wished to remain identifiable, others preferred to be anonymized, for whom I have used pseudonyms (Madden 2017).

Outline

As mentioned before, this thesis will focus on noise pollution and air pollution in the surroundings of Schiphol, since these forms cause the most disruption, frustration, and worries.

This thesis explores the way the residents of the vicinity of Schiphol understand, experience, and act upon living with toxicity, which will be regarded as a form of slow violence.

The first chapter concerns noise pollution and will demonstrate how this impacts the lives of my research participants. I will argue that it is insightful to regard the toxicity in the surroundings of Schiphol as a form of slow violence and to focus on noticeability, since this reveals why noise pollution is perceived as violent, as this draws the attention to temporal aspects, which are important to understand why noise pollution is perceived as violent, since this is related to the repetitive nature of aviation sound. Then, I will focus on the ways in which my research participants try to collect data about the noise pollution in their living environment through measuring the sound, and how this affects their understandings. I will end this chapter by showing how people mitigate and react to noise pollution.

The second chapter of this thesis focuses on life with air pollution, in which I will first show how air pollution can be regarded as violent. This will be done through regarding air pollution as a form of slow violence, as this emphasizes the violent aspects. Within this illustration, I will show how air pollution is perceived as violent by my research participants, as I will focus on the perceived health consequences of living with slow violence. After this, I will address how these perceived health consequences influence the lives of people living with them. Then, I will provide a demonstration of the ways in which my research participants try to mitigate their lives with air pollution. Lastly, I will show how my research participants notice air pollution, and how this affects their understandings.

The third chapter addresses the prevailing tensions between the perceived sense of powerlessness and the difficulties in addressing and resisting living with toxicity, and in extent, forms of slow violence. My research participants perceive Schiphol, and by extent the Dutch government, as the responsible actors of the toxicity in their living environment. I will show that this is more complex and that the structure in which Schiphol and the Dutch government operate perpetrates the violence in the vicinity of Schiphol and provides Schiphol with exceptional position as a powerful entity. This structure evokes a sense of powerlessness for my research participants, who despite this feeling still try to resist the toxicity in their surroundings. The difficulties within representing and resisting the toxicity will be addressed, after which I will show how Schiphol seems to be given blame for the climate crisis and how this influences my research participants actions related to matters of sustainability.

Chapter One: The Violence of Noise Pollution

A few days after the storm Eunice, that raged over the Netherlands in February 2022, I met up with Max for a walking interview through his neighborhood, which is located at the border of Amsterdam Buitenveldert and the North of Amstelveen. It was still quite windy and a bit rainy that day. The sky was grey and cloudy. Upon arrival, I could already hear and see some airplanes flying over quite low. I could easily see the airplanes flying underneath the low-hanging clouds. The sound produced by the airplanes was very loud, which made it hard for me to hear the music through my earphones while I was walking to the place where we would meet. I noticed that I immediately looked up to see where the sounds were coming from exactly. Instantly, my attention was pulled toward the airplanes.

When I saw Max and introduced myself to him, he quickly started talking about the landing planes, which were flying at a low altitude over our heads. He indicated that I chose the right day to have the interview, as I would be able to experience some of the airplane nuisance myself during our walk. Yet, while pointing this out, he indicated that the nuisance could be even worse, as it had been the past few days and nights.

During our walk, Max showed me some beautiful, green spots in the area. It was the beauty of the neighborhood among other positive aspects, such as living close to a big city, that made Max and his wife decide to move here a few years ago. A choice he would not make again today, due to the increasing nuisance in this area. Max explained that according to him, the neighborhood has two sides. He characterized this as "schizophrenic". One moment, when there are no planes coming over, like at the end of our walk, Max appreciates his living environment immensely. Such moments make him appreciate the beautiful surroundings with its many advantages. However, the next moment, when the airplanes start flying again, the advantages of this neighborhood all seem to fall apart. During such moments, for Max, the joy of living in his neighborhood is pretty much gone, and feelings of frustration and stress prevail.

My interview with Max revealed that the impact of living with noise pollution extends beyond residential and living enjoyment, the nuisance also affects mundane things, such as the conversation we were having. I noticed that every time an airplane flew over our heads, we would both look up. The loud sound produced by the planes kept distracting us from our conversations, every time an airplane flew over. This was a valuable experience but annoying at the same time. Sometimes, our conversation even fell silent when an airplane flew over, otherwise we would not be able to hear each other talking. Such moments made me understand

the feelings of frustration better. In addition to the impact on mundane things such as a conversation, it also affects someone's social life. Max explained to me that moments in which visitors are distracted and annoyed by the overflying airplanes, he feels uncomfortable. “Sometimes, I really feel ashamed of my living environment”, he told me. Max is especially embarrassed by his surroundings whenever he has visitors, in particular when they are unable to have a normal conversation due to the noise pollution. The shame and the uncertainty of whether planes will take off and land on the Buitenveldertbaan during visits, causes feelings of stress and anxiety. Ultimately, this caused Max to avoid having visitors at his home (Fieldnotes, walking interview, 25 February 2022).

Noise is an unwanted sound and a physiological stressor (Schell and Denham 2003, 122). The Guideline Development Group (GDG) from the World Health Organization recommends reducing noise levels that are produced by airplanes to below 45 decibels during the day, and 40 decibels during the night. Noise produced by airplanes above these levels is associated with adverse health and sleep effects (WHO 2018). In the vicinity of Schiphol, the average noise level is considerably higher than this WHO guideline, as shown in Figure 2.



FIGURE 2: MAP SHOWING ANNUAL AVERAGE NOISE LEVELS IN DECIBEL (TROUW 2014).

Living with noise pollution has a major impact on the health and lives of the people who are living in the surroundings of Schiphol, as became evident in the vignette above. I will elaborate on the experiences, the impact, and the way my research participants try to mitigate this throughout this chapter, as I will illustrate what it is like to live with noise pollution. First, I will show how noise pollution can be noticed. Second, I will argue that it is insightful to regard noise pollution through the extended notion of slow violence, as I introduced in the introduction, since the focus on the noticeability of noise pollution as a form of slow violence reveals how noise pollution is violent and draws the attention to the temporal aspects. Third, I will illustrate how my research participants try to collect data about aviation noise through measuring it, and how this affects their understandings. Lastly, the focus is on ways people try to mitigate living with noise pollution.

Noticing noise pollution

It is insightful to regard noise pollution through the extended notion of slow violence, as this draws the attention to sensual experiences and the embodiment of slow violence. In the case of Schiphol, the residents can notice noise pollution through sensual experiences. Obviously, noise pollution is audible. This sensual experience is perceived as violent by my research participants, on which I will elaborate in the next paragraph. Another noticeable burden of noise pollution produced by airplanes, is vibrations. This can contribute to increased annoyance (RIVM 2019). The sensual experience of vibrations occurs less frequently, as they are particularly noticeable when there is a big, low flying cargo airplane flying over. One of my research participants, who experiences such vibrations occasionally, is Michiel, a resident of a small village near Schiphol, where he lives together with his wife and young daughter. They are particularly affected by noise caused by airplanes landing and taking off from the Kaagbaan. During our interview, he told me about the vibrations from airplanes:

There are certain objects upstairs which, if you put them wrong, can resonate. However, it is not like it used to be. My neighbor told me that in the old days, the cups in the cabinets were actually jingling. Nevertheless, those newer planes have changed a little bit and the isolation helps. But the rumble, you feel it (Interview, Michiel, 12 April 2022).

This quote illustrates that the sound of airplanes is not only audible, but also tangible. My research participants perceive these sensual experiences of airplane noise as penetrating, as they perceive it as something impossible to escape from. I will elaborate on this later this chapter.

Nevertheless, in addition to sound being audible and tangible, the overwhelming sound of a big, low-flying airplane is noticeable through embodiment as well, as it also evokes bodily reactions. According to my research participants, there are at least two forms of embodiment of noise pollution: through a short-term bodily response and through a delayed destruction of the body due to negative health effects that occur as a result of living with noise pollution. Anna, whom I mentioned in the introduction, described the short-term bodily response as a form of tensing up, due to cramp in her muscles (Anna, Interview, 21 April 2022). Michiel, on the other hand, explained it as a kind of shock, or pain, that goes through his body. This bodily reaction even wakes him up at night. During our interview, he illustrated it like this:

A while ago, I woke up at 4 o'clock and I did not hear anything, no plane, nothing. But I could not sleep anymore. I have that quite often. And then, when I am awake, it is like the moment I wake up and realize it is still night, there is a kind of impulse going through my body, a kind of pain. The other day, someone said that is stress, a kind of fight or flight reaction. I do not know if I have that completely, but a kind of blood that goes through your brain or something, something you feel, I cannot quite describe it (Michiel, interview, 12 April 2022).

Anthropologists Schell and Denham (2003, 122), who have done research about the impact of air pollution, lead, and noise pollution on human biology, also recognize that noise stressors provoke short-term bodily responses. Such responses involve several bodily changes, like altered heart rate, blood pressure, and respiration (Schell and Denham 2003, 122).

In addition, noise pollution also evokes delayed effects. Miedema (2007, 42) argues that “noise is one of the background stressors interwoven with our daily life”. Little (2012, 431) also states that environmental health risks, such as living with toxicity, are socially experienced as environmental suffering, frustrating, painful, and causes bodily distress. This is also the case for the residents of the surroundings of Schiphol, as noise pollution is perceived as a major source of stress by my research participants. According to Schell and Denham (2003, 122), “stress is the primary mechanism by which noise produces nonauditory effects on physical and mental health”. They argue that outcomes of the health effects of nonauditory effects in the surroundings of airports all show negative health consequences, such as on cardiovascular effects on children, like higher levels of epinephrine, norepinephrine, and psychological stress, as the study of Evans et al. (1998, 75) has shown (Schell and Denham 2003, 122-127). Furthermore, Schell and Denham (2003, 123) state that studies have consistently found negative

health consequences in the form of postnatal growth, such as reductions in birth weight related to noise from airports. In addition, interdisciplinary research by Beutel et al. (2016, 2) has shown that chronic exposure of exceeded levels of noise can have adverse health outcomes.

Through these forms of embodiment, both noise pollution, and its consequences become noticeable. The noticeability of noise pollution and its consequences draw attention to the impact this has on the lives of my research participants, and why they perceive this as violent, which I will show in the next paragraph.

Regarding aviation noise as (slow) violence

Even though noise pollution may not appear to be a form of slow violence at first glance, as it refers to an unspectacular nor instantaneous form of violence, I propose that it is insightful to regard noise pollution in the surroundings of Schiphol as a form of slow violence, and to focus on noticeability. I argue that this provides an insightful framework to analyze how noise pollution is violent, as it draws the attention to the temporal aspects. Temporality is an important aspect in why noise pollution is perceived as violent. One overflying aircraft is not considered violent, but the number of airplanes and the ever-shortening periods of silence. In other words, the repetitiveness nature makes the sound of airplanes violent. This became evident in my interview with Michiel, as he stated:

Except for the several flights at night, the busy days, with almost continuous noise of airplanes, are lasting from 05:15 to 23:59. Only during the first and last hours, the repetitiveness of the airplanes is slightly lower. There are regular moments throughout the day when two planes pass overhead within 60 seconds. This is new to me. I cannot think of another word for it other than violent. There is no more silence between the two planes. Just today, I counted 376 planes (Michiel, Interview, 12 April 2022).

The quote shows that the repetitive nature of airplane noise causes it to be perceived as violent by my research participants. The chronic exposure to this form of noise pollution makes the impact profound. In addition, this causes delayed health effects, as I have demonstrated in the previous paragraph. Such negative health consequences are a result of a violent delayed destruction of the body, being one of the key characteristics of the notion of slow violence (Nixon 2011, 2). The fact that it takes a long time for such negative health consequences to emerge, affects how people react to living with noise pollution, as my interview with Michiel showed:

The noise pollution at first just causes sleepless nights. But slowly, really that is just been proved, it can lead to cardiovascular disease. First it causes stress, actually. But yeah, then I still think, I am sensitive to it. I think I am doing it to myself and just happens very slowly. And because it goes so slowly you do not act right away. If someone were standing there now with a knife at my throat I would take action, I would move immediately. But now I stay, as I also still see how beautiful it is here (Michiel, interview, 12 April 2022).

This quote shows that impactful health consequences of noise pollution develop slowly, which causes residents, such as Michiel, to not act right away. Analyzing noise pollution through the notion of slow violence with the focus on noticeability, allows us to regard these delayed health consequences as violent.

In addition to temporal aspects that make noise pollution violent, the penetrating character of the sound of airplanes is also experienced as violent. As the quote shows, aviation sound has something violent attached to it. The sound of airplanes is perceived as unpleasant and penetrating, as something that enters your private space, as something you cannot escape from. This became evident in my interview with Tom, who lives near the city center of Amsterdam, where, according to Tom, noise pollution has increased enormously in recent years, except during the COVID-19 lockdowns. During our interview, he describes it like this:

I perceive airplane noise as intimidating. It has something aggressive attached to it. What is very crucial in this, is the fact that the sound is entering your own space, your private space. If it was in a public space, I guess I would perceive it as less aggressive or violent, but because it is happening in your own space, it acquires the quality of being violent and aggressive (Tom, Interview, 14 April 2022).

As the quote shows, aviation sound has something violent attached to it. In fact, sound, and even music, is used during interrogation and in torture techniques, since "prolonged exposure to noise "softens up" and "breaks" prisoners to reduce their resistance to authority and to increase interrogatory compliance, it produces extreme psychological distress, it deprives prisoners of rest and sleep" (Hill 2012, 218). My research participants also occasionally referred to noise pollution as being a form of torture, in particular when the noise of airplanes woke them up at night, causing sleep deprivation. Sleep deprivation is also known to be used as a form of psychological torture (Reyes 2008, 591). The violence and impact of sleep deprivation became evident to me during the same interview with Michiel, who told me the following:

It feels like we are being tortured. Sleep disruption is torture. Of course, I am not in acute danger of death; there is much worse suffering in the world. But having said that, multiple night flights every night that are so loud that you are even taken out of very deep sleep and from 05:15 onwards a plane every ten minutes so that every morning the quality of sleep is violently affected, this is a torture technique. It breaks us apart; this is no way to live. No one should experience this (Michiel, interview, 12 April 2022).

This quote, like Tom's, shows that noise pollution is perceived as violent. In addition to the violent, aggressive nature of living with noise pollution from airplanes, my research participants perceive it as penetrating, especially since it enters your private space. According to my research participants, the penetration of noise pollution takes away the safe, comfortable feeling of home, which is replaced with feelings of frustration. In addition, my research participants experience noise pollution as something impossible to escape from, as it is present in the whole neighborhood. This makes the impact of noise pollution profound. For Tom, the noise pollution, and the impact it has, is starting to put a negative mark on his life. He illustrated it as followed in our interview:

If you ask yourself what is going good in your life and what is not going good, factors about which you are dissatisfied, the whole portion of unhappiness, and if you look at what factors play a role in this, then the nuisance from Schiphol is a factor in that, almost daily. I feel incredibly strongly that they are coming into my own private space, and I have no control over it. I cannot run away, that is an incredibly unpleasant feeling (Tom, interview, 14 April 2022).

Thus, the violent, penetrating nature of aviation noise is thus perceived as very unpleasant by my research participants, and even puts a negative mark on their lives. This reveals the impact of living with noise pollution.

Another aspect that I would like to address within this chapter, is the impact of noise pollution on someone's social life. As I have shown in the vignette in the beginning of this chapter, noise pollution is experienced as very impactful. It impacts mundane aspects of life, such as having a conversation with someone outside. This is something people who are living underneath a flight route to or from one of Schiphol's runways may experience on a nearly daily basis. The noise coming from the airplanes is distracting and irritating. You might look up to see where the airplane is, or you must stay silent for a moment, as you cannot hear each

other. This can cause you to lose track of what you were talking about, or what you wanted to say. As a result, conversations process less smoothly or are hardly possible. As shown in the vignette at the start of this chapter, when someone deals with this frequently, this starts to increasingly impact someone's social life. For instance, some research participants have indicated that they avoid small talk with neighbors when subjected to a lot of noise pollution. In addition, it might impact your social life with family and friends, as became evident in the vignette. This is also the case with Anna, as became evident during our conversation when she told me this:

The other day a friend was over, and a plane came so low over us while we were sitting outside, and then she said very oppressively; shall we go inside? And the other day at Christmas it was also very bad. The Christmas days were terrible. Then she wrote, shall we meet but at my place? Because of the airplanes... (Anna, interview, 21 April 2022)

Comments like this can evoke feelings of stress, frustration, and embarrassment. It is difficult to plan visits around the use of runways since you cannot predict or know when Schiphol will use which runway, as explained in the introduction. Consequently, for people like Max and Anna, living with noise pollution from Schiphol has a major impact on their social lives.

However, the impact goes beyond the influence on mundane aspects and someone's social life. It might also influence someone's work. Several participants, including Max, have had to call in sick to work occasionally as a direct result of the noise pollution. This happens especially when people have not been able to sleep (properly) at night because of the noise pollution. In addition, during the covid-19 pandemic period, when many people were forced to work from home, several of my research participants experienced that the sound of the overflying airplanes affected the quality of their online meetings. In both cases, the noise pollution caused the residents of the surroundings of Schiphol to be unable to function properly at work.

Measuring noise

Some research participants try to collect data about the noise pollution in their surroundings through measuring the noise of airplanes, in order to collect evidence as a way to counteract it. I have encountered three ways in which people try to do this. The first way is by using the app Explane. Through the app Explane, people can measure the decibels of an overflying airplane. The app Explane is developed specifically to record and register airplane noise. Using this app,

residents hope to be able to record the actual aircraft noise and to show that this is a big difference with the figures and calculations from the aviation sector itself (Schiphol Watch 2019).

However, not everyone uses the app, as you must do the recordings yourself. The second way to measure noise pollution, is measuring it with your own devices. For instance, Michiel has built his own measuring devices in his garden. He has built several attenuators and measuring devices. One of these devices measures the sound through decibels, another device receives information about the airplanes, their tail numbers and their altitudes and can link that to the measured sound (Michiel, Interview, 12 April 2022).

The third way to make noise pollution noticeable through measurements, is through a form of citizen-science. Win lives with his wife and his son in Uithoorn, which is located about 8 kilometers away from Schiphol. He is participating in a form of citizen-science research. During our interview, he told me: “The RIVM is now working on a study about noise pollution. I was asked if I wanted to participate if they could place a device to measure the noise in my backyard. So, there is a noise meter here in the backyard where you can see everything accurately” (Win, Interview, 31 March 2022). Such measurements are part of a bigger project to make the noise pollution in the surroundings more noticeable.

This data collection affects the residents’ understandings of noise pollution, as it provides people with the knowledge of the actual number of airplanes, the times they are flying, and actual sound of the noise pollution. For instance, Michiel indicated that he sometimes felt that as many as 20 planes were flying over within an hour, but the measurements showed that there were only 8 (Michiel, Interview, 12 April 2022). Win explained this to me during our interview:

I consider those data about the sound of aviation as evidence, as verification. Because sometimes, I think, am I crazy or what? That I think to myself, what am I worrying about? It is noise. And then I look at those measurements and I think, yes, it is really that bad (Win, Interview, 31 March 2022).

As shown with these examples, residents make noise pollution noticeable by attaching numbers such as decibels to it, thus also providing residents with a form of confirmation and control of their experiences and perceptions, as it provides inside in the intensity and repetitiveness of noise.. This shows that residents are uncertain about their own experiences with noise pollution. This is something I have encountered more often during my fieldwork, the fact that residents

seek some form of validation for their experiences. Measurements are seen as an important resource in this regard. In addition, measurements are used as a form of proof, to show other people that the noise pollution is as bad as they say. Through these measurements, residents can also make noise pollution noticeable for others, which is – as I will discuss in chapter 3 – an important element of resistance against Schiphol.

Mitigation of noise pollution

People experience and act upon living with slow violence in various ways. Sociologist Tironi (2018, 438) has done research about how people affected by the toxicity in Puchuncaví, Chile, act upon and know about their chronic, structural sufferings. During this research, he focused on their use of “hypo-interventions”. With the concept of hypo-interventions, Tironi (2018, 439) refers to a form of intimate activism, which relies on a way of acting and thinking that brings mundane but purposeful actions into relief. Hypo-interventions are minimal and unspectacular, but life-giving practices of caring for, cleaning, and healing the ills of their significant others, attuned to the rhythms of the everyday, set up by people to secure their livelihoods and to make otherwise intractable ailments and problems known (Tironi 2018, 438-439).

In the case of Schiphol, people also started doing little things to mitigate living within their toxic surroundings. In the case of noise pollution, most people tried to mitigate this by isolating their homes and keeping their doors and windows closed as much as possible, to keep the noise pollution outside of their homes. Such actions might seem easy to take. However, for most people, such actions provoke feelings of being locked up within their own homes. For instance, one of my research participants told me during a walk through his neighborhood, that moments in which he keeps all the doors and windows closed to keep the noise outside his home, he feels like the walls are closing in on him, which provides an oppressive feeling as well (Fieldnotes, Walking Interview, 1 April 2022). Such feelings of being trapped into your home, is what makes the noise pollution profound and why it is experienced as penetrating and stressful, especially since home should be a place in which you feel comfortable and safe, as I explained earlier in this chapter.

Other hypo-interventions (Tironi 2018) that people implement to counteract noise pollution, are actions to counteract the noise produced by airplanes using other, more pleasant sounds, such as music or listening to the radio or the tv. According to the woman I interviewed from GGD Kennemerland, this is one of the most useful interventions to mitigate noise

pollution (Interview, 25 April 2022). Others use earplugs to minimize all sounds. Earplugs are especially used by my research participants during nights, to prevent them from waking up from the sound from the airplanes above their heads. For some research participants, it is no solution, as they consider sleeping with earplugs as very uncomfortable. Others feel defeated by the noise pollution when wearing them, as was also the case for Michiel.

I feel like it is something unnatural, to wear earplugs. Moreover, using them feels like a kind of defeat. In addition, I am afraid that now I started using earplugs during the night, I will never be able to sleep without them, that all sounds will start bothering me at some point (Michiel, Interview 12 April 2022).

However, Michiel sleeps a lot better since he started wearing earplugs at night. He indicated that the earplugs reduce the noise quite well, but that it will never be completely silent.

In addition to these ways of mitigating life with noise pollution, people also try to escape their homes, if possible. Anna referred to these people as “sound refugees” (Interview, Anna, 21 April 2022). Running away from your home to escape the noise pollution is a form of everyday resistance, which is a “informal, often covert, and concerned largely with immediate, de facto gains” (Scott 2008, 33). However, it is difficult to run away from noise pollution, especially within the immediate area since the noise pollution is there as well. Other ways to escape noise pollution require both money and time. Several research participants indicated that they needed to go away for a few days to regain peace and quiet. There are even participants who have bought a vacation house for this reason, to make this option more accessible.

Moreover, all the participants I have spoken to have at some point considered moving to a place where they will experience no nuisance from airplanes. Although some wonder whether places like these can still be found in the Netherlands, as the area affected by the nuisance continues to grow. For this reason, some research participants have even considered, or are considering moving to another country. Anna, whom I mentioned in the introduction, has recently decided to sell her house, and leave the place she has grown up and lived all her life. She is moving to the east of the Netherlands.

Conclusion

In this chapter, I have argued that it is insightful to regard noise pollution as a form of slow violence, and to focus on noticeability. Noise pollution is noticeable through sensual experiences and through embodiment, which happens in two ways: through a short-term bodily

response and through a delayed destruction of the body due to negative health effects. The noticeability of noise pollution and its consequences draws attention to the impact this has on the lives of my research participants, and regarding this as a form of slow violence draws the attention to the importance of looking at temporal aspects and reveals why noise pollution is regarded as violent. Temporality is an important aspect in why noise pollution is perceived as violent, since one overflying aircraft is not considered violent. It is the repetitiveness nature, the number of airplanes and the ever-shortening periods of silence that cause the sound to be perceived as violent. In addition, according to my research participants, the sound of airplanes has something violent attached to it, as it is regarded as an unpleasant, penetrating sound which enters your home, making it hard to escape from. Moreover, noise pollution is impactful and affects the social lives of the residents of the surroundings of Schiphol. Some research participants try to collect data about the noise pollution in their surroundings through measuring the noise of airplanes. Such measurements affect the understanding of noise pollution and functions as a form of confirmation and control to the sensual experiences of the residents, and are used as proof, to show other people that the noise pollution is as bad as they say. The residents of the surroundings of Schiphol try to mitigate living with noise pollution through using hypo-interventions (Tironi 2018), by keeping the windows and doors closed, by counteracting the noise with other noise, using earplugs and by trying to escape from it.

Chapter Two: Living with Air Pollution

The other day someone asked if I could describe what I think of Schiphol, then I wrote down: *Noise pollution, air pollution, soil pollution, destruction of living environment, destruction of livability, destruction of the health of the local residents, emitting toxic substances, pollution of the climate*. Then I thought, I will stop, this is already quite a list. Anyway, the parts like air pollution, but also the destruction of the climate and the pollution of groundwater, I am really worried about that. Then I am like, hey, I am 72, I have lived my life, but there are a lot of other people who have their lives ahead of them (Erik, interview, 21 March, 2022).

Erik has lived in de Kwakel for more than 40 years, a small village which is located around 8 kilometers from Amsterdam Airport Schiphol. As Erik shows with his description of Schiphol, in his view, Schiphol is a big polluter causing a lot of destruction. Most research participants seemed to be less concerned with air pollution in comparison to noise pollution, mainly because this form of toxicity is less noticeable. Still, many people in the vicinity of Schiphol do worry about the pollution in their surroundings, especially the health consequences that this entails. In addition, there is a lot of uncertainty and ambiguity regarding the consequences of living with air pollution, including what the impact on health might be. Therefore, I argue that it is insightful to regard air pollution to the extended notion of slow violence as well, as making air pollution noticeable creates more awareness for its presence and will draw the attention to the embodiment, and thus its violent aspects.

In this chapter, I will first show how air pollution can be regarded as violent, by demonstrating why it can be regarded as a form of slow violence. Within doing this, I will show how air pollution is perceived as violent by my research participants, by focusing on the perceived health consequences of living with slow violence, after which I will address how this influences the lives of people living with it. Third, I provide an illustration of the ways in which my research participants try to mitigate air pollution, and how this influences their lives. I will end this chapter with illustrating how my research participants notice air pollution, and how this affects their understandings.

Regarding air pollution as (slow) violence

An airplane produces a lot of emissions. As a result, according to my research participants, they are continuously exposed to air pollution, caused by Schiphol. Erik noted during our interview:

“We are all getting that pollution inside our body anyways. Unconsciously, unnoticed, we breathe it in” (Interview, 21 March 2022). According to Auyero and Swistun (as cited in Little 2012, 433), environmental health risks, such as living with toxicity like air pollution, are socially experienced as environmental suffering, to which Little (2012, 431) adds that it is experienced as “bodily distress, frustration, and even pain”. The bodily distress, frustration, and pain that are caused by air pollution are violent. Soyapi and Kotze (2016, 393), have done research about the “ignored, albeit equally critical, deleterious socio-economic and related environmental impacts of mining in South Africa by exploring the intimate”. In their article, they state people who are continuously exposed to environmental living conditions that are detrimental to their health, are facing slow violence (Soyapi and Kotze 2016, 401). Nixon (2011, 2) also acknowledges the slow, detrimental health consequences of facing slow violence, as he sees slow violence as a “violence of delayed destruction that is dispersed across time and space”. I argue that it is insightful to regard air pollution in the surroundings of Schiphol as a form of slow violence as well, as this draws the attention to the violent aspects of facing air pollution, such as the detrimental health consequences.

How living with air pollution is detrimental for someone’s health and how it affects the lives of people, became clear to me when I was doing a walking interview with Emily. She lives with her husband and two children in Baarn, which is located approximately 37 kilometers from Schiphol. Yet, Baarn is located underneath one of Schiphol’s flight routes. Emily sees noise and air pollution as two separate things that have different impacts. For her, even though noise pollution evokes irritation and annoyance, air pollution has more impact on health. However, Emily can imagine that this is different when you live closer to Amsterdam Airport Schiphol, as the airplanes fly a lot lower over there in comparison to Baarn. In that case, she acknowledges that noise might also impact someone’s health. Nevertheless, Emily is primarily concerned about the air pollution, especially the health effects this might have for her daughter. Emily’s daughter suffers from lung problems and is quickly short of breath. Since December 2021, Emily suspects a relation with her daughter’s health problems and the emissions from the many planes flying over their home. The health problems of Emily’s daughter seem to be worse on days when many airplanes fly over. She is then short of breath, coughs a lot, and eventually gets sick.

“Sometimes, I really feel like crying when I see my daughter sick, when she is not able to play, etc. I feel like I am a bad mother”. While we were walking through her neighborhood, Emily explained that she feels guilty towards her daughter, as she suspects that her living environment is making her sick. The impact on her daughter’s health and the increasing feelings

of guilt and fear result in the consideration to move to Switzerland, which they contemplate as one of the few places where the air is still clean. However, moving is easier said than done. Moving would mean living in cleaner air and better health conditions for their daughter, but at the same time, this would also have a big impact on their (social) lives. Especially for her son, who is in the midst of puberty. Moving might have a big impact on his social life, which would be hard and impactful for him as well. She feels like she must choose between two wrongs (Fieldnotes, walking interview, 11 April 2022). Emily is not the only one who experiences these feelings. Win, who is living with his wife and son in Uithoorn, which is located around 8 kilometers away from Schiphol, also experiences this. Win and his family are particularly bothered by airplanes landing and taking off from the Aalsmeerbaan. He also told me about the experience of these feelings during our interview:

My 18-year-old son has had trouble with his lungs. He has these troubles since we first moved here, he is born here, actually. He suffers from lung problems, no kind of allergy, but when there are a lot of airplanes flying over, that has an immediate affect on his lungs. We have visited a doctor because of this, who said that we live in an unhealthy place. Such conversations make you think like, we live in the wrong place, we have to move, you know. You feel guilty about it. But how are we going to move? That is not as easy as it seems (Win, interview, 12 April 2022)

Win also experiences feelings of guilt because of the health effects their living environment seem to have on his son. Just like Emily, Win and his wife have also considered moving. However, over the years they have become attached to their living environment. In addition, due to the prevailing lack of clarity about the actual health consequences of living in the vicinity of Schiphol, they continued to downplay it, resulting in the fact that they have not yet taken the decision to move somewhere else.

In addition, many research participants suspect that there are accounts of elevated rates of diseases in the vicinity of Schiphol, such as cancer, asthma, and cardiovascular disorders. For instance, during our interview, Anna told me about the many people, including many children, who have died in the area from cancer, especially leukemia. “My sister-in-law is a nurse. She always remarked: there are a lot of people in this area who have cancer”, Anna told me. Because there seems to be accounts of elevated rates of diseases, a few research participants, such as Anna, referred to Schiphol as a “silent killer” (Anna, 21 April 2022). Recent studies conducted by the RIVM (2022) show that prolonged exposure to ultrafine dust

from aviation may have a detrimental effect on the development of an unborn child and on the cardiovascular system, as more people in the vicinity of Schiphol Airport are taking medication for this compared to areas where the concentration of fine dust is lower.

However, there remains a lot of insecurity and ambiguity, as the RIVM is currently only talking about possible links, as they believe there is still too much uncertainty to definitively conclude that there is a causal relationship (RIVM 2022). This uncertainty about the link between Schiphol and health consequences was also apparent among most of my research participants. As a result, many research participants remained hesitant in making statements about the relationship between health problems and Schiphol. This is also a characteristic of slow violence, since the slow nature of the violence makes it difficult to establish a clear connection to the cause, which also makes it difficult to identify an actor (Saleh et al. 2021, 8). Nixon (2011, 8-9) stated that “in the long arc between the emergence of slow violence and its delayed effects, both the causes and the memory of catastrophe readily fade from view as the casualties incurred typically pass untallied and unremembered”. As a result, the actor of violence obscures. According to several research participants, this also seems to be the case with air pollution and Schiphol, as the long time it takes for health consequences to engender and to become noticeable, in combination with the possibility that these health effects have a different cause, such as smoking, other sources of stress or other forms of pollution, it is difficult to establish the connection to air pollution produced by Schiphol as a cause.

Another result of the remaining insecurity and the hesitant links in studies conducted about the actual air quality and its effects, is that it remains unclear how damaging it is to live with air pollution. According to Win, Schiphol has a role in the remaining ambiguity about the actual consequences of its emissions, as he explained during our interview:

Yes, of course, nowadays there is more knowledge about particulate matter and ultrafine matter and things like that, that it is bad for you, but at the same time, there remains ambiguity and vagueness about how much damage it is actually causing. Instead of actually researching it, Schiphol has to think about it, the government has to think about it, then they finally start a research, which then needs to be re-examined, and then the whole process starts again. I see that as a delaying tactic. I think Schiphol has already done more things like that, they delay and then go and do another investigation. And that takes time, and keeps taking time, without actual results (Win, interview, 8 April 2022).

Win explains that as a result, he is still able to downplay the harmfulness of living with air pollution. In addition, there remains a lot of insecurity about the actual harmfulness, which is amplified by the fact that, as Win also shows within the quote above, research is often delayed or needs to be re-examined, resulting in a lack of clear results. People refer to this as “Schiphollen”, which is even a verb in the Van Dale, the leading dictionary of the Dutch language. The Van Dale describes “Schiphollen” as: “misleading by manipulation, lies, twisting of facts, etc., this behavior does get attributed to Schiphol in relation to those living in the vicinity of that airport” (van Dale, n.d.). This behavior of Schiphol ensures that there remains uncertainty about a lot of things, such as the actual health consequences, but also about the way Schiphol will address toxicity in the environment. Moreover, many agreements that have been made in this regard are not being kept. As a result, people feel like they are not being heard, not taken seriously, and not being protected, as became evident in my interview with Michiel: “My confidence has really dropped drastically. For example, research of the RIVM on particulate matter, that takes years now, and I am sure that no matter what the outcome will be, there is no way that the number of flights will be reduced. Just like it will never be acknowledged that there are people who are bothered to sickness” (Michiel, Interview, 12 April 2022). “Schiphollen” thus evokes frustration and stress and declining confidence.

Trying to mitigate life with air pollution

Residents of the surroundings of Schiphol try to mitigate living with air pollution by using several hypo-interventions (Tironi 2018). However, they seem uncertain in how to do this. Moreover, mitigating air pollution seems harder than mitigating noise pollution, as there are fewer ways to protect and disconnect yourself from it. Furthermore, it seems to be harder to keep this form of toxicity out of your home, especially since air pollution lingers in the air, even when no airplanes are flying over at the time. My research participants try to seek ways to mitigate life with air pollution, but do not seem to have found concrete measures.

For instance, most research participants indicated that they try to mitigate air pollution by keeping the doors and windows closed. One research participant started to close all windows and doors when there are airplanes flying over, but quickly encountered a dilemma within this, since venting was a requirement during the COVID-19 pandemic. Now she applies a sort of middle ground, ventilating her house at times when she is not home and keeping the windows and doors closed as much as possible at times when she is home and planes are flying overhead (Interview, 17 February 2022). Michiel also indicated that keeping the windows and doors

closed, is not the best way to mitigate living with air pollution anyways. He had bought a measurement device for the air quality within his home, which measures the amount of CO₂ indoors. Keeping all doors and windows closed made the air quality worse, as the amount of CO₂ got higher because of the closed doors, which resulted in the emergence of headaches (Michiel, interview, 12 April 2022). I have encountered this way of mitigating air pollution most during my fieldwork, even though it appears not to be effective.

Another way of mitigating life with air pollution, is by using a hypo-intervention that engenders a way of acting and thinking that brings mundane but purposeful actions into relief (Tironi 2018, 439). One example of this is applying air filters, such as air diffusers, and/or ventilation systems into the homes of people living in the vicinity of Schiphol. With these filters and ventilation systems, people try to filter the air pollution within their homes. According to the people who have such filters and/or ventilation systems, the filters are black every time they clean or change it (Interview, 15 March 2022; Interview, 12 April 2022). This is the same kind of black, sticky substance which I wrote about earlier in this chapter. This indicates that the polluted air enters the homes of people in the surroundings of Schiphol. The research participant to whom I spoke about this indicated that that at least some of the air pollution is filtered this way. However, the participants are aware that they are still breathing in the polluted air, despite the taken measures.

Another hypo-intervention (Tironi 2018) which people use to mitigate living with air pollution is by temporarily escaping it. This means escaping your own living environment and going to a place with cleaner air, by taking a (short) break, for example. As mentioned before, according to a lot of research participants, places to which you can escape are scarce in the Netherlands. Only the province of Drenthe and Zeeland are places considered to have “clean air”, by many research participants. For this reason, some people seek such clean places to escape to even outside of the Netherlands, like Emily. She explained that whenever she and her family are on a break to Switzerland, a place of which they consider the air as clean, her daughter feels better and more alive. In Switzerland, her daughter is not short of breath, and she can run and play. This is not always possible in their home environment, suspectable due to the many planes flying over, as I have showed earlier in this chapter. Since such things become possible during a break, they are considered as very rewarding. Others research participants also indicate that they feel rested and recharged after such a break. Some research participants have even bought a vacation home to make it possible to go on such breaks more often, such as Win. He indicated that he could not live without his escape to his vacation home in France anymore (Win, interview, 8 April 2022).

Another, more drastic way to escape living with air pollution, is moving. As indicated earlier in this chapter, this is something several research participants, such as Emily and Win, often considered. The main reason for this consideration is the health consequences their children suffer from due to living near Schiphol. However, as I have learned from my research participants, moving is a difficult choice and not possible for everyone, for instance because of financial reasons. In addition, most residents have become attached to their living environment due to work, school, and social networks.

Noticing air pollution

As I have demonstrated in the previous chapter, noise pollution is perceived as violent and penetrating. People living with noise pollution are consciously aware of its presence and bothered by it. However, this is different with air pollution. Whereas noise pollution is a form of toxicity that is clearly audible and tangible, air pollution is not. In fact, air pollution is considered as quite invisible, as it only seems to be noticeable through the suspectable embodiment of detrimental health consequences, which I just discussed. This hardly noticeable aspect of air pollution fits within the definition of slow violence being a form of violence which “occurs gradually and out of sight” (Nixon 2011, 2). Ahmann (2018), who studied intentional manipulations of time which characterize responses to living with slow violence in Curtis Bay, United States, argued that as a result, this form of slow violence is hard to represent and perceive (Ahmann 2018, 144). Consequently, people seem to be less aware of living with this form of toxicity. Therefore, I argue that it is insightful to regard air pollution in the surroundings of Schiphol through to the extended notion of slow violence, as this regard and the focus on the noticeability creates more awareness for the presence of air pollution. As mentioned in the introduction, Davies (2022, 411) has conceptualized ways in which people who are facing slow violence can make it noticeable and knowable as “slow observations”.

Focusing on the noticeability of toxicity as a form of slow violence is important, since several research participants indicated that they only started to realize that they were living with air pollution when they did notice the presence of it by either seeing or smelling or reading something about it. Noticing air pollution thus affects the understanding of living with air pollution, since it creates awareness. Even though air pollution is generally quite unnoticeable, for my research participants air pollution becomes noticeable in at least four ways. Such moments trigger the awareness of the presence of this form of toxicity.

The first way my research participants can notice air pollution is by smelling kerosine. According to Anna, this smells heavy and greasy (Anna, interview, 21 April 2022). Others describe this smell as similar to the smell of gasoline. Smelling kerosine is particularly prevalent when there is no wind or fog, in combination with low flying airplanes. Hence, you do not smell this on a daily basis. In addition, Win, whom I introduced earlier in this chapter, indicated that occasionally, it smells like frying oil. According to him, this is because KLM's fuel mix consists partly of biofuel, meaning that sometimes, they mix in used cooking oil, which you smell from time to time (Win, Interview, 8 April 2022). In 2011, the first commercial KLM flight flew to Paris with biofuel, consisting of used cooking oil (KLM 2011). Since 2011, the KLM has purchased this more sustainable fuel on a larger scale (KLM 2019). They state that it will reduce CO2 emissions by up to 80% compared to fossil kerosine (KLM 2019).

The second way my research participants notice air pollution is through seeing a black, sticky substance. You can see this substance on, for instance, balcony edges or furniture outside, but also within the filter of an air ventilation system. This indicates that residents of the surroundings of Schiphol breath in this substance. I discussed this substance with Win, who's outdoor furniture is regularly covered with this black, sticky substance. In fact, he must always wipe it off before he can use them, which is almost on a daily basis. He used to work at the fire department, where he asked one of his co-workers who was specialized in working with dangerous substances if he could check what the substance in his garden consisted of. His co-worker had answered: "That is all junk, pollution, not good for your health. We do not have to measure or test this, we just know. How many liters of kerosine are used when an airplane takes off? That is tremendous! All that gets burned, and yes, that emits pollutants, which lands at your place" (Win, interview, 8 April 2022). Even though no one seems to know what this black, sticky substance consists of exactly, everyone I spoke to stated that it must be pollutive. In addition, they all stated that breathing this in, is bad for their health.

The third way of noticing air pollution that is produced by Schiphol, is through seeing white streaks in the sky, coming from airplanes. In English, this is called contrails or chemtrails. Contrails, which refers to condensation trails, are the result of the process of the formation of condensation or deposition trails (Mazon Bueso et al. 2017, 181). The word chemtrails which is short for chemical trails, refer to "trails left behind by airplanes allegedly spraying the atmosphere with chemicals that damage the environment and all lifeforms" (Bakalaki 2016, 12). The chemtrail narrative started as a conspiracy theory to challenge knowledge about nature and the causes of global hazards (Bakalaki 2016, 12-13). I will further refer to this as chemtrails, since most research participants referred to the white streaks from airplanes as pollutive. For

instance, Anna explained to me, “it seems that chemtrails are pollutive. It is located in the high atmosphere and does not go away. As a result, the whole higher atmosphere will be polluted too.” (Anna, interview, 21 April 2022). With this, Anna implied that the air pollution caused by Schiphol occurs in multiple atmospheric layers. The Koninklijk Nederlands Meteorologisch Instituut (KNMI), also indicates that chemtrails occur in the high atmosphere, at a height of about 10 kilometers (KNMI, n.d.). The temperature at this altitude is about -40 degrees Celsius, which causes the emissions, in particular water vapor, to freeze, creating ice crystals which subsequently generate visible chemtrails (KNMI, n.d.). According to the KNMI (n.d.), the emissions produced by the engines of airplanes create an increase in water vapor and soot particles on the flight routes. However, since the air in the high atmosphere hardly blends with the air at ground level, this has little effect on air quality (KNMI, n.d.). Despite this knowledge, Anna stated: “it frightens me, that the pollution in the high atmosphere does not compose. It remains there” (Anna, interview, 21 April 2022).

The fourth way in which air pollution becomes noticeable, is through studies and news articles. For instance, Schiphol Watch (n.d.), a foundation that fights for a better living environment in the surroundings of Schiphol and for shrinking air traffic in the Netherlands, is working on this. The foundation shares and writes several articles about the toxicity and the health impacts of living with it in the surroundings of Schiphol. In this way, Schiphol Watch seeks to share information and create awareness. Reading and noticing air pollution triggers the awareness of its presence. For instance, one research participant explained to me that seeing the documentary “Ziek van Schiphol”, which is translated as “Sick of Schiphol”, made her aware of the consequences of breathing in air pollution. Seeing this documentary also triggered her to try to keep the air pollution out of her home, as a way to mitigate life with air pollution by trying to keep the air pollution out of her house as much as possible (Interview, 17 February 2022).

The ways in which air pollution can be noticed are less penetrating than those of noise pollution. As a result, this form of toxicity is less noticeable. A person must pay attention and know that the ways I just described are ways to notice air pollution. According to Win, noticing air pollution, and especially seeing its (health) effects, is crucial. This became evident during our interview, as he told me this:

People do not realize how damaging or serious the consequences are until they physically notice it. So, people obviously need to notice, there is something not right. People can call it out, say there is something not right here, but nothing will happen until something

happens physically, that is also the case here. For example, if they suddenly find out that the chance of a heart attack here is 80% higher than in the rest of the Netherlands, then everyone will wake up. Actually, someone has to die first before people believe it is true. Only then will people start to take action (Win, Interview, 8 April 2022).

People need to notice and see the effects of air pollution in order to believe that it exists. Noticing air pollution thus influences the way the residents understand this. In addition, as the quotes shows, without noticing air pollution and its effects, people will not act upon living with air pollution. Therefore, focusing on how to notice air pollution and regarding this as a form of slow violence is valuable, as this creates more awareness for this form of pollution and draws the attention to the violent aspects, such as the slowly unfolding, detrimental health consequences.

Making toxicity in the surroundings of Schiphol noticeable and regarding this as a form of slow violence, is also a form of resistance, as this allows the residents to identify the toxicity in which they live as violent. This creates a sense of urgency for the problem of living with toxicity in their neighborhoods, as it can be used as way to create more awareness within politics.

Conclusion

As I have showed and argued throughout this chapter, it is insightful to regard air pollution in the surroundings of Schiphol through the extended notion of slow violence, since making this form of toxicity noticeable creates more awareness for the presence of air pollution and will draw the attention to the violent aspects. Air pollution is regarded as violent because of the perceived health consequences. This evokes feelings of fear, insecurity, and guilt. Yet, people remain hesitant in establishing links between health effects and air pollution as a source due to the remaining ambiguities of the actual health consequences and because of the long time it takes for health consequences to emerge and to become noticeable, which makes people doubt if they may have a different cause. Mitigating air pollution is difficult since it is quite hard to protect and disconnect yourself from it, especially since this form of toxicity lingers. However, people try to mitigate living with air pollution by keeping all the windows and doors closed as much as possible, by installing filters, by taking a break or by moving. As I have outlined, there are a few ways to notice air pollution, through the smell of kerosine, by the black, sticky substance found on for instance garden furniture, through chemtrails, and through studies and news items. These ways of noticing air pollution triggers the sense of awareness, and thus affect

the understandings of living with air pollution. In fact, people need to notice and see the effects of air pollution to believe that it exists and in order to act upon living with air pollution. Making toxicity noticeable and regarding this as a form of slow violence is also a way to resist living with toxicity, as this provides a sense of urgency. This will be examined in the next chapter.

Chapter Three: Between Powerlessness and resistance

I was naive and thought it would be a matter of time until the facts would defeat the lobby. Well, I am not so sure anymore. There are no mistakes being made with enforcement, measurements, or mathematical models, it is all done deliberately. It is painful since you have no voice, we have nothing to say. We are not protected. The Netherlands is not that civilized. We are given up. There is nowhere to turn, we are lawless (Interview, Michiel, 12 April 2022).

As I have shown in the previous chapters, the residents of the surroundings of Schiphol live in a toxic environment. They are facing noise- and air pollution, of which my research participants point to Schiphol, and in extent the Dutch government, as the actor. The toxicity in the surroundings of Schiphol can be regarded as a form of slow violence (Nixon 2011). I argue that to regard toxicity as a form of slow violence is an act of powerful framing and emphasizes the power imbalances and struggles that the residents face in their efforts to address and resist these forms of toxicity. However, addressing and resisting forms of slow violence is difficult and results in tensions between a sense of powerlessness and acts of resistance.

This chapter will address these tensions between the experienced powerlessness and the difficulties in addressing and resisting living with toxicity, and in extent, forms of slow violence. First, I will focus on the perceived actor of the toxicity in the living environments of my participants, Schiphol, and by extent the Dutch government. Within this focus, I will address the complex structure in which they operate and demonstrate how this provides Schiphol the exceptional position as a powerful entity. Second, I will illustrate how the structure in which Schiphol and the Dutch government operate evoke a sense of powerlessness. Third, the focus will be on the act of powerful framing to representing slow violence as it provides a sense of urgency, after which I will address other ways in which my research participants try to fight the toxicity in their living environment, and which difficulties they encounter in the process. Fourth and lastly, I will address how Schiphol seems to be given blame for the climate crisis and how this influences my research participants' actions related to matters of sustainability.

Schiphol, a powerful entity

As I have shown in the previous chapters, it is insightful to regard the toxicity in the surroundings of Schiphol as a form of slow violence (Nixon 2011). This act of powerful framing

emphasizes the power imbalances and struggles that the residents face within addressing and resisting slow violence. According to my research participants, addressing and resisting toxicity is difficult and entails tensions. My research participants generally demonstrated a sense of powerlessness vis-à-vis Schiphol, and by extent the Dutch government, who they have addressed as the actor responsible for the noise and air pollution in their environment.

Addressing a clear actor in cases regarded as slow violence is unique, since most cases of slow violence, but also cases of structural violence, lack a clear actor and are instead perpetrated by structures (Malagón 2020, 31). Galtung (1969, 175) states that “the set of all such systems of interaction, for a given set of actors, can then be referred to as a structure”. However, I would like to emphasize that the actor in the case of Schiphol is more complex as it might seem, as the toxicity in the surroundings of Schiphol seems to be perpetrated by a structure as well. Therefore, I would like to address the complex political, legal, and economic structures in which Schiphol and the Dutch government operate, which perpetrates the violence in the vicinity of Schiphol.

According to my research participants, the Dutch government should protect them from living within toxicity, especially since the United Nations Human Right Council (HRC) has recognized that having a clean, healthy, and sustainable environment, is a human right (United Nations Environmental Program 2022). In the Netherlands, the government is responsible for protecting citizens from violations of (human) rights (College voor de Rechten van de Mens n.d). The government plays an active role in the protection of human rights in the Netherlands, municipalities in particular (Rijksoverheid n.d.). However, according to the residents of the surroundings of Schiphol, the human right of having a clean, healthy, and sustainable living environment is violated by Schiphol, as the residents consider their living environment as toxic, polluted, and unhealthy to live in. Some residents even state that the environment is becoming unlivable.

Within matters regarding Schiphol, the interests of the Dutch state seem to be divided. This is because the Dutch state owns shares of Schiphol. In fact, the Dutch state is the majority shareholder of Schiphol, owning 69,77% of the shares (Ministry of Finance 2021, 4). In addition to the state being the majority shareholder, the municipality of Amsterdam owns another 20% of the shares in Schiphol (Royal Schiphol Group, n.d. b). As shareholders, they collect an adequate dividend of Schiphol’s profit (Royal Schiphol Group, n.d. b). Hence, the Dutch state has a financial interest in Schiphol making a profit. The Dutch State also holds shares from Air France-KLM (14%) and KLM (5,92%) (Ministry of Finance 2021, 5). As a Dutch airline, with Schiphol as its home base, and an extensive European and intercontinental

network, KLM is an important keystone within Dutch aviation (Ministry of Finance 2021, 20). According to Ties Joosten (Follow the Money, 2022), the Dutch State continues to buy new shares in Air-France KLM, an expensive investment that lacks an underlying plan or economic rationale. This is one of the examples showing that the lobby from the Dutch State towards the aviation sector is dominating the political course of action.

The shares, interests, and lobby characterize the structure in which Schiphol and the Dutch government operate. I argue that this structure provides Schiphol an exceptional position as a powerful entity, characterized among other things by impunity. Win even indicated that he feels like Schiphol “is above the law” (Win, Interview, 8 April 2022). One example of this, is the fact that Schiphol has been operating without a nitrogen permit for years, while the Minister of Infrastructure and Water Management already knew about this in 2014 (SchipholWatch 2022). Meanwhile, eight years have passed without any enforcement. In addition to this impunity, no sector has such an exceptional position as the aviation sector when it comes to aspects such as policies and taxes, including for example the absence of tax burdens (Verdel 2021, 17). Based on examples like this, my research participants state that the Dutch State seems to choose the aviation sector above the surrounding environment and its residents.

Thus, it is not just Schiphol that is responsible for the toxicity in the environment, it is the structure in which Schiphol and the Dutch government operate that enables and maintains this. Therefore, the actor in the case of the toxicity in the surroundings of Schiphol is not as clear as it might seem. The residents have to resist a complex structure and encounter a lot of difficulties within doing this. For my research participants, this causes stress, frustration, and evokes a feeling of powerlessness, on which I will elaborate in the next paragraph.

A sense of powerlessness

Schiphol and the Dutch government operate in complex structures, ensuring the position as a powerful entity for Schiphol. Resisting this structure is difficult. As a result, my research participants generally demonstrated a sense of powerlessness vis-à-vis Schiphol and by extent the government of the Netherlands. The feelings of powerlessness are not only generated by these complex structures, but also arise from experiences of residents within resisting the toxicity in their living environment. Erik gave an example of such an experience during our interview:

One day, there was an organized meeting with people from Schiphol. And Benschop, the director of Schiphol, joined the meeting, I even sat next to him. During the meeting, he acted like he found it all very unpleasant for us, acted very moved, very compassionate. However, after the meeting, they turned around and they just carried on as they were doing. They make promises, but they do not act upon it. This is very frustrating (Erik, Interview 21 March 2022).

Such moments, broken promises, delayed research, manipulation, lies and distortion of facts, the whole structure that enables the operating style of Schiphol, which is known as “Schiphollen”, evokes a feeling of powerlessness for my research participants. Anna refers to the operation style of Schiphol as a management technique, which is enabled and maintained by the Dutch government. During our interview she described it like this:

It does not help anything. The moment you get through to the House of Representatives and are admitted to a meeting with the minister, they postpone it again. They always find a way to postpone things. In the meantime, I have learned from a friend of mine, that this is a way of governing. A management technique. You give people the idea that they have some say, you invite them to information evenings and so on, but the decision had been made a long time ago, never in our favor (Anna, Interview, 21 April 2022).

As a result of “Schiphollen” and the lack of protection from the Dutch government, my research participants indicated that they have lost hope and confidence in the Dutch government. Moreover, they have also lost confidence in whether anything will change in their living environment in terms of toxicity. For instance, Win indicated: “nothing will happen or change. We are second class citizens. We feel like we are not being heard and apparently, we have no right to complain. We are treated differently” (Win, interview, 8 April 2022). The prevailing sense of powerlessness also became evident in my interview with Michiel, as he stated:

My confidence in politics has dropped drastically in a short period of time. Nothing shows that there will ever be a solution for the nuisance within this area. WHO standards are ignored, not a little bit but completely. A RIVM study on particulate matter has been going on for years, and whatever the outcome, there will be no reduction in flying. Just as it will never be acknowledged that there are people who are pathologically impaired. They will just make up schemes to avoid reducing to fly. The interests are much greater than I had ever imagined, nothing and no one is going to help us (Interview, Michiel, 12 April 2022).

My research participants demonstrated a lack of confidence in the government or in any upcoming change, of which the quote of Michiel is an example. Moreover, during my fieldwork, I frequently encountered statements like “nothing will ever change, but we keep on fighting”. Such statements reveal a tension between powerlessness and resistance, as such statements indicate a sense of powerlessness, but also indicate that my research participants still try to resist living with toxicity. So, despite the feeling of powerlessness, my research participants continued to resist the toxicity in their environment. Within this resistance, they have encountered all kinds of difficulties, which I will address in the next paragraph.

Representing and resisting slow violence

Throughout this thesis, I have argued that it is insightful to regard the toxicity in the surroundings of Schiphol as a form of slow violence, and to focus on how to make this noticeable. I argue that focusing on noticeability is also important within resisting slow violence, since this is an act of powerful framing. Moreover, this focus emphasizes the power imbalances and struggles that the residents face in their efforts to address and resist these forms of toxicity. Davies (2022, 419) also points out the importance to make slow violence noticeable, as he argues that “an emphasis on the invisible characteristics of pollution risks downplaying the political agency of frontline communities, and is myopic to the many mechanisms, embodiments, and formations of informal knowledge that allow communities to recognize and live with pollution”. In the case of the residents of the surroundings of Schiphol, they can use this focus as an act of powerful framing to resist the problems regarding toxicity, since this focus emphasizes the power imbalances and struggles that the residents face in their efforts to address and resist these forms of toxicity.

However, the residents perceive it as challenging to stress the problems regarding toxicity and Schiphol. In fact, my research participants argue that the toxicity in their living environment is an underrepresented problem. This is in line with Nixon’s (2011, 200) notion of slow violence, as he argues that forms of slow violence are underrepresented in media and politics (Lidström et al 2015, 3). According to Nixon (2011, 200) and Lidström et al. (2015, 13), such cases are underrepresented since cases of slow violence do not easily fit into the established models of spectacular and sensationalized news reporting, or into the localized and individualized narratives through which we typically interpret our environment. During the manifestation at Schiphol, which I mentioned in the introduction, I spoke to two participants whom I had already interviewed. They both mentioned that not only the gathering of a diverse

plethora of speakers about why the aviation sector had to shrink was a victory, but also the presence of several media reporters, who wrote something about the manifestation on several media platforms (Participant observation, fieldnotes, 14 May 2022).

During my interview with Anna, she stressed another example about difficulties in stressing the problems regarding toxicity and Schiphol in the media. She stated that “negative media coverage of Schiphol is systematically barred”. According to Anna, articles misrepresenting Schiphol in the media, or articles that address the slow violence and toxicity in which the residents of the surroundings of Schiphol live, are often subsequently overshadowed by positive news reports about the airport, which ensures that there is still little (media) attention and awareness about this topic (Anna, interview, 21 April 2022).

In addition, some of my research participants indicated that the few moments someone who fulfills an important function within Schiphol or someone from the Dutch government is talking about issues related to Schiphol on TV, the interviewers seem to be soft. Questions remain too kind and not to the point. Consequently, the issues remain unclear and underrepresented. Tom, a resident of the surroundings of Schiphol whom I introduced in the first chapter, indicated that because of this, he stopped watching programs in which people discuss issues or topics related to Schiphol, as these kinds of stories are often twisted into stories about how wonderful Schiphol is. During our interview, he stated: “Out of self-protection of being irritated to death by these beautiful stories people tell about Schiphol, I do not watch such programs. I guess this says something about how deep my distrust is, my irritation, and almost fear as well: I do not want to see this” (Tom, Interview, 14 April 2022).

According to Lidström et al. (2015, 3), the underrepresentation of forms of slow violence in the media also causes such cases to remain “underrepresented in public and political debates, and often compound inequitable distribution of risks and vulnerabilities” (Lidström et al. 2015, 3). My research participants also indicated that they consider the toxicity as an underrepresented topic in both public and political debates. For instance, Michiel indicated that during the municipal elections last March, there were only a few political parties that paid attention to the toxicity within the vicinity of Schiphol. To create more awareness about this issue in both public and political, he created and handed out a voting guide focused on who to vote for if you do not want the aviation sector to grow. Moreover, he contacted political parties whom in general are against the growth of Schiphol and did not reflect this point within their programs to indicate this, after which some parties updated their program to include this. In addition, he started discussions about the toxicity in his neighborhood with other residents to

create more awareness about the toxicity and the positions of the political parties within this case (Michiel, Interview 12 April 2022).

In addition to resisting the toxicity in their living environment by trying to represent their case, I have encountered other ways in which my research participants tried to resist the structure they hold responsible for toxicity in their environment. The actions, the amount of time, and the amount of energy my research participants put into it, varied per person. An important note within this is that my research participants seemed to agree that standing up against Schiphol is not something you should do individually, as this has no impact. They consider resisting Schiphol as something they must do collectively, as this gains more attention and seems to have more impact. I will outline the most heard actions that people undertake to fight Schiphol. To start, all the participants I spoke to reported about the toxicity within their living environment through official channels. However, the residents did not quite experience the feeling of being heard, or sense that this really contributed to something. Still, many people regarded it a useful thing to do. For instance, because reporting and complaining allowed them to write off some of the frustration. Moreover, my research participants considered it as a form of intimate activism, as a way to speak up against Schiphol. Another positive aspect about reporting, is that it provides insight into the number of complaints and the whereabouts.

In addition to try to represent, report and complain about the toxicity, some participants tried to act against Schiphol more collectively. For instance, the foundation *Recht op Bescherming tegen Vliegtuighinder*, (which translates to *Right to Protection from Airplane Nuisance*) is pursuing a civil case against the Dutch state. They argue that the State of the Netherlands is failing to protect its residents against the consequences of air traffic, thereby, they are violating their duty of social care (*Recht op Bescherming tegen Vliegtuighinder*, n.d.). A lot of residents that I spoke to support such lawsuits by donating money. Other collective actions through which residents try to act upon and resist Schiphol, is through signing petitions, voting for political parties that stand up against Schiphol (such as *GroenLinks*, *Partij van de Dieren* en *Partij van de Arbeid*), or by joining protests, such as the manifestation I joined on the 14th of May 2022.

Some participants also joined (local) action groups, such as *Schiphol Watch*, *Behoud Woongenot Aalsmeer*, *Vlieghinder Nieuwkoop*, and *Platform Vlieghinder Kennemerland*. These groups actively try to counteract Schiphol by, for example, engaging in meetings with municipalities and the government, creating voting guides during election periods, contacting the media to draw attention to the problem, and so on. This form of activism requires a lot of time and energy. Win is one of my research participants who has participated in a local action

group to counteract Schiphol and told me this: “It almost feels like a kind of warfare with Schiphol, and I just do not want to do this anymore, it really started to dominate my life” (Win, interview, 8 April 2022). Win has now quit the action group, though he is still engaged in the fight against Schiphol on a lower level.

Michiel, in contrast, is currently very much involved in the fight against Schiphol. During our interview, he indicated that resisting the toxicity in his living environment starts to dominate his life, as he puts every free minute he has into resisting Schiphol. For example, he indicated: “I really say yes to everything that has to do with airplanes, conversations, interviews, discussions, I will take any opportunity to make myself heard” (Michiel, Interview, 12 April 2022). Hence, he is constantly occupied with Schiphol, constantly reading news items about Schiphol, involved in organizing actions, and constantly engaging in (online) discussions about the aviation industry, even on birthday parties. As a result, his fight against Schiphol comes even at the expense of spending time with his family (Michiel, Interview, 12 April 2022). In fact, it seems to be an addiction, as he told me:

I am addicted to reading things about Schiphol, and a bit about reading some climate issues as well. And, yeah, it just takes up too much time. And then I tell myself, now I will put my phone aside and just watch some TV in peace, but after about 5 minutes I notice that a feeling of restlessness comes up again (Michiel, interview, 12 April 2022).

Despite all the time and energy that Michiel and some other residents of the surroundings of Schiphol put into their resistance against Schiphol, they demonstrate a prevailing sense of powerlessness. Yet, the residents of the surroundings of Schiphol try to seek strength and hope from small victories and keep trying to resist the toxicity in their living environments, and fight for a shrinkage of Schiphol, to have less airplanes flying over their homes, for their living environment to recover, enabling them to live in a healthier and cleaner environment. According to my research participants, this is a fight in which the residents of Schiphol must unite, a battle they have to fight together in order to make a chance.

Climate crisis

As I have showed in this chapter, the residents seem to address Schiphol, and by extent the Dutch government as the responsible actor for the toxicity in their living environments. I have demonstrated that this is more complicated, and that they are in fact resisting a complex structure in which Schiphol and the Dutch government operate. However, since Schiphol and

by extent the government of the Netherlands are identified as the actors for the toxicity in that area, Schiphol seems to be discarded as a kind of blame player in other matters as well. For instance, by some of my research participants, Schiphol seems to be portrayed as the party to blame for other matters as well. For instance, by some of my research participants, Schiphol is identified as the one to blame for the climate crisis, which, just like other slowly unfolding environmental catastrophes, actually has no clear actor (Nixon 2011, 2). Yet, for some research participants, such as Michiel, Schiphol has become a symbol for all kinds of injustices. During our interview, he stated:

I am mainly focused on the noise pollution. Once, it was just a direct source of annoyance and irritation. I guess noise bothers me more quickly than an average person. However, now, I have come to link noise pollution to everything that is wrong with the whole aviation sector. Noise pollution, or in fact aircraft noise has become a symbol of climate change, deceit, corruption, and other injustices (Michiel, interview, 12 April 2022).

Thus, Schiphol's role in terms of toxicity in the vicinity of Schiphol has resulted in Schiphol being regarded as a focus point for climate action. During my fieldwork, I encountered it more often that research participants consider Schiphol as a big actor in the climate crisis. For instance, Erik expressed his concerns about the emissions of Schiphol and the impact these emissions have on the environment and the whole climate crisis.

Again, what I am really worried about is the environment, the climate. I am really worried. And of course, this worry extends beyond Schiphol, but flying screws it up even more. It has been proven that flying emits so many greenhouse gases that it has a huge impact on the climate. And I might be biased, but yeah, that is what I read. And then I think like, we only have one world!" (Erik, interview, 21 March, 2022).

Michiel and Erik, among other research participants, consider the whole aviation sector as a big polluter and a big contributor to the current climate problems. In fact, many of my research participants expressed their concerns about this and have linked these concerns to Schiphol. The expressed concerns were mostly about the emissions and the consequences of this for the next generations. For instance, Michiel pointed this out during our interview: "Actually, I am just really worried about the whole climate and climate change. I am quite scared about of what is coming, not necessarily for my life, I am 40, up to half of my life, hopefully, but I also have a little daughter..." (Michiel, interview, 12 April 2022).

A result of these concerns and worries, is the emergence of forms of activism, both individually and collectively. For example, some people have started to live more sustainably, such as by becoming vegetarian. A collective form of activism in which it became clear that the climate crisis is seen as overarching problem in which the aviation sector is seen as a big contributor, was during the "Shrink the Aviation" manifestation. This manifestation took place the 14th of May, at all Dutch airports: Amsterdam Airport Schiphol, Rotterdam the Hague Airport, Eindhoven Airport, Groningen Airport Eelde, Maastricht Aachen Airport, and Lelystad Airport. I joined the manifestation at Amsterdam Airport Schiphol, the biggest Dutch airport where also the biggest manifestation of that day took place. It was a beautiful, sunny day, and about 500-600 people gathered outside of Schiphol, in front of Schiphol Plaza to demonstrate. Together, they conveyed their message and the theme of this manifestation loud and clear: "*DOWNSIZE AVIATION!*". The manifestation lasted three hours and consisted of music, several speeches, and a moment of silence. In the middle of the square, there was a podium with some banners at the back, stating: "Schiphol is a big polluter", "Schiphol, where is your climate plan?" and "System change not climate change". There were also people walking around with banners and some were placed on the ground in front of the stage, all focused on the shrinkage of the aviation sector of expressing concerns about the climate.

During this manifestation, a diverse plethora of representors from political parties, environmental organizations, student associations, trade unions, nature associations and "neighbors" of Schiphol came to speech about why the aviation industry needs to shrink. With so many different speakers explaining their concerns about the negative effects of Schiphol, such as destruction of livability in the area and health consequences. In addition to these concerns, the influence of the aviation sector on the current climate crisis was a reoccurring theme. Through the speeches and well-outlined arguments, the necessity for downsizing Schiphol and the whole aviation sector was emphasized. Therefore, the conclusion for the people who were demonstrating at this manifestation was obvious: Schiphol should not continue to operate like this (Fieldnotes, participant observation, 14 May 2022).

However, for some of my research participants, the climate crisis and the role of the aviation sector resulted in a form of resistance towards sustainable living. Since Schiphol seems to have little to no environmental regulation and pollutes the living environment of the residents, feelings of powerlessness and hopelessness seem to prevail. As becomes evident in the following quote, some people do not feel it is fair that they should be the ones who have to live more sustainable, as according to them, one of the biggest polluters in the Netherlands also

does not strive to be more sustainable. As a result, some people reject trying to live more sustainable.

Sometimes, people start talking about the environment and climate change and such. Well, they do not have to come to me! Such people cannot tell me that I cannot eat a steak because a cow farts, while at the same time, the whole of Schiphol is flying over my head! Forget it! (Interview, 22 February 2022).

During one of my interviews, a research participants explained to me that according to her, Schiphol has little to no environmental regulations, whereas nearby companies must adhere to the “ever increasing environmental regulation that apply to them” (Fieldnotes, walking interview, 3 March 2022). Some companies in the surroundings of Schiphol were even threatened with closure if they did not comply with such sustainability measures in time. This uneven balance between companies in the surroundings of Schiphol, resulting in this significant difference also evokes feelings of powerlessness towards Schiphol and the Dutch government. This results in resistance to sustainable ideas and more sustainable living among some of my research participants.

Conclusion

In this chapter, I have regarded the toxicity in the surroundings of Schiphol as a form of slow violence to emphasize the power imbalances and struggles that the residents face in their efforts to address and resist these forms of toxicity. My research participants have addressed Schiphol, and by extent the Dutch government as the actor responsible for perpetrating violence through the noise and air pollution in their environment. However, as I have showed, it is the complex structure in which Schiphol and the Dutch government operate which perpetrates the violence in the vicinity of Schiphol. Moreover, I have argued that this structure provides Schiphol the exceptional position as a powerful entity. This complex structure causes prevailing tensions between a sense of powerlessness and acts of resistance, since despite the feelings of powerlessness, my research participants still try to resist the toxicity in their environment. Focusing on the noticeability of slow violence to represent this, is an act of powerful framing which can be used in resisting toxicity. In addition, I explained other ways in which my research participants try to resist toxicity in their living environment. Here, collective actions are the most effective, since, according to my research participants, this gains more attention and seems to have more impact. However, some of my research participants do not only resist Schiphol

for the toxicity in their living environment, but they also resist Schiphol for their role within the climate crisis, as some of my research participants seem to define Schiphol the party to blame for the crisis. Pointing to Schiphol as the party to blame within the climate crisis causes some participants to start living more sustainably, whereas it causes others to repel sustainable living.

Conclusion

People living in the surroundings of Schiphol live in a toxic environment, primarily due to noise pollution and air pollution caused by aviation. As I have argued, it is insightful to regard the toxicity in this area as a form of slow violence (Nixon 2011), since such an approach draws attention to the violent, temporal, and hidden aspects of living with toxicity. Moreover, to regard the toxicity as a form of slow violence, emphasizes the power imbalances and struggles that the residents face in their efforts to address and resist these forms of toxicity. In addition, regarding something as violent is also an act of powerful framing and provides a sense of urgency to the problem. Additionally, it also provides a sense of urgency to address this within political debates. Within this thesis, I have argued to expand the concept of slow violence. This extended notion also draws the attention to sensual experiences and the embodiment of toxicity, which in the case of toxicity in the surroundings of Schiphol, are aspects that make the residents perceive it as violent. Furthermore, the focus on noticeability creates more awareness for the problems of toxicity, since noticing, as I have mentioned in the introduction, is about making toxicity observable, and about becoming conscious of the toxicity in their living environment, which ultimately affects the understandings and ways people act upon living with toxicity.

In this thesis, I have shown how residents of the surroundings of Schiphol Airport understand, perceive, and act upon living with toxicity, which I have regarded as a form of slow violence. In addition, I have captured how residents try to make the toxicity in their environment noticeable. I have focused on two types of toxicity: noise pollution, air pollution and their different characteristics and impact on people daily lives. In addition, I have explored different ways in which residents try to make these forms of toxicity noticeable, since this affects the way people understand, perceive and act upon living with slow violence.

Noise pollution has a major impact on the lives of the residents of the surroundings of Schiphol. I have argued that it is insightful to regard noise pollution as a form of slow violence and to focus on noticeability, as this draws the attention to the sensual and temporal aspects, which causes noise pollution to be perceived as violent. Noise pollution can be noticed through sensual experiences, as it is obviously audible and can be felt through vibrations caused by hard sound. Due to this penetrating character of these sensual experiences and the repetitive nature of aviation noise, my research participants perceive aviation noise as violent. In addition, noise affects mundane aspects of daily life, such as having a conversation. It further impacts residents' social life, as people feel ashamed of their living environment. In addition to these

sensual experiences, residents try to make noise pollution noticeable and quantifiable through measuring decibels, frequency, and duration of the sound of airplanes. This helps residents to understand the intensity of the noise pollution. Moreover, residents use it as a form of confirmation and control to their experiences. Residents of the surroundings of Schiphol try to mitigate living with noise pollution by isolating their homes and keeping their doors and windows closed as much as possible. This engenders the feeling of being trapped into their own homes, which is another reason why noise pollution is perceived as penetrating and stressful. Another way of mitigating noise pollution is fighting airplane noise with other sounds, such as music or by minimalizing noise by using earplugs. Others try to escape noise pollution, for instance by leaving their living environment for a few days, others by permanently moving away from the Schiphol area.

Air pollution, on the other hand, is less penetrating as it is less noticeable, which makes the residents of the surroundings of Schiphol less aware of living with air pollution. Nevertheless, my research participants expressed a certain fear of living with air pollution, particularly about physical or health consequences, which are detrimental for someone's health. However, most people are hesitant in making statements about the relationship between (perceived) health problems and Schiphol. This is a result of the insecurity about the actual health consequences, due to the long time for health consequences to engender and to become noticeable, and due to the possibility, that these health effects have a different cause. Because of these factors, it is difficult to establish air pollution as the main cause for these consequences. Mitigating life with air pollution seems harder than mitigating life with noise pollution, as my research participants still seem to figure out ways how to do this. My research participants try to mitigate living with air pollution by keeping the windows and doors closed, which appears to have little effect. Other, seemingly more effective ways are applying air filters, such as air diffusers, and/or ventilation systems into homes and by (temporarily) escaping it. Even though air pollution is less noticeable than noise pollution, for my research participants air pollution becomes noticeable in at least four ways: the smell of kerosine, seeing a black, sticky substance, through chemtrails and through studies. Noticing air pollution is crucial in understanding air pollution and to trigger the awareness of its existence. Moreover, this triggers the residents to resist it.

As shown, living with noise pollution and air pollution is impactful, causing people to try to resist this. As I have argued, it is insightful to regard the toxicity in the surroundings of Schiphol as a form of slow violence. This is an act of powerful framing, which emphasizes the power imbalances and struggles that my research participants face within addressing and

resisting slow violence. My research participants seem to have addressed Schiphol, and by extent the Dutch government, as the actors responsible for the violence, in the form of toxicity, in their living surroundings. However, I have shown that this is more complex than it might seem, as the toxicity in the surroundings of Schiphol seems to be perpetrated by a structure, of which I have argued that this provides Schiphol an exceptional position as a powerful entity. Resisting Schiphol and this complex structure is difficult and evokes a sense of powerlessness among my research participants. This results in a prevailing tension between a sense of powerlessness and acts of resistance, since despite the feelings of powerlessness, my research participants still try to resist the toxicity in their environment, which they try to do in various ways. However, some of my research participants also resist Schiphol for their role within the climate crisis, as some seem to define Schiphol as the party to blame for the crisis, which causes some participants to start living more sustainably, whereas it causes others to repel sustainable living.

In this thesis, I have used the notion of slow violence to provide insight and a language to understand what living in a toxic world means, and to show how this can be considered as violent. Within doing this, I have debated the accepted definition of slow violence, as given by Nixon (2011). I proposed to expand the notion of slow violence, by focusing on noticeability, thus focusing on all sensual experiences and the embodiment in order to make this observable, which results in more awareness on the way people act upon this, as it helps the residents to understand the intensity. Moreover, this provides a sense of urgency for the problem. It is insightful to regard toxicity as slow violence and focusing on (the influence of) noticeability allows aspects such as insecurity and resistance to be explored through the notion of slow violence as well. This focus on noticeability will also draw the attention to the violent, temporal, and hidden aspects of slow violence.

This thesis has focused on one specific case of living with toxicity, the surroundings of Schiphol. However, as I mentioned in the introduction, according to Nading (2020, 210), there is “no escaping the toxic world”. Living with toxicity seems to be a growing problem that needs to be changed. One example of this is the ongoing debate surrounding nitrogen in the Netherlands. Therefore, it is important to study cases of toxicity, and to regard such cases through the expanded notion of slow violence, since this provides a sense of urgency for such debates, as the focus on noticeability creates more awareness and draws the attention to the violent aspects. Furthermore, it provides insight and a language to understand what living with toxicity means. Thus, this focus will be an insightful lens to explore cases regarding toxicity, such as the case of Tata Steel or toxicity related issues such as the nitrogen debate and the

climate crisis, as this would provide scholars with a better understanding of the impact and struggles of living with toxicity.

Epilogue

The fieldwork for this thesis is conducted between February and May 2022. During my fieldwork, the plans to grow and to expand the flight capacity of Schiphol were prominent. However, since a few weeks, there seems to have occurred a shift within these plans. Whereas I wrote in chapter 3 that one of the challenges in resisting slow violence, is making this noticeable through representing this case within the media and public and political debates, which was something my research participants encountered difficulties with, Schiphol has recently been a regular topic of conversation in the media over the past few weeks. Due to staff shortages, Schiphol cannot cope with the current capacity, which causes long queues and many cancelled flights (NOS 2022a). This summer, Schiphol will cancel hundreds of flights because of congestion (NOS 2022a).

In addition to this, news came out that instead of being allowed to grow further, Schiphol is forced to shrink. In 2023, Schiphol is allowed to operate 440,000 flights, which is 60,000 flights less than in the peak year 2019, where almost 500,000 flights were operated (NOS 2022b). The reason for the shrinkage is noise pollution and environmental damage (Schiphol Watch 2022). The current Minister of Infrastructure and Water Management, Mark Harbers, has indicated that the Dutch State is going to stop tolerating Schiphol being in violation of the law (NOS 2022b). Examples of such overstepping's are violating enforcement points for noise and laws regarding nitrogen emissions. The Dutch State stated that the interests are with the residents of the surroundings of Schiphol from now on (NOS 2022b). Accordingly, the noise pollution for residents will be addressed as a priority (NOS 2022b). Despite these news reports, there is no complete disclosure about the actual plans yet, as the government still until the end of 2022 to complete them. Nevertheless, the residents in the vicinity of Schiphol regard this as a hopeful development since the noise pollution will be decreased as a direct result of the shrinkage (Schiphol Watch 2022). Additionally, they regard the new plans as beneficial for the environment, the climate and public health (Schiphol Watch 2022).

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