

Imag(in)ing the health-security nexus

The connection of images, health, and security in the Ebola epidemic 2013-2016

Dissertation

zur Erlangung des Doktorgrades

der Wirtschafts- und Sozialwissenschaftlichen Fakultät

der Eberhard Karls Universität Tübingen

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2022

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18.07.2022

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Abstract

This thesis explores the interplay between images, health, and security in relation to the Ebola epidemic that took place in West Africa between 2013 and 2016 by posing the question: *How do images shape our understandings of the link of health and security?* The central argument of the thesis is that images enable us to see different layers of health security, ranging from the threat of infection to the individual body to the threat of a global spread of the virus. These layers unfold within the image, between in front and behind the camera, between depicted and viewing person, and, ultimately between Global North and Global South. Together, they define Ebola as a threat *to* the body, *through* the body, and *within* the body. As images are connecting and separating bodies, they are not only representing the health-security nexus but are partaking in its making; they make (in)visible and make problems, such as biases and injustices.

I develop this argument through three different visual nodal points: the protection suit, the body in pain, and the virus. Theoretically, I introduce a framework inspired by Actor-Network Theory (ANT) to conceptualize images as actors and as (part of) networks. This framework enables me to trace and understand how bodies, materialities, and ideas of health security are connected, act, and are enacted through images. Methodologically, I follow the images in the three nodal points while being sensible to my own embeddedness in the research process. The theoretical and methodological frameworks together build an approach that has applicability beyond the focus of this thesis as it tends to the meanings and doings of images whilst accounting for their relations with other images, artefacts, and human actors thus fitting the complexity of today's visual age.

The thesis contributes to and connects different literatures that together shape our scholarly understanding of health crises and images. Besides International Relations (IR) literature on the health-security nexus and on visual security studies, I also draw on works from the fields of history, anthropology, and science and technology studies (STS). This demonstrates how images act and are enacted not only in the health-security nexus but also across different disciplines. The findings presented in this thesis not only offer a more thorough understanding of how health and security are intertwined but also emphasize the normative necessity to ask the question "security for whom?" again and again to be sensible to whose body is under threat, whose body is safe, and whose body is ignored.

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Abbreviations

ANT	Actor-Network Theory
CDC	Center for Disease Control and Prevention
DRC	Democratic Republic of the Congo
FDA	Food and Drug Administration
IHR	International Health Regulations
IR	International Relations
MSF	Médecins Sans Frontières
NIAID	National Institute of Allergy and Infectious Diseases
NSF	National Science Foundation
NYT	New York Times
PHEIC	Public Health Emergency of International Concern
STS	Science and Technology Studies
UNICEF	United Nations Children's Fund
UNMEER	United Nations Mission for Ebola Emergency Response
UNSC	United Nations Security Council
WHO	World Health Organization

Glossary of viruses and diseases

COVID-19	Corona virus disease 2019
EVD	Ebola virus disease
HPV	Human papillomavirus
H1N1	Influenza A virus subtype, commonly referred to as <i>swine flu</i>
H5N1	Influenza A virus subtype, commonly referred to as <i>avian influenza</i> or <i>bird flu</i>
HIV	human immunodeficiency virus, causing AIDS
AIDS	acquired immune deficiency syndrome
SARS	Severe acute respiratory syndrome
SARS-CoV-1	Severe acute respiratory syndrome coronavirus 1, causing SARS
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2, causing COVID-19

Introduction: imag(in)ing the health-security nexus

The doctors say, 'Don't worry,' but the pictures say, 'Oh, yes, you should.'
(CNN News quoted in Moeller 1999: 60)

This quote from a CNN news episode on the spread of a virulent strain of group A streptococcus in the United Kingdom in 1994 points at the core of this thesis: the connection of images, health, and security. By posing the question *How do images shape our understandings of the link of health and security?* I want to shed light on the role images play in the ever-growing connection of health and security. I argue that images enable us to see different layers of the health-security nexus, ranging from the threat of infection to the individual body to the threat of a potential global spread of the virus. Together, these layers define Ebola as a threat *to* the body, *through* the body, and *within* the body. As images are connecting and separating bodies, they are not only representing the health-security nexus but are partaking in its making; they make (in)visible and make problems such as stereotypes, biases, and injustices.

The empirical starting point and focus of the thesis is the Ebola epidemic in West Africa 2013-2016. The epidemic became known as the “most severe acute public health emergency in modern times” and as a threat to “international peace and security” (WHO 2014e). The epidemic marks the third time the *World Health Organization* (WHO) announced a *Public Health Emergency of International Concern* (PHEIC), after swine flu and polio and before Zika, Ebola (that time in the Democratic Republic of the Congo (DRC)), and COVID-19. In the year 2015 the three most prestigious photo prizes have been awarded to photo reportages on the Ebola epidemic: photographer John Moore won a *Sony Photography Award* for his reportage on Ebola and its consequences in the Liberian capital Monrovia. Daniel Berehulak was awarded a *Pulitzer Prize* for his work on the spread of the epidemic in Sierra Leone, Liberia, and Guinea. Pete Muller won a *World Press Photo Award* for his photo series on Ebola in Sierra Leone. The fact that the three prestigious photography awards were given to photo series about the Ebola epidemic is important. It indicates that the Ebola epidemic was covered by (photo)journalists and highlights that the images taken in the context of the epidemic received international attention and recognition.

This emphasizes the question of how images influence our understanding of health crises. The underlying assumption of this query, which also reflects in the thesis' title, is that the way health crises are *imaged* heavily impacts on how they are *imagined* (Bleiker 2018a; Schlag, Heck 2020a). By setting what Connolly (2002) has termed the "conditions of possibility" they shape not only what we see but also what we can and cannot imagine (Bleiker 2015: 874; Callahan 2020: 3). Following Rancière's (2004) concept of the "distribution of the sensible" I claim that the ways Ebola is visualized need to be investigated as they impact on how health crises are understood and ultimately dealt with.

Despite its shortness, the quote at the beginning of this chapter highlights two characteristics of the interplay of images, health, and security that are of particular importance for this thesis. Firstly, the quote demonstrates the social construction of health security. The security dimension is negotiated between two speech acts ("don't worry" versus "oh, yes, you should"). This resonates with the many scholars in the realm of global health who broadly draw on the Copenhagen School's securitization theory (Wæver 1995; Buzan et al. 1998) to explore the (linguistic) framing of health as a security issue (Elbe 2006; Youde 2008; Wenham 2019). The bottom line of these works is the assumption that health and security are neither necessarily nor immutably intertwined by nature but that the nexus is a result of the social construction of extraordinary threats and referent objects. Already in 2010, Elbe (2010: 2) diagnosed a "tendency to articulate international health policy through the metaphors and vocabulary of security". Several health crises later, it seems no longer the question whether health is securitized or not. Instead, we cannot escape security in the context of health: "the securitization ship has already sailed" (Rushton 2019: 2). This, however, does not mean that the health-security nexus is a closed case. I claim the opposite to be true. If health issues are constantly securitized it is all the more important to fully understand this nexus and its political and ethical implications.

In a critical assessment of the linking of health and security, Nunes (2015: 61) importantly holds that "being ill is not the same as being insecure" and shows how a bodily condition (health) when connected to security becomes a political assemblage containing practices fueled by assumptions and perceptions that reproduce each other. McInnes and Rushton (2013: 116, emphasis added) furthermore point out that

the positioning of particular health issues on the security agenda appears to be to a great extent unrelated to measures of morbidity and mortality. [...] Thus what constitutes a 'health security' issue appears to be determined by *something other* than a 'clear and present danger' to life.

With a focus on images, this thesis sheds light on what this mysterious "something other" could be and how it shapes and impacts on the health-security nexus.

This brings me to the second element of the quote that is worth emphasizing: the role of the image. The fact that the image speaks implies some performative power. It is not the photographer who uses the image to make a point, but it is the image itself that acts and makes claims about how worrying a health crisis is. The role of the image is rather clear cut; it contradicts or at least challenges the voice of the doctor. This points at a specific relevance of images in the context of health. By questioning scientific knowledge, they may cause fear in their viewers. While this certainly is one way an image might influence its viewers' perceptions of a health crisis, this thesis makes a more complex case by exploring and tracing different layers of health security and images' role therein.

Taken together, these two points showcase the importance of images in the entanglement of health and security: If the health-security nexus is socially constructed, understanding the role images play in this connection appears to be of fundamental importance. The quote exemplifies that images are indeed political. They "delineate what we, as collectives, see and what we don't and thus, by extension, how politics is perceived, sensed, framed, articulated, carried out and legitimized" (Bleiker 2018a: 4). If we follow the argument that events are never separable from their visual representation (Bleiker 2001: 511), it is all the more astonishing that, while security studies pay attention to, for instance, the visibility of violence and death (Campbell 2004; Friis 2015; Berents 2019), terrorist attacks like 9/11 (Möller 2007), surveillance (Andersen, Möller 2013), iconic images of the war in Afghanistan (Heck, Schlag 2012), and the torture scandal in Abu Ghraib (Hansen 2015), there is hardly any debate about the visual security dimension of health. With this thesis, I seek to bring into conversation the hitherto rather separate literatures on visual security studies and health security.

The COVID-19 pandemic, which dominated the final two years of my work on the PhD project, in many ways highlights the topicality and relevance of the thesis. Be it images of deserted city centers, of health workers in heavy protective clothing, of ambulances queuing in front of hospitals, of coffins piled in front of crematories, or the many models of the spiky

virus – images of the pandemic have been and still are¹ omnipresent. In the last two years, I oftentimes was struck by how my seeing and understanding of the COVID-19 pandemic and of the Ebola epidemic became intertwined and influenced each other. “[P]hotographs echo photographs” Sontag (2003: 75) writes in “Regarding the Pain of Others” and even though the Ebola epidemic in West Africa and the global COVID-19 pandemic are fundamentally different in many ways – beginning with the type of virus, the symptoms of infection, the mode of transmission, the fatality rate, and the geographic spread – images of protective clothing, the (in)visibility of bodily suffering and grieving, and microscopic images of the respective viruses build a visual bridge between the two health crises connecting past and present. If “[t]o remember is, more and more, not to recall a story but to be able to call up a picture” (Sontag 2003: 80), reflecting on our visual memory and understanding the visual manifestation of health crises appears to be all the more important.

In the remainder of this introduction, I set the stage for this undertaking. Firstly, I explain why I put the Ebola epidemic at the center of this thesis. Building on that, I secondly introduce the theoretical and methodological tools I apply to the work on images. Thirdly, I introduce the three *visual nodal points* of the epidemic that build the core and structure of my analysis. Finally, I outline the structure of the thesis.

1.1 Ebola as a starting point

There are many empirical options to begin an inquiry into the connection of images, health, and security. The HIV/AIDS pandemic, as the first health crisis to be addressed by the *United Nations Security Council* (UNSC) (2000b) as a “risk to stability and security” seems just as valid as the plague as a historical reference point that nowadays constitutes a “cultural marker for death and destruction” (Rushton 2019: 9) or as COVID-19 as the most recent example of a global pandemic. My decision not to focus on any of these cases but to answer the research question with a focus on the Ebola epidemic has mainly two reasons.

Firstly, the visual attention the epidemic received suggests it to be an empirically rich and important case. The fact that the three prestigious photography awards of the year 2015 encompassed images featuring the Ebola epidemic is telling in itself. Importantly, Nunes (2016) in this regard shows how the securitization and the associated media spectacle in fact

¹ I write this introduction in late January 2022 when the numbers of Omicron infections are spiraling out of control, turning Europe, once again, into an epicenter of the pandemic.

circumvented a thorough engagement with the complex epidemic and instead reinscribed the neglect of Ebola. Interestingly enough, he (2016: 549, emphasis added) argues that the epidemic can be understood as “a powerful illustration of how neglect yields a particularly complex combination of *visibility* and *invisibility*”. Emphasizing the multifaceted nature of neglect, Nunes (2016: 549) here points out that not only invisible issues are neglected but that visible issues, when met with apathy, inaction or incompetence can be considered neglected too. While his article refers to (in)visibility in a metaphorical sense, this thesis explores both elements in literal terms and takes the award-winning image series as its empirical point of departure.

Secondly, the Ebola epidemic constitutes a most promising case to investigate the making of the health-security nexus due to the at first sight contradictory security dynamics at play. On the one hand, the Ebola epidemic was highly securitized and militarized (de Waal 2014) and for this reason appears to be most suited for the study of health security. However, the labeling of the epidemic as a “threat to peace and security” (UNSC 2014) and “a potential threat to global security” (The White House 2014) seems to discord with the unlikeliness of the virus spreading uncontrollably on a global scale due to its pattern of contagion (McInnes 2016: 382). Ebola, thus, constitutes an important starting point to explore the “something other” McInnes and Rushton (2013: 116) assume to play a role in the interlinking of health and security. Importantly, I understand the focus on Ebola not as setting up harsh boundaries. In fact, exploring the visual network of Ebola includes going back to the plague and moving forward to COVID-19 to account for Ebola’s visual entanglement with past and present infectious disease outbreaks.

1.2 Two tools to follow the image

In the thesis, I make use of Actor-Network Theory (ANT) as a theoretical and methodological toolbox conceptualizing images as *actors* and (parts of) *networks*. This framework enables me to trace and understand how bodies, materialities, and ideas of health security are connected, act, and are enacted through images.

The turn to ANT is prompted, firstly, by the conviction that ANT allows me to conceptualize the image beyond its content and to therewith account for its complexity. Conceptualizing images as non-human actors implies a focus on the images themselves. Building on Favero (2017: 1), who finds that images’ “meaning is increasingly to be found beyond the realm of

representation and indexicality, and in a terrain conscious about questions of multimodality, materiality and relationality”, I develop a framework that goes beyond the images’ content and does justice to the images’ complex entanglement in the health-security nexus.

While traditional securitization theory focuses on humans as securitizing actors, the second speech act in the quote at the beginning of this chapter is made by the pictures responding to the doctor with “oh, yes, you should”. This suggests the image to have some sort of agency. It is not the tool of, for instance, a photographer, politician, or editor used to illustrate an argument, but it speaks on its own. Considering images as non-human actors resonates with the theoretical debate at the intersection of visibility and security studies of *whether* and *how* images perform security (Hansen 2011; Heck, Schlag 2012; Hansen 2015). I add to this debate and conceptualize images as non-human actors that act and are enacted in networks consisting of human and non-human relations. In doing so, I build on the definition of Bengtsson et al. (2019: 116) according to which the health security assemblage is “a web of human and non-human relations producing priorities about threats [...] and how they are handled”.

This focus enables me to explore the meanings and doings of images. Furthermore, it, accounts for the interplay of images and three-dimensional visual artefacts. Thus, conceptualizing images as actors and (parts of) networks goes beyond a narrow focus on their content alone thus accounting for their complexity and entanglement.

The ANT-inspired focus on *the network* and its attention to relationalities and entanglement allows me to trace the connections between human and non-human actors and to understand the relevance of these socio-material networks for the health-security nexus. The *flat ontology* that seeks to overcome the dualism between the social and the natural (Latour 1994, 2005), which is shared by all approaches associated with ANT, enables me to consider non-human actors (like images, but also protective clothing, microscopes, etc.) and human actors (like photographers, patients, health workers, etc.) in a non-hierarchical and relational manner. This strongly resonates with topics situated in the field of health which is characterized by a diverse and dynamic network of human (patients, doctors, nurses, etc.) and non-human (drugs, hospitals, laboratories, devices, protective clothing, etc.) actors. The material semiotic framework of the thesis conceptually includes images in this network.

To specify the images' location, meanings, and doings in the health-security nexus and to render their agency less abstract and more tangible for the analysis, I introduce three theoretical lenses that are derived out of the visual International Relation (IR) literature and inductively based on a first screening of the initial set of images. Each lens is predominantly applied to one visual node and conceives of the images' agency as rooted in, respectively

- 1) their status as icons
- 2) their ability to evoke emotions within the viewer
- 3) their ability to constitute (truths about) security

The ANT focus of my theoretical framework holds these lenses together making sense of their interconnectedness and co-constitution. Through these lenses, I aim to engage the visual IR literature with ANT approaches in a productive way. Furthermore, they also tie back the ANT inspired framework to the existing visual IR literature thus enabling me to build on and add to existing debates. This conceptualization of the image and of the health-security nexus influences the methodological framework of the thesis.

1.3 Methodological framework

Departing from Latour's (2005: 12) suggestion to "follow the actors" I develop the phrase *I follow the image* as the guiding principle for my analysis. This following consists of two parts. By zooming in and zooming out I move between the detailed focus on few selected images and the broader circulation and meaning making that takes place in Ebola's visual network. This strategy is based on Nicolini's (2009, 2012) work, who, although being rooted in practice theory, also draws on ANT.

The zooming-in and zooming-out parts of my analysis do not happen in isolation. Here, the "I" in *I follow the image* becomes important. In a seminar at the University of Queensland in February 2022, Campbell emphasized that "images do not speak one universal language" (Bleiker 2022) pointing out the multiple readings of visual works. Hansen (2018: 276) in a similar manner finds that "the point is not that we get the same message, but that we assume we will be able to "get something"" highlighting the fact that the reading of images depends on our social context. It is this ambiguity (Hansen 2011) and openness that not only makes images particularly accessible across language barriers but also renders them challenging

research material. In the following, I want to reflect on how these challenges played out in the methodology of my thesis.

During the PhD project I was oftentimes confronted with (at times rather provocatively put) questions of whether my analysis was *merely* based on my *personal* and hence *biased* interpretation of images and whether the results of my analysis would be replicable. The insinuation of these sort of questions always being that the findings would be diminished by *my* seeing and interpretation of the images. At the beginning of my research project, I reacted rather defensively to these sorts of questions. I tried to explain how I meant to stay *objective*, how I sought to separate myself from the analysis conducted for the thesis. At various points, I contemplated about interpreting the images in focus groups, on working with questionnaires and a diverse set of *viewers* to achieve what I at that time thought would be valid and objective results.

The more I progressed with the thesis and the more I read on methods and methodology, the more my attitude towards these questions changed. This is not to say that they are not valid. On the contrary, I find them important and legitimate. What changed, though, is my answer to them. Following the claim that “knowledge never exists in isolation” (Brigg, Bleiker 2010: 791) I suggest that any use of method shapes the production of knowledge and hence does not constitute a neutral procedure (Aradau, Huysmans 2014: 598). Furthermore, I am aware that there is not one universal answer to the question of what images and artefacts do. Hence, I propose that there is no such thing as one stable visual network but a myriad of networks unfolding differently depending on where and how one enters and becomes part of it. In the methodological framework I put emphasis on this aspect with the phrase *I follow the image*.

Hence, I decided not to write myself out of the analysis. If we agree that the social context influences our seeing of images, such thing as a universal meaning of images hardly exists. However, it also implies that the seeing is not purely individual. The findings, hence, have application beyond my personal perception. While they have little to say about how, for instance, a person who grew up in Liberia and witnessed (and survived) the epidemic up close sees and understands the images, they offer insights into how distant viewers with a European or Western background make sense of the Ebola epidemic’s visuality. I highlight this point with

the title of the thesis. For distant viewers like me imagining the epidemic through images is as close as I can get (Hutchison 2014: 3) to the epidemic.

Having made these claims, the challenge remains: If I do not want to write myself out of the analysis, how can I write myself *in*? How can I account for my personal seeing of images in a transparent and rigorous manner that avoids naval gazing? After some deliberation and experimentation, I ended up with a tripartite structure. A structure that not only guides my writing but also the analysis itself: I combine the interpretivist mindset of my research with Nicolini's (2009) strategy of "zooming in and out". The analysis – as well as the respective chapters – begins with a vignette that situates myself, and the curiosity that drives my following of the images, into the chapter. The vignettes have a twofold purpose. Firstly, they make my research more accessible to the reader as they render more transparent with what kind of knowledge and rationale I approach each nodal point. Secondly, writing the vignettes is a structured way for myself to become more aware of my expectations and assumptions. After the vignette I follow the images in two interconnected steps. The zooming-in discusses two to three images in detail in terms of their content but also regarding their reception and background story (for instance, how the photographer talks about the image and its creation). The images for this step were chosen with care, either because they are of extraordinary importance (like the first microscopic image of the virus) or because their discussion already offers profound insights into the making of health security. The next step then is the zooming-out. It follows the motive of the virus, protection suit, or body in pain, either to different genres (news photography, pop culture, visual material of health actors) or/and throughout time.

1.4 Three visual nodes of Ebola: suit, body, and virus

Analyzing the visibility of Ebola is a challenging task – not only in theoretical and methodological, but also in empirical terms. The multitude of images and other visual material as well as the fluidity and complexity of images make it seem impossible to map the entire visual network of the epidemic. I approach this challenge with what I term *visual nodal points* upon which I base my empirical work. These nodes are the protection suit, the body in pain, and the virus. With the concept of the *visual nodal point*, I seek to achieve two things. Firstly, the term is a reference to the network and the overarching ANT framework, which builds the theoretical foundation of the thesis. Like in a real net, I consider the visual nodes as firmly

connected and as enacting each other. Secondly, in empirical terms, the identification of the three nodes enables me to conduct an analysis that is both structured and manageable within the scope of a thesis. Through the three nodal points, I approach Ebola's visuality from three interconnected perspectives that see Ebola as the protective measures taken to prevent an infection, as the symptom of an infection and the pain this infection causes to patients and their families, as well as the viral agent held responsible for severe damage within the human body. In the following, I introduce each node in more detail pointing out its relevance for the epidemic as well as for this thesis.

1.4.1 The protection suit

Images of the protection suit are a prominent motive in the award-winning series: 21 of the 39 images of the award-winning images feature health workers in protective clothing. We see the protection suit in news media reports on health crises, on information material of humanitarian organizations to promote their work and to attract donors; the protection suit even became a popular Halloween costume in 2014 in the US (Brandsonsale 2014). Importantly, the suit not only dominates visualizations of the epidemic, but it is also a key device for facilitating medical response and controls the daily tasks of health workers and their interaction with patients. In 2014, the WHO (2014a) published safety protocols on the usage of protective clothing in the context of the epidemic emphasizing both the importance of protective clothing and the complexity of safely using it. The importance as well as the high visibility of protective clothing spans from the plague doctor robe of the 17th century (Boeckl 2000: 15; Lynteris 2018: 449) to the omnipresence of facial masks in the current pandemic (Krause 2020a, 2021a). The protection suit, thus, appears to be deeply entangled with the epidemic and health crises in general.

The first visual node explored in this thesis departs from this visual omnipresence and medical importance of the suit and – with the help of the first theoretical lens – seeks to shed light on its alleged iconic status (Lynteris 2018: 452). Analyzing different visual manifestations of the protection suit, I argue that the suit constitutes an icon of disease outbreaks that condenses their meaning to the threat of contagion as a very narrow notion of health security. Through this notion, the suit in its different visual forms visually and sensually connects the bodies of health workers, patients, and viewers.

To develop this argument, I engage with literatures from within and outside the spheres of International Relations (IR), that analyze the suit as a material object of humanitarian action (Pallister-Wilkins 2016; Wezel 2019), its prominence in news reporting (Joffe, Haarhoff 2002; Gerlach 2019), movies (Albertini 2008) or its emergence during the 1910-11 Manchurian plague outbreak (Lynteris 2018). Here, I focus not so much on the suit as a device deployed on the ground by medical personnel but on the suit's different visual materialization beyond the immediate medical context.

1.4.2 The body in pain

Images of the body in pain are the other prominent motive of the award-winning image series. Out of the 39 images of the award-winning image series 25 of them show either sick, dead, or grieving bodies. Images are held to be the dominant medium to access the pain of others (Dauphinée 2007: 144) which is why I choose the body in pain as the second visual node to be explored in this thesis. Through the second theoretical lens I seek to trace and understand how visualizations of bodily suffering provoke particularly strong emotions with the spectator (Dauphinée 2007; Zelizer 2010) and what these emotions do to the health-security nexus. I use the term *body in pain* as a reference to Scarry's (1987) landmark work. Following the motive of the body in pain through the Ebola epidemic, I argue that the body in pain shapes the health-security nexus as the simultaneously *threatened* and *threatening* body resonating with the emotional registers of pity and fear.

The node builds on the rich academic work on the visibility of suffering and poor health. One landmark example in the field of IR is the work of Bleiker and Kay (2007) who investigate the representation of HIV/AIDS in Africa and claim that photography is one key medium in shaping the public and private perception of HIV/AIDS. Holding that "[t]he likelihood of a story making it to print, especially on the cover of a publication, increasingly depends on the quality of the pictures that accompany it" (Bleiker, Kay 2007: 140) they discuss how different modes of photography entail different ways of understanding and dealing with the pandemic. While humanist photography seeks to create compassion, Bleiker and Kay (2007) find that it at the same time may also evoke racial stereotypes. This is especially troublesome given that these types of photographs have an impact on the perception not only of HIV/AIDS but also of Africa in general until today. Similar to Bleiker and Kay (2007), Campbell (2003, 2012) asks how the visual representation of famines impacts on the understanding of the complexity of food

crises. Despite the significant changes in the understanding of the causes of famine, Campbell (2012) finds that the photographic portrayal of famine has remained rather static as stereotypical portraits of famine are continued to be produced. This form of representation, which lacks any form of context, causes the depoliticization of the circumstances and enforces the colonial stereotype of contrasting the “adult and superior global North with an infantilized and inferior global South” (Campbell 2012: 84). The work on disaster imagery and the emotional construction of solidarity after the Asian tsunami in 2004 by Hutchison (2014) points to a similar dynamic by showing that the common imagery of the disaster mobilized colonial stereotypes that supported “a global politics of pity”. Working on and especially with women with HIV/AIDS in Tanzania, Harman (2019) explores film as a visual method to challenge these narratives.

While all these works conceptualize and highlight the vital role visuality plays in our understanding of (health) crises – and thus are of the utmost importance for this thesis – the visual dimension of health *security* remains largely untouched. This is where this nodal point and the thesis at large want to add to the academic debate.

1.4.3 The virus

For the last nodal point, the visual manifestations of the virus, I abandon the award-winning series. This move is prompted in parts by the COVID-19 pandemic and the omnipresence of the US *Center for Disease Control and Prevention's* (CDC) model of the coronavirus. This model, as its creators Alissa Eckert and Dan Higgins recount, was designed as “[s]omething to grab the public’s attention” (Giaimo 2020). Instead of using images from the award-winning series, for this node, I commence my analysis with the first microscopic image of the Ebola virus and trace how it contributed to the “accomplishment” (van Loon 2002: 118) of the virus. From there I move to models, paintings, stock photos and plush toys of viruses to explore their role within the health-security nexus. This node emphasizes that visualizations of the virus are not restricted to the field of virology, or the natural sciences more generally, but that visualizations of the virus constitute our entire understanding of epidemics or pandemics (Weingart 2004: 101). This understanding is shaped by the virus’ visual manifestations in three ways: 1) the making of the virus and its introduction as an actor to the health-security nexus; where it, both, contributes to the 2) deepening and to the 3) widening of this nexus. The theoretical lens applied to this visual node, builds on works in the field of art history, media

studies, and Science and Technology Studies (STS) that highlight the constitutive power of the microscopic image (Latour, Woolgar 1986; van Loon 2002; Bredekamp, Brons 2005; Bredekamp et al. 2008; Daston 2014; Buiani 2014). These works resonate with the approach of this thesis that considers images as actors and not as mere tools of illustration and they inform my analysis of the visual manifestations of viruses.

The three nodal points are tied back to and held together by the overall framework through which I trace how visual manifestations of protective clothing, bodies, and viruses act with and are enacted by other human and non-human actors in the making of health security.

1.5 Structure of the thesis

The thesis proceeds as follows. This introduction is followed by *Chapter 2* that maps and links the theoretical points of departure of the thesis. Exploring the key debates in the literatures on health security on the one hand and on visual security studies on the other, I show that both literatures hardly engage with each other. Pointing out the recent turn in both scholarly debates toward non-human agency and assemblage thinking (Bellanova, Fuster 2013; Walters 2014; Bengtsson et al. 2019; Elbe, Buckland-Merrett 2019), I suggest that this commonality holds the potential to build between the two literatures providing concepts that enable us to think through the connection of images, health, and security.

Chapter 3 takes up this suggestion and brings forward an ANT-inspired theorization of images as actors and (parts of) networks. This material semiotic approach towards images, I claim, constitutes a very suitable approach for understanding how bodies, materialities, and ideas of health security are connected, act and are enacted through images. The conceptual work continues in *Chapter 4* where I introduce the methodological framework of the thesis and set the stage for the analysis. Departing from Latour's (2005: 12) famous call to "follow the actors", I move to *I follow the image*. With alternating between zooming in and zooming out (Nicolini 2009, 2012), I seek to account for the images' content and to trace their acting and enactment in the context of health security. *Chapter 5* opens the analytical part of the thesis with an introduction of the Ebola epidemic as a key site to explore the research question of the thesis: *How do images shape our understandings of the link of health and security?* *Chapters 6-8* answer this question from three different angles: the protection suit and its iconic status, the body in pain and its capacity to evoke emotions, and the virus as visual proof of Ebola. Through these three chapters and summarized in the conclusion (*Chapter 9*) I

develop the argument that images enable us to see different layers of health security: they define Ebola as a threat *to* the body, *through* the body, and *within* the body.

2 Theoretical points of departure: images, health, and security

The literatures on images, health, and security build the theoretical points of departure of this thesis. The aim and purpose of this chapter is twofold. Firstly, by sketching the recent debates in health security on the one hand and in visual security studies on the other, I seek to situate this thesis by mapping its historical and scholarly context. Secondly, I show that, while there are vibrant literatures on health and security as well as on images and security, these two strands hardly engage with each other. In this chapter, I bring forward the argument that the recent turn in both scholarly debates toward non-human agency and assemblage thinking (Bellanova, Fuster 2013; Walters 2014; Elbe, Buckland-Merrett 2019; Bengtsson et al. 2019) can build a theoretical bridge and provide concepts that enable us to think through the connection of images, health, and security.

To illuminate the thesis' backdrop, I proceed in three interrelated steps. Firstly, I unpack the health-security nexus showing and problematizing the absence of visibility. The second part of the chapter then moves to the literature on images pointing out the relative absence of health security in these works. Thirdly, throughout these two parts I show how both academic spheres, while hardly engaging with each other, are equally influenced by recent turns in critical security studies that embrace more-than-human approaches exploring non-human agency, entanglement, and new materialist claims. This similarity, I argue, constitutes the prospect of a theoretical bridge that can enable the linking of the two spheres and offers ways to theoretically informed think through the connection of health, security, and images.

2.1 Mapping the health-security nexus

In her 1989 article "On the Health of International Relations and the international relations of Health", Thomas (1989) points out the absence of health in the discipline of IR and makes the case for filling this gap. More than thirty years later, we can clearly say that Thomas' plea has been heard. Today, global health is an ever-growing field that moved from a niche topic into the center of IR. The frequent publication of handbooks, monographs and special issues (Davies 2010a; Youde 2012; Rushton, Youde 2015b, 2015a; Rushton 2019; Wenham 2021), the existence of standing sections at key IR associations' annual conferences like the *International Studies Association*, the *European International Studies Association*, and the *British International Studies Association*, and also the growing number of health seminars and programs at political science departments, manifest global health as an established field

within the discipline of IR. In addition, emerging epidemics and pandemics frequently highlight the importance of studying health from an IR perspective. The COVID-19 pandemic is only the latest case in point (Davies, Wenham 2020). Security (Rushton, Youde 2015a; Wenham 2019; Rushton 2019), alongside governance (Davies 2010b; Davies et al. 2015), and gender (Wenham et al. 2020; Wenham 2021), is one of the focal points of this literature.

I start the mapping of the health-security nexus with a short genealogy of the connection of health and security from a historical perspective. Taking into account the multitude and variety of the literature, the health-security nexus can be considered an assemblage that has manifested and still manifests itself through (global) health institutions (Hanrieder, Kreuder-Sonnen 2014), policies (Michaud 2015), and through language and framing (Labonté, Gagnon 2010; McInnes, Roemer-Mahler 2017). Considering these three elements, I trace how health has been an issue for international politics for centuries, but only with the end of the Cold War made it on the international agenda as a security concern. Building on this, I map the different conceptual approaches towards the health-security nexus and show that the visual has yet to be addressed in the health security literature. Finally, I turn to the normative assessment of the health-security nexus.

This initial mapping of the health-security nexus achieves three things. Firstly, the historical overview of the connection of health and security situates and contextualizes the Ebola epidemic which sits at the core of the analysis conducted in this thesis. Mapping the different conceptual approaches then acknowledges the rich literature this thesis builds on and at the same time, with pointing out the absence of the visual, highlights the contribution this thesis makes to the existing debates. The normative debates that exist around the health-security nexus, finally, are important as they inform the ethical motivation of this thesis.

2.1.1 A short genealogy of the health-security nexus

[T]he project of global health security has never referred to a unitary whole, but is a dynamic concept that has altered depending on context, pathogen and who/what is at risk. (Wenham 2019: 1094)

The dynamic Wenham (2019) describes in her article on the “oversecuritization” of health becomes apparent when we consider how health and security became more and more intertwined in the first two decades of the 21st century. In this section, I offer a short overview of the formation of the nexus and thus provide the historical context of this thesis.

While the spread of infectious diseases beyond borders was already a well-established security concern in times of war as, for instance, evident in Thucydides' emphasis on the devastating role of the plague during the Peloponnesian Wars (Price-Smith 2002: 10), it was only in the mid-late 19th century that health became a significant concern of foreign policy and international relations (Maclean 2008: 478). As a reaction to increasing transmission of infectious diseases along trade and travel routes, the 1851 *International Sanitary Conference* in Paris constitutes the first joint international attempt at addressing the governance of infectious diseases (Maclean 2008: 478). The subsequent creation of two major international sanitary bureaus – the *Pan American Sanitary Bureau* in Washington for the Americas and the *Office International d'Hygiène Publique* in Paris for Europe – and of the *League of Nations Health Organization* in 1920 established the foundations of international health cooperation which culminated in the foundation of the WHO in 1948 (Maclean 2008: 479; Heymann, West 2015: 101). The WHO's (1946) constitution already envisions the "security of all people" as the aim of the organization. The recognition that health needs to be thought beyond national borders, hence, is a longstanding and widely shared argument.

However, the formation of the strong nexus of health and security only took up speed in the 1990s and early 2000s when the widening of security in the post-Cold War era proved to be a window of opportunity for health to finally make it on the top rankings of the security agenda (Buzan, Hansen 2009: 156-225). One decisive event on the national level in this regard was the US-American 1992 national policy report "Emerging Infections: Microbial Threats to Health in the United States" by the *US Institute of Medicine* that defined emerging and reemerging infectious diseases as a threat to national security (Lederberg et al. 1992). This was followed one year later by a US-Canadian alliance demanding the WHO's investment into a global surveillance system for the detection and containment of diseases outbreaks (Lac Tremblant Declaration 1994; Weir 2015: 19). On the international level, in acknowledging the need for an early warning mechanism, a WHO division on emerging and other communicable diseases started to develop the *Global Outbreak Alert and Responsive Network* with the task of "maintaining global health security" (WHO 2000) in 1997.

Three years later, the first UNSC meeting of the twenty-first century in January 2000 constituted a watershed moment. For the very first time the UNSC addressed a health issue, namely *human immune-deficiency virus/acquired immune deficiency syndrome* (HIV/AIDS), as

posing a security risk (UNSC 2000a). The UNSC Resolution 1308, which followed this meeting, identified HIV/AIDS as a “risk to stability and security” (UNSC 2000b). The health-security nexus in case of HIV/AIDS was defined by the traditional security threat the virus was held to pose in terms of state security and stability due to its high prevalence in the militaries in various African countries (Wenham 2019: 1095). The WHO picked up this narrative and in April 2001 pledged to improve national epidemic alert and response measures to ensure “global health and security” (WHO 2001). Accordingly, the term *global health security* found its ways into the vocabulary of the organization from 2001 onwards emphasizing the need for rapid outbreak response mechanisms (Weir 2015: 18).

The 2003 outbreak of the *Severe Acute Respiratory Syndrome* (SARS) and avian influenza (H5N1) in 2004 fed into this narrative as they demonstrated the rapid and potentially global spread of diseases. Through its fast spread, SARS demonstrated the threat posed by infectious diseases in a time of international travel in a globalized world. This was illustrated by the case of the Chinese doctor Liu Jianlun. The doctor, who had treated some of the first SARS patients, traveled from Guangdong Province to Hong Kong, stayed in a hotel room and spread the disease to other guests who themselves traveled to Singapore, Vietnam, Ireland, Canada, and the US infecting other people. According to the WHO around 4,000 cases can be traced back to the traveling doctor (Elbe 2010: 38). Thus, Liu became known as a “super spreader” (Elbe 2010: 38) who is said to have “coughed the coughs that would eventually be heard around the world” (Fidler 2004b: 3). Regarding many cases rather similar to the one of Liu, Elbe (2010: 38f) summarizes that “SARS proved that a newly emerging infectious disease outbreak can indeed only be a plane ride away. The cliché was true after all”.

Against the backdrop of SARS in 2003, the international community was already sensitized to the issue of health threats and thus took the emergence of the H5N1 influenza in 2004 very serious. H5N1 is a strand of avian flu and as the name suggest transmission typically happens from bird-to-bird and rarely from bird-to-human in case of direct contact. Different to the H5N1 outbreak in Hong Kong in 1997 where more than 5,000 birds on poultry farms were culled, attention to the 2004 outbreak exceeded the sphere of animal health. Richard Lugar and Barack Obama, both at that time members of the Senate Committee on Foreign Relation, argued in their 2005 piece in the *New York Times* (NYT):

When we think of the major threats to our national security, the first to come to mind are nuclear proliferation, rogue states and global terrorism. But another kind of threat lurks beyond our shores, one from nature, not humans – an avian flu pandemic. An outbreak could cause millions of deaths [...] and threaten the security of governments around the world. (Obama, Lugar 2005)

The WHO picked up this discourse. Shigeru Omi, at that time head of the WHO's regional office in the Western Pacific, warned "we are talking at least 7 million [deaths], but maybe more – 10 million, 20 million and the worst case 100 million" (quoted in Abraham 2011: 808). Besides having an enormous effect on poultry in the region and thus remarkable economic implications, the threat to human health posed by H5N1 ultimately remained low: a total of 468 confirmed human cases have been reported, out of whom 282 died (WHO 2015a). There is no knowledge of any case where the virus spread from human-to-human. However, the possible fear of a pandemic emerging out of H5N1 was kept alive. In 2005, one year after the H5N1 outbreak in Asia, then-US President George W. Bush framed avian influenza as a danger to national security and issued the *International Partnership on Avian and Pandemic Influenza*. Furthermore, US Congress increased the spending on pandemic preparedness from US\$50-100 million in previous years to US\$6 billion (Abraham 2011: 797). In this context, Bush declared that "[b]y preparing now, we can give our citizens some peace of mind knowing that our nation is ready to act at the first sign of danger" (The White House 2005).

In the aftermath of SARS and H5N1, the WHO revised the *International Health Regulations* (IHR), a set of binding rules for member states to ensure maximum security against the international spread of disease with minimum interference with world traffic (WHO 2016a). While the IHR originally were limited to a list of known diseases (yellow fever, cholera, relapsing fever, smallpox, typhus, and plague), the revised version was extended to cover all potential emerging and reemerging diseases. Furthermore, the director-general is now entitled to make the final decision on whether health events are a PHEIC and has the right to deploy research teams into countries for investigating on possible epidemics without the invitation of governments (Støre et al. 2003; WHO 2014c).

Thus, the influenza pandemic of 2009 (H1N1, swine flu) "was an event the world had been preparing for at least five years before it happened" (Abraham 2011: 797) and marked the first time that the WHO issued a PHEIC (WHO 2009a). Even though Margaret Chan, the WHO's director-general at the time, was confident that "the world is better prepared for an influenza pandemic than at any time in history" (WHO 2009b) the pandemic was "different in any

possible respect” (Abraham 2011: 798) from what had been predicted: it did not originate from an H5N1 strand, but from a so far unknown swine origin virus. Also, it emerged in North America and not in Asia as expected and where great resources on pandemic surveillance had been spent. Finally, the predicted mortality from 2 million to over 100 million turned out to be wrong. In fact, swine flu turned out to be less fatal than the seasonal flu. Thus, Abraham (2011: 798) concludes that “the pandemic of 2009 was clearly not a threat to global health security under any definition of security”.

The issued PHEIC and the declaration of the outbreak as a pandemic on 11 June 2009 (WHO 2009c) caused the WHO a lot of criticism. *The Parliamentary Assembly of the Council of Europe* (2010), for instance, accused the WHO of having provoked “unjustified fears about health risks”. These scares, Rushton (2019: 30-33) traces, have been caused largely by the WHO’s usage of the term *pandemic*. A pandemic is technically defined as “an epidemic occurring over a very wide area, crossing international boundaries, and usually affecting a large number of people” (Porta 2014) and thus the correct description for the H1N1 outbreak of 2009. However, in the public discourse, the terms *pandemic* or *epidemic* are associated with deadly pathogens circulating on a global scale. The usage of these terms, hence, has political and economic consequences somewhat detached from the medical realities of the outbreak they are used to describe (Rushton 2019: 31). H1N1 thus vividly demonstrates how language matters in the context of outbreaks, and how terms like *health security*, *pandemic*, or *epidemic* are powerful and their usage highly political (Rushton 2019: 32).

A PHEIC that received little political and academic attention was the polio outbreak in Syria, which was declared a public health emergency in April 2014, shortly before Ebola entered the global stage (McInnes 2015b: 1308). The fact that polio, a disease that had been eliminated in Syria for 18 years, returned to the country in mid-2013 is a tragic indication of the harms caused by the war. The rise of polio, which can cause permanent paralysis, and other diseases preventable by vaccination, like for instance measles, highlighted the importance of medical and humanitarian relief for civilians in conflicts (Al-Moujahed et al. 2017: 64). Most likely due to the existence of the vaccines, the outbreak was seen as a humanitarian rather than a security concern.

The polio outbreak soon was overshadowed by the Ebola epidemic of 2013-2016 in West Africa marking the third time that the WHO announced an international health emergency

(WHO 2014c). Margaret Chan, then WHO director-general, stated that the epidemic was the “most severe acute public health emergency in modern times” and a “crisis for international peace and security” (WHO 2014e). Echoing this tone, Médecins Sans Frontières (MSF), for the first time in the organization’s history, called for military deployment as a last resort (MSF 2014a). Another novelty was the United Nation’s Resolution 2177, which for the first time identified a disease to be a “threat to international peace and security” (UNSC 2014) leading to the creation of the *United Nations Mission for Ebola Emergency Response* (UNMEER) (UN 2014). The Ebola outbreak in the DRC in 2018, albeit characterized by weak state and health infrastructure, did not create the same sort of immediacy as the previous epidemic in West Africa (Wenham 2019: 1096).

In comparison to SARS, and the H5N1 and H1N1 influenzas, where the security implications were seen in a potentially global spread and in terms of the economic consequences arising from that, the Ebola outbreak in West Africa was quite different. The example of Ebola demonstrates that it is at times difficult or even impossible to assign a disease to one coherent health security narrative: on the one hand previous outbreaks had been easily contained and thus had caused little worries in the global health community. On the other hand, this outbreak soon affected big cities and spread in so far unknown dimension causing a global media “spectacle” (Nunes 2016: 543), despite still being a rather easily to contain pathogen in Global North health settings. However, the high fatality rate combined with the fast spread turned the disease into an international security threat, that met all criteria of Wald’s (2008) “outbreak narrative” (Wilkinson, Leach 2015: 3).

The West African Ebola epidemic was only about to phase out when the Zika outbreak in Brazil and its fast spread in 2015-2016 was declared a PHEIC in February 2016 (WHO 2021a). Albeit constituting two very different diseases, some of the rhetoric deployed in the case of the Zika pandemic and also the heavy involvement of the military mimics the language and measures used to define and tackle the Ebola epidemic. For instance, the Brazilian government deployed 220,000 troops for handling the virus (BBC 2016a) and the country’s health minister Marcelo Castro declared Zika Brazil’s “public enemy number one” (BBC 2016a). Wenham (2019: 1096) in this regard diagnoses a “path dependency” connecting the two successive health crises. However, in contrast to the Ebola epidemic, the security concern in the case of Zika was not so much about the virus itself or the number of infections but rather

a combined concern over five overlapping elements: 1) *where* (in Brazil, with a history of failed vector control programmes and during domestic political turmoil), 2) *when* (immediately post-Ebola), 3) *who* was being affected (foetuses/babies), 4) *how* (unknown disease characteristics), and 5) *what* was the existential threat (vectortised unknown). (Wenham, Farias 2019: 399)

The final example of this genealogy is the global COVID-19 pandemic that is still ongoing when writing this chapter in December 2021. The outbreak, which commenced in China in December 2019, was declared a PHEIC on 29 January 2020 (WHO 2020a). What followed have been lockdowns, travel restrictions, several waves of infections challenging and oftentimes overwhelming health infrastructures, the development of vaccines and fierce discussion about their just distribution, and the conclusion that “key tenets of international relations have dominated” (Davies, Wenham 2020: 1230) this outbreak from the beginning and that the pandemic “is a political problem as much as it is a public health tragedy” (Davies, Wenham 2020: 1227). In a sense, the COVID-19 pandemic combines many aspects of previous disease outbreaks. It is accompanied by securitization moves and speech acts escalating into war rhetoric (Enloe 2020), gender inequalities enforced both by the pandemic and the measures taken to its containment (Wenham et al. 2020), as well as racial stereotypes perpetuated first by labeling the pathogen “China virus” (Rogers et al. 2020) and descriptions of the new Omicron variant as “the virus from Africa” (Braun 2021).

What can we learn from this short genealogy? Firstly, it demonstrates that the health-security nexus unfolds and manifests around emerging and re-emerging infectious diseases. Secondly, in this context, the Ebola epidemic happened at a time when the experience of previous epidemics and pandemics had created a sort of “slippery slope” (Hanrieder, Kreuder-Sonnen 2014) toward further securitization processes. Regarding the increasingly routinized connection of health and security, Fidler (2007: 42) stated that “[t]he use of security as a trope has become ubiquitous in how experts frame public health governance”. He even claims that the current period should be characterized as a “post-securitization phase” (Fidler 2007: 41) given the fact that the securitization of infectious diseases is completed. In a similar manner Rushton (2011: 792) argues that nowadays health and security communities are united under a “‘health security’ banner”. This banner is critically discussed in the literature. The following two sections offer an overview on the different theoretical approaches brought forward to conceptualize and assess the nexus and map the ethical implications of the health-security nexus discussed in health security scholarship.

2.1.2 The many (conceptual) dimensions of the health-security nexus

As security is a contested concept (Buzan 1991: 7), it is little surprising that the idea of health security and its implications seem to be diverse as well – both within actual national and international policies and approaches and in academic understandings and debates. In this section, I focus on the latter to situate my research in the existing debates.

The “‘health security’ banner” (Rushton 2011: 792) is not as uniform and consistent as one may assume on the first sight. McInnes (2015a), for instance, shows that different distinctive but overlapping concepts – *global (public) health security*, *national security*, *human security*, and *biosecurity* – are used in the debate on health security and points out that these different terms are not mutually transferable as they imply different perspectives on which health issues are a threat and whose security is actually threatened. These many dimensions of health security indicate that health security is not one clear cut concept but ambiguous in itself. Concepts of health security differ in terms of referent object, existential threat, securitizing actor, and audience (Harman, Wenham 2018: 364). In addition, what is meant by the two terms *health* and *security* varies not only between but also within health crises (Wenham 2019: 1095).

Early works on health security mostly focused on the intersection of health, national security, and foreign policy, as exemplified by the works of Fidler (2004b, 2004a; Fidler, Drager 2006). More recently, assuming the social construction of security, many scholars in the realm of global health broadly draw on the Copenhagen School’s securitization theory (Wæver 1995; Buzan et al. 1998) to explore the (linguistic) framing of health as a security issue and what is lost and gained with it (Elbe 2006; Youde 2008; Wenham 2019). The bottom line of these works is the assumption that health and security are neither necessarily nor immutably intertwined by nature but that the nexus is a result of complex social constructions of extraordinary threats and referent objects. (Critical) security studies scholarship in the realm of global health is, hence, not concerned with assessing the actual threat posed by, for instance, pathogens or bioweapons, but rather with the *presentation* and *social construction* of certain issues as threats and with the consequences arising from that construction.

Assessing that the global health security narrative has become dominant within health policy, Wenham (2019) diagnoses an “oversecuritization” of global health. While many works draw on securitization theory rather directly (Elbe 2005, 2006; Youde 2008; Enemark 2009)

when discussing specific disease outbreaks, it is, importantly, not only the rise of specific infectious diseases on the national and international security agenda that is explained by securitization processes. Many scholars make the case that the increasing importance of health in general in national and international politics is a result of the securitization of infectious diseases (McInnes, Lee 2006; Davies 2008; Aldis 2008).

Other works move beyond securitization theory, arguing that the growing health-security nexus not only impacts on how health is understood and practiced but also has significant implications on the very definition of security (Elbe 2010; Elbe, Voelkner 2015). By finding a medicalization of insecurity, Elbe and Voelkner (2015) show that security is more and more seen as a medical issue and hence no longer exclusively linked to military capacities as “insecurity in global politics comes to be understood as partly arising from medical problems presenting within the bodies of citizens” (Elbe, Voelkner 2015: 73). This medicalization of insecurity also impacts on the practitioners of security which is visible, for instance, in the growing number of health groups in security think tanks and institutions like the global health security initiative (Elbe, Voelkner 2015: 75). As a consequence, the health-security nexus and the connected medicalization of security lead to a situation where human bodies become “new “battlefields” of security policy” which “demands of citizens that in order to be secure, one must first become a patient” (Elbe, Voelkner 2015: 79). Enemark (2017) in his work on Ebola also moves beyond the traditional securitization theory framework of referent objects and extraordinary threats suggesting a shift from securitization to securing circulation. The shift which he identifies to be at work in the UNSC’s resolution 2177 is characterized by the aim of securing the circulation of medical professionals to secure the health of populations. In doing so, he draws on Elbe’s work that observes HIV/AIDS to be problematized “as a circulatory threat” (Elbe 2009: 80).

So far, the connection of health and security has largely been addressed with a focus on human actors (Davies 2008; Elbe 2010), with many works drawing on securitization theory exploring the “dominant *narrative*” (Wenham 2019: 1093, emphasis added) of health security. By contrast, more recent works – and this thesis seeks to be one of them – echo and build on the current turn in IR and security studies that puts the non-human in the center referencing concepts like new materialism, assemblage thinking, post humanism, and ANT.

Elbe and Buckland-Merrett (2019), for instance, understand security as ontologically entangled and suggest a conceptualization of health security as an “intensely relational phenomenon that does not exist prior to, nor independently of, its intra-action with other agencies” (Elbe, Buckland-Merrett 2019: 124). They build their argument about the entanglement of science and security on Barad’s (2007) onto-epistemological framework of agential realism and its inherent interconnectedness of matter and meaning. Drawing on the material turn in IR and on ANT specifically, Bengtsson et al. (2019) also move beyond speech acts and human agency by exploring the role of epidemic intelligence in EU health governance by understanding

securitization not as something generated by single and powerful actors linguistically evoking emergencies in order to justify extraordinary measures, but rather as the continuous assembling of heterogeneous elements into open-ended and ever-expanding networks of human and non-human entities. (Bengtsson et al. 2019: 117)

Similar claims are also made outside of IR. In geography, Brown et al. (2012: 1183) suggest that health security is “not given but enabled, imagined, and performed via particular knowledges, rationalities, technologies, affects, and practices”.

Regarding the history of the growing connection of health and security, especially since the early 2000s, as well as the academic literature continually evolving around this development, I concur with Rushton’s (2019: 2) assessment that “the securitization ship has already sailed”. However, that does not mean that there is nothing left to interrogate. On the contrary, I find that acknowledging that health security is now well established on the policy agendas of most governments makes it even more important to understand how health security is actually made. The works of Elbe and Buckland-Merrett (2019) and Bengtsson et al. (2019) alongside the recent debates in IR about non-human agency and entanglement provide promising links to theoretically introduce the study of visibility into the health-security nexus. However, the challenges of this thesis are not only how to theoretically fit images into this but also how to make sense of the health-security nexus in normative terms. To meet this challenge, a first step is to get an overview about the ethical debates about the health-security nexus. This is the task of the next section.

2.1.3 Ethical implications of the health-security nexus

Thomas (1989: 273) underscored her call for IR’s engagement with health “not simply to facilitate containment of disease transmission across international borders but also because

central notions of justice, equity, efficiency and order are involved”. This argument resonated in so far as health security scholarship increasingly critically discusses the implications and consequences of the health-security nexus. While these works assess the health-security nexus from different angles, many have in common the fundamental question raised by the Copenhagen School of “whether it is a good idea to make this issue a security issue – to transfer it to the agenda of panic politics – or whether it is better handled within normal politics” (Buzan et al. 1998: 34). In a similar manner, it is widely acknowledged in the literature that the securitization of health can mobilize attention and funding (Buzan et al. 1998: 29; Elbe 2006). Though there is consensus on the arguably substantial possible benefits of the health-security nexus, the answers to what is at risk when linking health and security are manifold. In the following, I unpack and organize these answers and situate the Ebola epidemic and also this thesis’ normative motive within this debate.

A milestone in regards to the meaning and usage of the term *global health security* is the work of Rushton (2011) who finds that, while there are different uses and concepts of the health security tag, there is in fact a substantial consensus in the dominant policy discourse both on whose security is threatened and on what the major threats in this regard are. Questions as to whom is threatened and by what and what measures are necessary to provide security tend to be answered with a strong western bias. Inherent to this bias is a prioritization of the protection from and prevention of emerging infectious diseases that are regarded to have the potential of a global spread (Aldis 2008; Lakoff 2010; Rushton 2011; Calain, Abu Sa'Da 2015; Harman, Wenham 2018).

Labonté and Gagnon (2010) and also Abraham (2011) argue accordingly that the dominant health security discourse focuses on health issues that concern the West. Dry (2008: 2) adds to these statements that the current health security discourse

privileges acute outbreak events that occur on a daily basis or weekly basis as opposed to chronic factors, such as changes in land use and host and vector population, which occur over years or decades, and which account for broader trends.

Hence, global health security seems to be about “the protection of the West from threats emanating from the developing world” (Rushton 2011: 780). The fact that the answer to the question *Security for Whom?* largely turns out to be *the West* is creating a divide between the Global North and the Global South. The Ebola epidemic appears to be a bitter case in point in

this regard. Lakoff (2017), for instance, diagnoses a shift from considering the outbreak a humanitarian issue to a concern for global health security once the outbreak spread beyond West Africa. Harman and Wenham (2018: 370) find that

Ebola fell between the cracks of a crisis labelled and strategized as a health emergency that required the type of action seen in standard humanitarian response mechanisms.

This dynamic is connected to the distribution of costs. Rushton (2011: 793) points out that especially the Global South is bearing many of the costs of global health security. Youde (2008), furthermore, finds that the securitization of avian flu made developing countries more vulnerable by forcing them to spend an inappropriate amount of resources to that issue while diverting attention from other health concerns leading to deepening the gap between Global South and Global North.

In addition, Elbe (2011: 221) highlights the concern of developing countries that, in the case of a global health issue, more powerful states could override their sovereignty in the name of security. Drawing on the Copenhagen School's work, Elbe provides three examples of how a threat-defense logic, evoked by securitization, may prove counterproductive in the case of health issues. Firstly, the securitization of global health moves any possible response to it out of the "more cosmopolitan and altruistic framework of health and development" (Elbe 2006: 129). Instead, it is pushed in a state-centric context in which states strive for maximizing their power and security. Using the example of HIV/AIDS, Peterson (2002) shows that linking a disease to national security transforms the logic of international action into one based on narrow self-interests. Overdrawing the link between disease and security may have the negative effect that states will only react to diseases if their core national security interests are at stake (Peterson 2002: 46). Thus, saving people from preventable diseases becomes not an altruistic duty but a decision that is made based upon national risk assessment. One implication of the securitization of global health in this argumentation is that health itself is rendered less important than security.

Strongly connected to this argument is Elbe's second point: a threat-defense discourse allows states to prioritize measures to protect their armed forces as they play a crucial role in traditional security terms. This means that funding is concentrated on the protection of soldiers rather than civilian populations (Elbe 2006, 2011). Rushton (2011: 782-783) adds another practical concern to the debate. He argues that due to the dominant health security

rhetoric most of the responses address surveillance and emergency measures and are overwhelmingly defensive. This leads to a situation where containment and prevention measures are decoupled at the expense of prevention. Taking up this aspect, McInnes and Lee (2006: 12) warn that securitization of global health issues entails the risk of creating a “fortress mentality”. In this regard, one can notice that the securitization of Ebola was connected to the also highly securitized field of migration. In October 2014 Marine General John Kelly, chief of the US Southern Command, argued that Ebola’s real danger is “mass migration into the United States” (Thompson 2014) posed by people fleeing from Ebola in Mexico and Central America and urged for tighter border controls. Ignoring the fact that there was not one single case of Ebola in Latin or South America, Kelly, in order to proof his point, referred to an US embassy employee in Costa Rica who informed him about migrants already coming from “Liberia” (Thompson 2014). In the end it turned out that most likely the embassy employee did not refer to the West African country Liberia but instead to the city Liberia in Costa Rica. Even though this story does not spare a sense of comedy, it demonstrates the severe consequences of securitization.

On a more general level, Brown and Stoeva (2015) point out that, even though more and more works engage critically with the health-security nexus, they restore a state-centric position because they base their claims on security *from* external threats. The result according to Brown and Stoeva (2015: 304), who advocate for a more cosmopolitan perspective, is the promotion of an “ethos of security over an ethos of care”. The consequences then are short term measures and technical quick-fix approaches and the ignorance of structural factors and lack of long-term strategies (Nunes 2016; Roemer-Mahler, Rushton 2016). This argument is, for instance, made in relation to the Ebola epidemic. Exploring neglect in global health in general and in the case of the Ebola epidemic in particular, Nunes (2016: 543) argues that

the disease was framed as an exotic and racialised phenomenon, in addition to being enveloped in a media and political spectacle that resulted overwhelmingly in a short-term, ‘crisis management’ modality of response.

Elbe’s last point in the context to threat-defense logic discusses *othering* as a consequence of securitized health. Inherent to the concept of security is a thinking of *us versus them* (Wæver 1995: 64). Concerning the link between security and identity Campbell (1992: 55) famously argued that

[i]ndeed, in a world in which state identity is secured through discourses of danger, some low tactics are employed to serve these high ideals. [...] But securing an ordered self and an ordered world – particularly when the field upon which this process operates is as extensive as a state – involves defining elements that stand in the way of order as forms of “otherness”.

Practices of security, in Campbell’s point of view, are crucial for the construction of the national self by indicating the difference between itself and *the other*. Thus, the state’s identity depends on a sense of insecurity and threat, as “the state only knows who it is and what it is through the juxtaposition against the radical threatening Other” (Hansen 1997: 375). Speaking specifically about the US, Campbell (1992: 196) argues that the post-Cold War era is characterized by a need for a new discourse of danger, for which diseases such as HIV/AIDS are possible candidates. Abraham (2011: 805) observes that viruses are increasingly perceived as the “new other” against which identities are constructed. Fitting to this observation Schell (1997: 94-95) finds that

lethal new viruses have become a hot topic for science best-sellers, medical research, action movies, and science fiction. On the big screen, virus thrillers like *Outbreak* and *Twelve Monkeys* have attracted major stars and large audiences.

A commonality of the infectious diseases in the pop culture, analyzed by Schell (1997), is the fact that viruses all came from outside the US: preferably from Africa or from unnamed tropical locations. Abraham (2011: 805) for this reason uses the expression viruses “coming from the world’s ‘wild zones’”. In addition, according to Elbe (2006: 139), by securitizing diseases one securitizes a danger that lives in a human body. Bound to this observation is the concern that due to securitization persons living with diseases might be seen as a threat themselves.

The ethical implications of the health-security nexus that I have summarized in this section build the ethical consciousness of this thesis and are further explored in relation to the role of images in the health-security nexus. Having mapped and discussed the history of the health-security nexus, its different conceptualizations in the literature and the debates about the ethical implications of linking health and security, the question that follows then is how to theoretically locate visibility into the nexus. This leads me to the next section that explores the interconnection of visibility and security.

2.2 Visuality and security: sketching the state of the art

Rather similar to the developments in the literature around the health-security nexus, edited volumes (Bleiker 2018b; Schlag, Heck 2020b), special issues like the *Millennium: Journal of International Studies* issue of 2001 on images, narratives, and sounds in world politics, chapters in method handbooks (Andersen et al. 2015b), and standing sections at key conferences suggest the move of the visual from niche to center, not only in IR, but the social sciences at large. This “visual” (Callahan 2015) or “aesthetic turn” (Bleiker 2001) can be also traced and witnessed in (critical) security studies. Early examples are Williams’ (2003) reflections about the compatibility of securitization theory and images, Hansen’s (2011) landmark theorization of images for security studies, and the edited volume of Vuori and Andersen (2018b) introducing visual security studies as “emerging as a subfield of (critical) Security Studies” (Vuori, Andersen 2018a: 1). As such, visual security studies is influenced by the approaches of (critical) security studies that go beyond security speech acts by, for instance, paying attention to networked security actors (Schouten 2014) or everyday practices and “little security nothings” (Huysmans 2011). Despite this variety, and this is another similarity to the health security literature, the Copenhagen School remains an important reference point.

It is impossible to fully outline the complexity of the theoretical arguments made in the visual security studies literature and the manifold empirical findings they have generated. Instead, I focus on two axes, or theoretical puzzles, along which one can structure this literature. The first one concerns the different approaches towards the visual. They range from a focus on single, oftentimes iconic images to a much broader approach that takes visuality as a technique of knowledge (Andersen et al. 2015b: 88). The second way of structuring focusses on images as meaningful objects and asks about their power. The two poles here are the image being always depended on their producer or the written word or, on the other side, the image with the potential to securitize on its own. In the following I discuss these two puzzles in depth to locate my own approach alongside these axes.

2.2.1 Finding focus: visuality, image, and artefact

In their chapter on visuality for the volume “Critical Security Methods” (Aradau et al. 2015b) Andersen et al. (2015b: 88) map the “epistemological spectrum of visual analysis” between “visual security” referring to magazine covers, cartoons, etc. and “visualities of

security” as techniques of knowledge that concern, inter alia, the role of color or questions of (in)visibility. Detecting a tendency in the academic discourse to focus on what they call “visual artefacts” (Andersen et al. 2015b: 86) they argue for a broader focus on visibility which would achieve more analytical sensibility in the critical study of security.

A work that fits into the “visualities of security” corner is, for instance, the volume edited by Haggerty and Ericson (2006) which looks at the role of surveillance and visibility in the war on terror after 9/11 from different angles. The study on chromatology by Andersen et al. (2015a) fits equally well to this paradigm as it does not focus on visual artefacts but on the role of colors. Conceptualizing colors as a means to classify prisoners in concentration and enemy-combatants camps, they want to

move from the visual study of artefacts that communicate or are implicated in security discourses towards the study of security visualities that are present in much of security practice. (Andersen et al. 2015a: 453)

Thus, chromatology, as the study of the relation of color and people, seeks to go beyond the study of certain visual forms like drawings, photographs or videos by more broadly accounting for visual modalities (Andersen et al. 2015a: 441). In a similar vein, Amoore (2007), in applying Mitchell’s (2002) notion of “visual culture”, extends the focus from the study of individual images to “everyday practices of showing and seeing” (Mitchell 2002: 170) using the so called *War on Terror* in the aftermath of 9/11 as a case study. After the events of 9/11, she finds, a “vigilant mode of visibility” (Amoore 2007: 216) is expanding which implies the algorithmic screening of the everyday life of people. The key concern with this practice is that this form of “data-led watchful politics [...] seeks the visualization of a threat *in advance* of law, *prior to* justice” (Amoore 2007: 230). Like Andersen et al.’s (2015a) approach, Amoore focusses on visual or visualizing practices and not on visual artefacts as such.

A different approach in the existing literature is to center the question of the relationship between visibility and security in studies dealing with specific images. Two landmark examples are the works by Hansen (2011, 2015) and Heck and Schlag (2012). With her article on the Muhammad Cartoon Crisis, Hansen (2011) provided the possibly most influential answer to Williams’ (2003) plea of taking the image seriously in security studies. Aiming to theorize the image for IR, Hansen (2011) holds that images differ from written or spoken words for three reasons: ambiguity, circulability, and immediacy. *Ambiguity* is one characteristic of images as

it is implausible that all audiences *read* images in the same way. There always remains an “interpretive gap” (Hansen 2011: 58) that may, for instance, hinder or support securitization. While one may argue that this gap also exists in relation to texts, Hansen (2011: 58) holds that “visuals are more ambiguous than words”. This is especially manifest in the context of securitization: Security discourse implies a precise referent object which is in need of protection. Images, however, often only depict individuals, leaving the viewer with the open question which referent object and collective identity is signified by the pictured individuals (Hansen 2011: 58). Furthermore, securitization comes with a call for action. Linguistic securitization often specifies what extraordinary measures need to be taken, whereas images do not have the potential to define these measures to a similar extent (Hansen 2011: 58).

The second defining aspect, images’ *circulability*, is characterized by two elements. Firstly, due to modern technology images can be shared across national and linguistic borders (Hansen 2011: 57). Due to the speed of today’s visual communication images of a certain event circulate immediately, often before text exists, and create a notion of *live* for the viewer. This implies a battle on who is the first to provide images to a certain event and thus sets the tone (Der Derian 1992: 134). Secondly, the term *circulability* does not only refer to the fast spread but also to the fact that everyone in possession of a smart phone can take a picture which then has the potential to circulate on a global scale. It is this speed and access of the last years that constitutes and shapes this times’ “visual age” (Bleiker 2018a). The third aspect on Hansen’s list is the *immediacy* of images meaning the instant, emotive response images evoke in the viewer. This response differs from the responses triggered by texts, as images provoke emotions without being dependent on language as they do have an immediate impact on first sight (Mirzoeff 2009; Vuori 2010; Hansen 2011). However, Hansen (2011: 60) also emphasizes that visual securitization processes may differ from genre to genre (photography, comic, painting, etc.).

Heck and Schlag (2012) analyze the iconic photograph on the *TIME* magazine’s cover that depicts a young Afghan woman with severe facial mutilations resulting from a physical penalization sentenced by a Taliban jury. Accompanied by the words “What happens if we leave Afghanistan” the portrait was understood as a symbol for the difficult situation of women in Afghanistan and as a legitimization for the ongoing presence of US-American soldiers in the country. In order to analyze how this image may *speak* security, Heck and Schlag

(2012) take inspiration from the art historian Erwin Panofsky and develop an iconological approach that enables them to look both at the image and its social and historical embeddedness. This implies to understand the iconic act as performative and hence to ascribe agency to the image.

Referring to the iconic images as well, Hansen (2015) discusses the iconicity of images in IR using the image of the hooded prisoner that became a symbol for the torture scandal in Abu Ghraib as a case study. She defines international icons as “freestanding images [that are] widely circulated, emotionally responded to, and seen as representing significant historical events” (Hansen 2015: 287). Furthermore, these icons do not merely depict, they confine, constitute, and fixate the meaning of a particular event. Unlike Heck and Schlag (2012), whose text addresses iconic images in general, Hansen puts *the international* of icons at the center of her work developing an IR-specific approach towards them. Other, more empirical examples are, inter alia, the work by Van Veen (2010) on photographs of the detainee camp of Guantanamo, Möller’s (2007) work on the looks at photographic interventions in the context of 9/11 examining a sample of photographs from exhibitions and photo reportages, of Friis (2015) who analyses the visibility of violence in beheading videos in the war against ISIS as well as the works on posters in and about the British suffrage movement and images role in making visible gender-specific security problems and on the intersection of gender, race, and security with a focus on Ms. Marvel comics by Cooper-Cunningham (2019, 2020).

I find the spectrum mapped by Andersen et al. (2015b) helpful not only in order to make sense of the literature out there in the hardly to contain and constantly growing field of visual security studies, but also to reflect on my own location in that spectrum. To begin with, I disagree with the claim that existing research is “haunted by the tendency to assume that *the visual* [is conceptualized] as a field of objects” (Andersen et al. 2015b: 86). On the contrary, I propose that the object character of images, namely their materiality, is in fact understudied – images so far have not been discussed as real research *material* but as a subgroup of signs which is apparent in semiotic studies on images, like, for instance, the work of Vuori (2010) on the Doomsday Clock that is built on the semiotics of Peirce (1986). For this reason, the focus of this thesis on images, and especially on photographs, promises new insights. Furthermore, it is important to reckon that Andersen et al. (2015b) use the expression *spectrum*, rather than, for instance, *boxes*. This, I find, implies some degree of flexibility and allows for a

dynamic approach. Rather than remaining in one closed box, I want to move along the path between visual security and visualities of security. The idea of images as (parts) of a network in which they act and are enacted and the already introduced concept of the health security assemblage (Bengtsson et al. 2019) implies that I do not take images and their genres as “placeholders for different potentialities” (Andersen et al. 2015b: 91). Instead, by tracing how images act and interact with other human and non-human actors, my analysis moves back and forth between the image and visibility as a broader concept. In the following, I further specify and locate this argument and the thesis’ concept of images with reference to the second theoretical axe: the question of the images’ power in relation to security.

2.2.2 Visual security beyond Copenhagen

The already mentioned text by Hansen (2011) defines visual securitization as a situation in which “images constitute something or someone as threatened and in need of immediate defense or when securitizing actors argue that images ‘speak security’” (Hansen 2011: 51). The question that appears to be at stake here, hence, is whether images *securitize* or *are securitized*. In the latter case, the image depends on an actor ascribing securitizing power to it. In the former case, images securitize on their own by constituting someone or something as threatened. This points at a larger discussion surrounding the power of images and the question of what images (can) mean and do. To shed more light on this debate, this section seeks to structure the existing literature on visual securitization alongside this question.

Works that closely refer on the Copenhagen School approach this question with a focus on the speech act. They range from claims that “images do not speak by themselves” (Hansen 2018: 272) to making the case that there might be in fact have performative power (Heck, Schlag 2012). This dynamic can be witnessed especially in early works on visual security (Möller 2007; Vuori 2010; Hansen 2011; Heck, Schlag 2012) that all discuss images with reference to the Copenhagen School’s influential conceptualization of the security speech act.

Focusing on the textual and discursive context of images, the image itself remains rather passive. Hansen’s (2011) framework, which is designed to “examine situations where visuals are constituted as ‘speaking security’” (Hansen 2011: 69), is arguably the most prominent example in this regard. She holds that images on their own are not very powerful as “the visual does not enter the political without being the subject of debate or engaging with the discourses already in place” (Hansen 2011: 53). Thus, they depend on contextual factors to

securitize. For this reason, Hansen deems it insufficient to analyze the image alone as attention also needs to be paid to the images' constitution and its discursive embeddedness (Hansen 2011: 51). Building on Kristeva's (1980) theory of intertextuality, Hansen (2011: 54) finds that "all texts are at the same time referring to texts that came before" – a claim that she finds to be true for images as well. The image in this framework remains rather powerless and is acted upon rather than acting on its own (Andersen et al. 2015b: 96). This claim is re-emphasized in her text on the Abu Ghraib torture photographs where Hansen holds that an icon cannot make a foreign policy utterance in itself but depends on text provided by media, political elites and other. Images can only claim that something needs to be done but are unable to specify *what* exactly this is (Hansen 2015: 274). Hence, meaning does not reside within the image itself but is constituted through discourse. Vuori (2010: 260), in his work on the Doomsday Clock as a visualization of securitization moves, argues as well that images alone can hardly convey an act of securitization. Instead, building on Barthes (1977), he finds that images need some form of textual "anchorage" (Vuori 2010: 260). Möller (2007: 185) goes even one step further by suggesting to "bracket the image as such and to focus on the meaning assigned to images". Images in Möller's reading, thus, cannot, due to their ambiguity, reach a securitizing status independently of written or spoken word.

These claims are somewhat contrasted by the work of Heck and Schlag (2012) on the *TIME* magazine cover. Following art historian Horst Bredekamp, Heck and Schlag (2012: 898) find that images possess "auto-activity". While not neglecting the importance of contextual factors, Heck and Schlag caution against underestimating the image itself and transfer the performative power of the security speech act to the image:

Taking the iconic seriously, one could say that not only are securitization actors able to claim that an image speaks security, as Hansen argues, but that there might be instances where the image itself may 'function as a communicative act'. (Heck, Schlag 2012: 906 with reference to Williams 2003: 527).

Mitchell (2002: 175) prominently holds that the image constitutes "an apparently autonomous source of its own purposes and meanings". This claim is in line with the argumentation of Butler (2016: 71) who argues that "the image [...] structures how we register reality" and for this reason "[t]he photograph is not merely a visual image awaiting interpretation; it is itself actively interpreting". In order to capture the image's performativity, Heck and Schlag (2012: 897) introduce a relational ontology of images that conceptualizes

images as the “effect of the discursive and material relation between pictures, their producers and spectators”. The ability of the image to securitize arises in its relations with both its producers and spectators. The theoretical basis of this notion is formed by Bredekamp’s (2013) concept of the “auto-activity” which stems from the iconic act of showing and seeing. Images are *showing* something or someone to the viewer that is present and absent at the same time. *Seeing* the image, then, may confirm, transform or in some other way affect the beliefs of spectators and producers.

Where do these debates leave us? And what do they mean for the aims of this thesis? First of all, I appreciate the argument that images are embedded in discursive structures. As Rancière (2011: 99) writes, an “image never stands alone. It belongs to a system of visibility”. But I would emphasize that – and I further develop this argument in the theory chapter (*Chapter 3*) – it is not only the discursive structure that influences how the image is perceived but that the image itself, as a material semiotic artefact, also influences the discursive structure. This claim is powerfully summarized by Andersen et al. (2015b: 97) finding that

[v]isual power, therefore, is at once socially constructed by the practices of production and interpretation in a society, and at the same time participates in the re-shaping of these practices.

The image, if we take this claim seriously, is hence far from passive and powerless. This power, however, is not pre-given. Given the vast variety of pictorial genres and the different circumstances in which images appear and circulate, it seems almost obvious that general claims and the a priori assignment of agency are not in order. Rather,

[t]he links between images and security work gradually and across time and space. They transgress numerous borders – spatial, linguistic, psychological, and other. They work inaudibly but powerfully: by slowly entrenching – or challenging – how we view and think of security and thus how security is articulated and implemented. (Bleiker 2018c: 192)

This complexity further increases if we consider the entanglement of images and three-dimensional artefacts that is more and more emphasized in the literature (Bleiker 2018c; Callahan 2020). Furthermore, we can witness the critical security studies’ turn towards non-human agency, that I have already highlighted in respect to the health-security nexus, arriving at visual security studies as well. Increasing attention is paid to the agency of cameras and other picture producing devices. Andersen (2016), for instance, explores the agency of digital cameras in political activism. Other works consider airport scanners (Bellanova, Fuster 2013),

or drones (Walters 2014). What these works share, is the focus on image producing devices through an STS-inspired lens of non-human agency to explore how they contribute to the making of security. The image, however, still has to be pieced into these debates. The thesis wants to provide some first ideas of how this could be achieved.

Overall, in this literature review I have shown that health security and visual security are discussed in two strands of literature that are growing both in terms of published works and the recognition they receive but hardly engage with each other. The fact that they are similarly influenced by the recent turns towards non-human agency in critical security studies constitutes, I find, the prospect of a theoretical bridge. This, to close this chapter, brings me back to the definition of the health security assemblage as “a web of human and non-human relations producing priorities about threats [...] and how they are handled” (Bengtsson et al. 2019: 116). This definition holds the opportunity to locate, trace, and assess images meaning and doing in the health-security nexus. In the following chapter I develop this argument into the thesis’ theoretical framework.

3 Theorizing images (for the health-security nexus)

In his pioneering text, Mitchell (1994: 9) states that “[a]lthough we have thousands of words about pictures, we do not have a satisfactory theory of them”. While in the meantime the general importance of images has been widely accepted and acknowledged as, for instance, apparent in the “visual” (Callahan 2015) and “aesthetic turn” (Bleiker 2001), the question what it exactly is that images *are* and *do* remains difficult to tackle. To meet this challenge is the aim of this chapter.

Importantly, there is not one universal way to conceptualize the image. How images are understood and dealt with in theoretical terms rather depends on the goal and focus of the analysis (Rose 2016: 50ff). In the case of this thesis, the health-security assemblage of Bengtsson et al. (2019), hence, already sets the tone for this chapter with the overall challenge to discuss, identify, and define images’ agency.

In this chapter, I argue that ANT constitutes a very suitable approach for this thesis by enabling an understanding how bodies, materialities, and ideas of health security are connected, act, and enacted for three reasons. Firstly, ANT accounts for non-human actors. Adopting an approach inspired by ANT, hence, puts emphasis on the role of the non-human in political events. By understanding images as non-human actors, I do not want to neglect the intentional usage of images, for instance by human securitizing actors. It is obvious that images are a crucial tool for conveying a political message and are frequently used for this purpose. However, I suggest a change in focus away from the human (photographer, editor, journalist, etc.) towards images. This point is, for instance, prominently supported by Sontag (2003: 35) claiming that

[t]he photographer's intentions do not determine the meaning of the photograph, which will have its own career, blown by the whims and loyalties of the diverse communities that have use for it.

A more-than-human approach enables me to start my analysis from the “career” (Sontag 2003: 35) of the image and to explore its meanings and doings by ascribing agency to them. This conceptualization, furthermore, appreciates the interplay of images and three-dimensional visual artefacts and implies to explore images in ways that go beyond a narrow focus on their content alone thus accounting for their complexity as well as for their agency.

Secondly, the emphasis ANT approaches put on relationalities and entanglements allows me to trace the connections between human and non-human actors and to understand the relevance of these socio-material networks for the health-security nexus. This again acknowledges that images constitute a highly complex research material: They appear and disappear at high speed without necessarily having a permanent physical location and form temporary relations with other images, viewers, editors, photographers, texts, etc. The meaning and doing of an image, hence, is never fixed but results from a complex interplay of human and non-human actors. This means to conceptualize images as more than visual content, and to understand them as part of complex networks in which meaning not only depends on representation but on the relations built between human and non-human entities that together build a dynamic network.

Thirdly, more empirically, ANT's notion of a network consisting of human and non-human entities and the symmetric emphasis that is put on the relations between these entities, is particularly well suited for topics situated in the field of health. Health – we can see this in the literatures outside of IR, like public health (Bilodeau, Potvin 2018) or health education (MacLeod et al. 2019) – consists and is enacted through a diverse and dynamic set of human (patients, doctors, nurses, etc.) and non-human actors (drugs, hospitals, laboratories, devices, protective clothing, etc.). This is also true for health security in particular, as emphasized by the definition of the health security assemblage proposed by Bengtsson et al. (2019: 116) as “a web of human and non-human relations producing priorities about threats [...] and how they are handled”. Thus, an ANT perspective not only holds value for conceptualizing what images are and do in a general sense but is particularly promising if we consider the topic of health security and the role images play therein. In the following sections, I further unpack these points by exploring two questions that may appear basic and trivial at first sight: *What are images?* and *What are they doing?*

To answer these questions and to show that they are not that trivial after all, the chapter proceeds in three steps. Firstly, I briefly introduce the key assumptions shared by ANT approaches. Secondly, to answer the questions of what images are, I theorize them as non-human actors that act and are enacted in complex networks. Here, I draw on works summarized under the label ANT (Callon 1984; Law 1992; Latour 2005) and propose a material semiotic approach towards images. Thirdly, for the second question, I specify images' agency

with a particular focus on the health-security nexus by introducing three lenses – icon, emotions, and their ability to proof and make security – through which images’ agency can be explored and specified.

3.1 Introducing Actor-Network Theory as this thesis’ toolbox

Latour, who together with Callon and Law is regarded to be the key figure and thinker behind ANT, once, with what appears to be a great deal of frustration, wrote “there are four things that do not work with actor-network theory; the word actor, the word network, the word theory and the hyphen” (Latour 1999: 15). Callon, in the same year, in a text published in the edited volume tellingly titled “Actor-Network Theory and *After*” (Law, Hassard 1999, emphasis added) stated that “ANT is not a theory” (Callon 1999: 194; Mol 2010: 253). Law (2009: 142), a decade later, declared “it is better to talk of “material semiotics”” rather than “actor network theory”” to account for more openness and proposed thinking of “toolkit” or “sensibilities” instead of theory. Following this reasoning, I understand ANT, although the name suggests it, not as a ready-made theory to be applied to different case studies but rather indeed as a “conceptual and methodological toolbox” (Schouten 2014: 25).

I specifically want to make use of two tools ANT approaches have to offer: *the actor* and *the network*. Drawing on these two elements, I propose a material semiotic approach towards images. Before I turn to each aspect in more detail, I want to sketch the basic assumptions that, despite all differences and nuances, are shared by the works subsumed under the ANT label.

As the name already suggests, ANT assumes that the whole world consists out of networks in which agency is created and distributed. The importance of these networks is illustrated by Latour (2005: 46) who refers to Goffman’s (1959) concept of *theater*: No single actor can play alone but depends on other actors in order to bring a play to life. One core element of ANT is the inclusion of non-human actors into this network. With the famous claim “objects too have agency” Latour (2005: 64) picks up his early critique on the, in his view, artificial distinction between nature and society. In mainstream social science, the term *social*, according to Latour (2005: 43), is often used in a problematic sense that excludes physical, biological or economical elements. Latour positions himself against the dominant view in sociology according to which agency is a priori limited to intentional and meaningful humans (Latour 2005: 1). In other words,

ANT sees agency as a distributed achievement, emerging from associations between human and non-human entities (the actor-network). Tracing the processes by which these associations are built, maintained and severed is at the heart of ANT. (Müller, Schurr 2016: 218)

Sticking to the theater-example that would imply that a successful play not only needs interacting actors but also depends on non-human components like lighting, music, costumes, and requisites. I find this analogy useful to keep in mind when I take a closer look at the two key elements of ANT – the actor and the network – and apply these concepts to images in the following sections.

ANT as a set of concepts itself, importantly, does not exist in isolation but is influenced by past and current debates in the social sciences. I find it thus necessary to recap ANT's location in the ongoing theoretical debates to avoid confusion and the creation of straw men. Two aspects seem particularly important to me in this regard. Firstly, on a more stylistic note, I decided to use traditional ANT-vocabulary and to make use of the terms *actor*, *network*, and *agency* in this thesis. However, I acknowledge that especially Latour (for instance: 1999) has made the case for the usage of other terms like "assemblage" or "actant-rhizome". Furthermore, what non-human actors *do* and how this doing can be grasped in theoretical terms is vividly debated in the intersecting literatures emerging around ANT, assemblage thinking, and new materialism. It is hence not surprising that besides the term agency, theoretically rich terms like "vibrant matter" (Bennett 2010), "intra-action" (Barad 2007), or "posthuman performativity" (Barad 2003) are frequently used and applied. For the sake of clarity and also to connect to works that still work with the original ANT-terminology, I stick to the traditional term agency as coined by Latour (2005: 64) in his famous claim that "objects too have agency" and mobilize the term *network* and *actor* to make sense of this agency.

Secondly, in this thesis I do not want to artificially (re)produce a fundamental divide or opposition between ANT and poststructuralism. Instead, I understand and use ANT rather as a specific empirical rendering of poststructuralism (Law 2009: 145) that draws our attention to more-than-human relations. In a similar vein to Law (2009: 145), who points out parallels between ANT and Foucault's epistemes, Latour admits that Foucault is a major source of inspiration for his work (Pyyhtinen, Tamminen 2011: 136). Hence, ANT is aware of its poststructuralist heritage. ANT, however, goes further than scholars like Foucault and Derrida, who (in some of their works) recognize the mutual constitution of matter and language. By

claiming “objects too have agency” Latour (2005: 64) and colleagues put more emphasis on exploring the role of objects. Even though practice theory and poststructuralism and other approaches do not inherently exclude non-human actors, “they almost invariably conceive of currency, weapons, computers, and other objects as either external to the sociocultural forces they focus upon or mere media for relating actors to one another” (Nexon, Pouliot 2013: 343). ANT’s approach not to a priori assigning any hierarchy to human and non-human actors offers an insightful new perspective that takes *things* seriously. While, for instance, the Foucauldian *dispositif* surely works for detecting relations between discursive and non-discursive elements, Aradau (2010: 493) rightly notes that “[e]ven the literature drawing on Foucault’s notion of the *dispositif* has been less interested in the role that objects played in the definition of the security *dispositive*”. Further, Aradau (2010: 497) argues that while Foucault acknowledges the power of materiality what he lacks is asking and answering the question how materiality matters and how it relates to language. ANT, furthermore, has many overlaps with Deleuze and Guattari’s (1987) assemblage concept as both are invested into the socio-material relations between entities (Müller 2015: 30). For this reason, I do not take ANT as a competitor but rather as “an empirical sister-in-arms of the more philosophical assemblage thinking” (Müller 2015: 30). In sum, ANT could and should be understood as an approach that is deeply influenced by poststructuralism and assemblage thinking alike and, rather than existing in opposition to these approaches, offers a “conceptual and methodological toolbox” (Schouten 2014: 25) that is sensible to more-than-human relations.

3.2 What are images? Imaging Actor-Network Theory

In the next section, I want to make use of ANT’s toolbox and tend to two key concepts brought forward by ANT scholars: the actor and the network. I use the concept of *actor* to explore the agency of images. With reference to the *network*, I conceptualize their interdependencies and relations to human as well as non-human actors.

3.2.1 Images as actors

Discussing images’ agency by approaching them from an ANT point of view, I suggest in this section, is a promising way to, firstly, conceptualize images’ security performances and, secondly, to understand images not merely as end-products of cameras, scanners, or drones but to understand them as non-human actors in their own right. This speaks to the previous chapter (*Chapter 2*) where I have outlined that the key questions at the intersection of visibility

and security studies of *whether* and *how* images perform security manifests in a divide between scholars putting emphasis on a textual “anchorage” (Barthes 1977: 38) of an image (Hansen 2011) and approaches that hold images to be able to *speak security* in their own right (Heck, Schlag 2012). At the same time, conceptualizing images as actors adds to approaches inspired by STS-thinking, ANT, and new materialism that are finding entrance both in the fields of health security and visual security studies. In the case of the latter, we can witness a growing interest in role of cameras (Andersen 2016), body scanners (Leese 2016), and drones (Leander 2013; Walters 2014) – but, while these approaches take inspiration from ANT, they focus on the non-human agency of the device that takes and produces images and less on the agency of the image itself.

At first sight, the idea that an image *acts* might seem confusing. After all, no image can actively decide to depict a situation, an image has no *motivation* to do something. Instead of the image, the initial thought might be, it is the photographer who acts by taking a picture or the artist by creating a painting. However, as already indicated above, ANT’s concept of agency is rather distinct as it is not limited to conscious and intentional human beings. Motivation or intentionality is not a prerequisite for action, it is the modification of a state of the art that counts. To return to the theater example, a costume worn by a human actor possesses agency as it modifies the state of affairs by contributing to the role impersonated by the actor. The same counts for spotlights and props. Images do not merely depict, they themselves constitute reality and shape politics. Our understanding of certain events, like for instance 9/11 or of epidemic outbreaks like Ebola, is closely intertwined with images (Bleiker 2001, 2015). Hence, taking an ANT perspective, images can certainly be conceptualized as actors. Discussing non-human agency and its relation to materiality, the next two sections further unpack ANT’s understanding of agency and its implications for my work with images and how this differs from established takes on visual securitization.

Agency beyond the human

I agree with the claim that visibility needs to be thought of as more than discourse and communication (Andersen et al. 2015b: 96) and propose an ANT inspired framework as such an approach. For the purposes of the thesis, I therefore transform Latour’s (2005: 64) famous claim “objects too have agency” into *images too have agency*.

This means not to start the analysis with the intentions of the photographer but to be open for the possibility that the image acts by changing the prior state of things in ways that are unintended by the person who took and/or distributed it. This corresponds with ANT's concept of agency that is not limited to what humans do intentionally and thus accounts for non-human actors. Callon (1984), for example, analyses the scallops of St. Brieuc Bay and ascribes agency to them as they resist to behave in the way intended by the fishermen. Latour, to add an example of non-living objects, describes a door closer as a "highly moral, highly social actor" (Johnson 1988: 298). By including non-human objects into their research, ANT scholars do not want to replace human actors, instead they seek to abandon the dualism between human and non-human entities. This means that ANT scholars do not a priori assume any hierarchy between human and non-human actors but depart from a flat ontology (Latour 1994, 2005).

This again highlights the ANT's distinct understanding of agency: reflexivity or intentionality is not a prerequisite for action. By boiling water, a kettle acts even though it does not decide to boil the water. The mere fact that the state of affairs is changed due to the kettle (hot water!) constitutes an action (Latour 2005: 71). Of course, the kettle is not the only actor involved in the process of boiling water. For instance, there is the water in the kettle and a human who put the water there before pressing the ON-switch.

Using the term actor for both humans and non-humans creates some unease and critique as it may (albeit unintentionally) suggest that non-humans act in ways that are similar to those of human actors. In "Reassembling the Social" Latour (2005: 76) clarifies his ambition stating that

ANT is not, I repeat is not, the establishment of some absurd 'symmetry between humans and non-humans'. To be symmetric, for us, simply means not to impose a priori some spurious asymmetry among human intentional action and a material world of causal relations.

To appreciate the difference that ANT's conception of agency makes for our understanding of the relationship between images and security, it is necessary to take a closer look at the theoretical foundations of existing approaches to this relationship.

In visual IR, works that build on securitization theory (Wæver 1995: 63; Buzan et al. 1998: 21), images are oftentimes conceptualized as another form of text which implies a semiotic focus on the image's content alone. In securitization theory's key reference, Buzan et al. (1998) build on Wæver's (1995) early work and conceptualize securitization as a "speech act"

(Austin 1962), meaning a linguistic representation in which a securitizing actor positions a certain issue as an existential threat. If this securitizing speech act is accepted by the audience and thus successful, it removes its topic out of the realm of normal politics and legitimates “extraordinary measures” (Buzan et al. 1998: 29). I suggest that broadening this framework of the speech act in order to include the image, as suggested by McDonald (2008) and others (Williams 2003), only enables us to conceptualize images as a different form of text that is intentionally used by human actors. In this reading, images remain passive tools that entirely depend on human actors.

The dependence on intentional human actors goes back to the original work of Austin (1962), where, as for instance Diez (1999: 600) notes, action is not ascribed to language itself. This already becomes clear in the title of Austin’s (1962, emphasis added) landmark work “How to do things *with* words” which implies that something is done *with* language not *by* language. Conceptualizing the role of images as *pictorial acts* in accordance with the traditional *speech acts*, hence, does not answer the question about what images do. Instead, building on Austin’s work and asking *how to do things with pictures?* (Kjørup 1978) already implies that someone does something with them.

Art historian Bredekamp addresses this argument in his book “Der Bildakt” (2015). He argues that replacing the words of Austin’s speech act theory with pictures, as done, for instance, by Kjørup (1978), is misleading as Austin’s theory is not so much about the individual word but speech as a continuum (Bredekamp 2015: 58). For this reason, Bredekamp (2015: 59) does not want to replace words with images but puts images in the position of the speaker. This move ascribes a fundamentally new dynamic to the image which is no longer the instrument but the narrator and hence has actor quality. The intention of this step is to emphasize the “latency of images to, in interrelation with the spectator, play an active role in their own right” (Bredekamp 2015: 59, own translation). Furthermore, Bredekamp highlights the interplay of showing and seeing and thus advocates for a relational ontology of the image that accounts for both, the showing image and the seeing spectator (Heck, Schlag 2012: 896; Bredekamp 2015: 52).

The claim that images possess auto-activity and the emphasis on the relation between showing and seeing is extremely helpful for my purposes, for it implies an ontological status of images that “is defined by the question what it means for an image not only to denote and

depict, but also in some sense to perform what it denotes and depicts” (Heck, Schlag 2012: 898). Bredekamp’s approach, however, exclusively accounts for the analysis of images that have reached iconic status. Heck and Schlag (2012), for instance, apply Bredekamp’s concept to the *TIME* magazine’s iconic cover photograph. However, today’s visual age is characterized by a steady flow of images that potentially decreases the impact of the single image, in a sense rendering Bredekamp’s approach insufficient. For this reason, while I want to keep the idea of images possessing auto-activity, I find that the speech act analogy is too narrow and one dimensional to fully account for the complex nature and interrelation of images. Taking an ANT perspective means to conceptualize images as actors in a network that do not merely depict, but themselves constitute reality and shape politics. For instance, images might support the impression that something is a threat to our security and define security in multiple ways (Hansen 2018: 272). More generally, images produce knowledge and shape how events are perceived and dealt with. Hence, taking an ANT perspective, images can be conceptualized as actors (Latour 2005: 71). Having established images as actors and as *more-than-content* what they really *are*, however, needs further clarification.

What is the matter with images?

Looking at the rich literature evolving around ANT, its roots in empirical case studies become evident (Law 2009: 141). Throughout these case studies that make use of ANT’s toolbox, the focus on the meaning making and the doings of material objects sticks out. Examples are works on door closers (Johnson 1988), bush pumps (Laet, Mol 2000), or transport infrastructure (Wang, Yau 2018). Such a focus of materiality also gains increasing attention in the field of (critical) security studies, the core argument being that

[s]ecurity cannot be understood solely as a set of speech-acts but also requires guns, tanks, drones, tear gas, badges, and fences. In each of these areas, there are non-human actants that fundamentally alter the condition of human possibility in ways that are unpredictable and irreducible to their constituent elements. (Salter 2015: viii)

In line with Salter’s argument, studies explore, for instance, the role of infrastructure (Aradau 2010), drone strikes (Walters 2014), and body scanners (Leese 2016). These existing studies share the argument that matter has the potential to both enable and constrain security practices and processes (Walters 2014: 101).

This begs the question if and how the image, especially in its now prevailing digital form, fits in this collection. Implied in this question is the assumption that the image, especially if it is a digital one, does not have materiality and is hence somewhat disqualified for being analyzed through an ANT framework. I suggest that this apprehension can be refuted by pointing out the different conceptions of materiality that are used by scholars drawing on ANT and by locating my material semiotic approach therein. Two points are of particular importance in this regard.

Firstly, understanding materiality in the context of material semiotics suggests to “talk more of mattering and materializing than of matter and materiality” (Law 2010: 187). Using verbs instead of nouns, Law puts emphasis on the enactment and doing of materials. This take abandons a metaphysical notion and ontological fixity in favor of the malleability of materiality, taking it as “produced, enacted, relational and processual” (Beetz 2016: 127). This approach differs significantly from approaches that conceptualize materiality with reference to metaphysical objects with a given and stable form.² Woodward (2020: 13) offers music as an example that challenges the general assumption of things as bounded, solid entities. Considering music as material would entail interrogating music’s relation with other things like speakers and music players as well as bodies. Following this argumentation, debates on possible differences between analogue and digital images and on whether the latter does possess materiality or not (as for instance done by Sassoon 2007, 2010) are irrelevant for the image’s status as material. What matters are the relations through which the image materializes and the connection it forms with other human and non-human actors. Material semiotics, in my conceptualization, takes images as not defined by their physical materiality but rather as non-human actors, as things in themselves (Breitbach 2011) that are produced, shared, circulated, referenced, and embedded. This notion can also be found in ANT-inspired works on algorithms (Andersen 2017), financial transactions and terrorism (de Goede 2018), or ethereal concepts like love (Anderson 2016) that all build on the notion of non-human agency without concerning themselves with the possible physical materiality of their research objects.

² For a discussion on the metaphysical materiality and its relevance in analogue photographs, see Edwards (2009a, 2009b) and Sassoon (2007, 2010).

This notion, secondly, helps us to understand the “relationship between matter and meaning making” (Aradau et al. 2015a: 58) in the case of images. Amicelle et al. (2015: 298) state that devices perform security as “they (re)configure social spaces, (re)draw boundaries and (re)distribute meanings”. This point, I claim throughout the thesis, can be applied to images as well. I suggest that adding the material to the already existing semiotic component offers the possibility to move away from a concept of images that takes them as passive objects without any power as it emphasizes that “[t]hings’ are not empty receptacles of discourses” (Aradau 2010: 494). That means that

rather than trying to make general determinations as to the political significance of ‘things’, it is important to recognize that the relations between discourses and materialities are not universal but undergoing constant rearrangement according to the elements gathered together and the circumstances under which this occurs. (Aradau et al. 2015a: 63)

Matter in this vein should not be thought of as the passive end-product of discourse but as an active element in material-discursive processes (Aradau 2010: 497). Including the materiality of images emphasizes the “material character of every discursive structure” (Laclau, Mouffe 2001: 108).

This is also in line with Heck and Schlag (2012: 898) holding that “[t]he picture is materially made by someone somehow and this materiality serves as the precondition for showing and seeing”. Understanding images as material semiotic artefacts, thus, constitutes a balanced approach in which material and discursive elements are not privileged over one another but thought together as it comes with the “ability to move from signs to things and back” (Akrich, Latour 1992: 259). ANT moves beyond the dichotomy between matter and semiotics (Nexon, Pouliot 2013: 344) and provides the theoretical framework to connect both content and materiality of the image without privileging one over the other.

In conclusion, stating “images matter” does not mean to reduce my thinking to their material properties, but rather to be open to images’ different materializations and the relation it builds with other human and non-human actors. Physical materiality, however, is not categorically excluded in this framework. Instead, it becomes relevant throughout this thesis when I move from image to multisensory artefact and consider images visual manifestations as magazine cover or newspaper front pages. The next section on the concept of the network further explores these relations.

3.2.2 Images as (part of) networks

Images never exist in isolation. Hansen (2011), in her groundbreaking work on images, puts emphasis on the intervisuality and intertextuality of images. I find this emphasis crucial for our understanding of images, but I would add that besides image-text and image-image relations, the relation the image builds with the viewer, the photographer, the photographed, other artefacts outside and within the image, need to be considered as well. Put differently, images emerge out of relations, circulate through relations, are interpreted and have effects through relations. Understanding images as (part) of networks, I propose in this section, helps us to acknowledge, address, and trace these relations.

The social, in the understanding of ANT, is not made of different layers (micro, meso, macro) but is *flat* and consists out of one layer: the network (Michael 2017: 4). ANT scholars, hence, oppose the dichotomy between nature and society and instead propose a concept that is based on heterogenous networks that can be understood as techno-social-semiotic hybrids (Latour 1996). The flatness of networks implies that rather than presuming a macrosocial system, social research should take interaction as its starting point. As Bengtson et al. (2019: 119) put it: “In ANT, *relations* then take priority over entities. Meaning is intrinsically relational”.

It is only in a second step that one should ask if and how some of these interactions stabilize and reproduce themselves, for instance, how they create power and inequalities (Law 1992: 380-381). The social, according to Law (1992: 381) is thus “nothing other than patterned networks of heterogeneous materials”. The expression “heterogeneous materials” again highlights that these networks are composed out of both human and non-human elements. Non-human elements are not merely used by human actors, instead they mediate the interaction of people and are thus part of the social (Law 1992: 382). Law (1992: 382) summarizes this claim by stating:

If human beings form a social network, it is not because they interact with other human beings. It is because they interact with human beings *and* endless other materials too.

But what exactly is this network? As a starter for answering this question it useful to talk about what a network in the ANT understanding is *not*. Latour points out misunderstandings of ANT’s network concept which stem from the common usage of the word (Latour 1996: 370). Firstly, an ANT network is not to be confused with a technological network, as, for instance,

for computers, subways, or trains. These networks are perceived as static, strategically organized, and come with compulsory paths. Most importantly, they imply transport without change. In contrast, the ANT's network implies transformation (Latour 1999: 15) and includes networks that are less stable and durable. A technological network is thus defined much more narrowly. Secondly, ANT does not study *social networks* and thus differs from the network concept prevalent in social sciences. ANT is not exclusively interested in the relationships between humans and their interaction, instead, ANT's understanding of networks also includes non-human actors and non-individual entities.

But, again, what then exactly is a network according to ANT? The concept of network is influenced and inspired by different perspectives. A key figure in this regard is the linguist Saussure. In Saussure's concept of semiotics (2011), language consists of signs that are part of a network. In this network, no word exists on its own; rather, words are knots in networks consisting of many other words. Mol (2010: 257) uses the example of the word *fish* that only gains meaning in contrast to other words like *meat*, and in combination with words like *water* and *gills*. ANT takes this concept beyond the linguistic sphere and applies its understanding of relatedness to "the rest of reality" (Mol 2010: 257). After all, also a real fish swims in water, has gills and competes with meat on the food market.

Besides the semiotics of Saussure, another important influence is the sociologist Granovetter (1985). Callon (1999) builds on Granovetter's work in order to outline his understanding of the *N* in ANT: A network, and this is its most important feature, is not an amalgamation of already existing stable entities "but a network that configures ontologies" (Callon 1999: 185). In this vein, entities only come to exist in and through their networked relations. Callon (1999: 185f) further outlines this characteristic by explaining:

The agents, their dimensions, and what they are and do, all depend on the morphology of the relations in which they are involved. For example, a very simple variable such as the length of the network, or the number of connections that an actor has with different networks, determines what the actor is, wants and can do.

While semiotics is based on a linguistic understanding of signs and signifiers (Derrida 1997; Saussure 2011), the extension of this concept to non-human material builds a cornerstone of ANT. Law illustrates this point as he argues that "society, organization, agents, and machines are all *effects* generated in patterned networks of diverse (not simply human) materials" (Law 1992: 380). As an example, Law (1992: 383-384) points out that without his computer,

colleagues, office, books, desk, and telephone he would probably not be a sociologist who gives lectures and writes papers. Hence, he is not a sociologist *only* due to his knowledge, values, and skills but also because he is produced and patterned as a sociologist in a heterogenous network (Law 1992: 384). The same argument can be made in terms of the photographer. They, for example, cannot be a photographer without a camera, the knowledge of how to use said camera, the motive, and the picture that they eventually can sell or show to friends and family. Also, they only have very limited control over the way the image is shared and interpreted – what we see is thus a complex network with a multitude of human and non-human actors, one of which is the image itself.

Law (1992: 384) even goes one step further claiming that the essence of the term *actor-network* lies in the idea that the actor always is also a network. As indicated by the hyphen, actor and network have always to be thought together. For instance, the human body can be perceived as both an actor and as a network consisting of complex biological processes. The question that comes to mind if we follow the assumption that every actor is at the same time a network, is why sometimes networks are perceived as actors and sometimes not. As an answer to this dilemma, Law (1992) suggests that a network disappears if it acts as a consistent and uniform entity. This uniformity in a sense masks the network and makes it appear as one single actor. Law (1992: 385) calls this form of simplification “punctualization”. This punctualization is also necessary as researchers cannot deal with an endless amount of network ramification. In sum, and unlike the understanding of networks is different from the network concept offered by mainstream social science, ANT conceptualizes the network not merely as a place where actors meet, but as that which is responsible for the creation of said actors.

Theorizing images on the basis of ANT’s understanding of networks implies that images do not enter into being with a predefined form of agency – they rather become actors through interactions in the network. An actor never acts alone but “is what is made to act by many others” (Latour 2005: 46). Agency, according to ANT, is not attributed to singular (human) entities, but distributed in interactions between human and non-human actors. In the case of images that means an image’s power does not stem exclusively from the image itself but only emerges in the interaction with other human and non-human actors like texts, viewers, producers and of course other images. It, hence, also matters where the image manifests

(page one of a big newspaper, magazine cover, or a blog post) and how it is embedded (headline, caption, other images next to it).

It is key to re-emphasize at this point that I am not trying to detect and identify some sort of cause-effect model between images and, for instance, threat perceptions. “Causality is not the right concept to understand the impact of images” (Bleiker 2018a: 19). They work in much more subtle and indirect ways as their political power resides in framing what Connolly (2002) has termed the “conditions of possibility” (Bleiker 2018a: 20). Hence, instead of tracing some causal clues, this project seeks to get to a more thorough understanding of how images contribute to the connection of health and security. I thus “trace the associations between elements that create, stabilize, and extend networks” (Bengtsson et al. 2019: 119). To put it differently, I am not only interested in what a specific image means but also into what images do. This doing can be traced with making use of ANT’s concept of the network.

Applying an ANT framework to images picks up and further pushes points already made in the visual IR literature. For instance, Heck and Schlag (2012: 896), building on Bredekamp (2013, 2015), find that the agency of an image stems from a “mutual process of showing and seeing, [...] images are constituted through their relation to spectator and producers”. This notion of “showing and seeing” as performative action strongly resonates with the ANT’s concept of the network that does not assume stable actors but pays attention to how meaning is generated, stabilized and changed through interaction. Thus, the image can be seen as part of a network of many other images, text, viewers, etc. which makes it impossible to pin it down to a fixed location. Furthermore, as already pointed out in the introduction, “photographs echo photographs” (Sontag 2003: 75) and the “familiarity of certain photographs builds our sense of the present and immediate past” (Sontag 2003: 76). Thus, images, due to their interconnectedness, should always be understood in relation to one another, both in material and semiotic terms. Using the network means to trace connections between images and other human and non-human actors. Hence, ANT’s concept of network is a promising way to meet calls “to turn our focus away from images alone, to the complex entanglements they can be found in” (Lehmuskallio, Cruz 2016: 2). For my thesis this means not to exclusively focus on the content of an image but also to consider the network and the relations the image builds – this, in a nutshell, is what a material semiotic approach to images means.

3.3 What are images doing? Three theoretical lenses

Having made the case for images' agency and their material semiotic conceptualization as actor and network, what does this agency entail and lead to? The question is even more pertinent if we contend that "[p]ictorial power is a constructed and polysemous" (Andersen et al. 2015b: 112). To render my thus far admittedly rather abstract theoretical arguments about images actionable for the empirical focus of this thesis, in this section I discuss and specify images' agency with a particular focus on the health-security nexus.

To fully grasp this potential, I suggest three theoretical lenses. These lenses are, on the one hand, derived out of the visual IR literature, and on the other hand also inductively based on and aligned with a first screening of the initial image selection. Here, I follow the interpretivist claim about the intertwinement of theory and empirics and that one "arrive[s] at theoretical arguments via a recursive and iterative back and forth between theoretical frameworks and the experience of data generation" (Kurowska, Bliesemann de Guevara 2020: 1215). Thus, the "thick description" (Geertz 2006: 5) of what and how I see the Ebola epidemic is grounded in the theoretical literature. Through the lenses I want to take up the interpretivist claim that an analysis needs to entail a "constant interplay between the concrete and the abstract, the local and the generic, the substantive and the theoretical" (Hammersley, Atkinson 2010: 196).

Introducing the lenses, furthermore, is a way to engage the visual IR literature with ANT approaches in a productive way. These lenses not only provide a valuable structure for empirically approaching the many doings and interactions of images, which are far too opaque and too fuzzy to grasp through universal claims, but they also tie back the ANT inspired framework to the existing visual IR literature thus enabling me to build on and add to existing debates. Together, the three lenses enable me to get to a nuanced and in-depth understanding of images' relevance for the health-security nexus. The three lenses conceive of images' agency as rooted in, respectively

- 1) their status as icons
- 2) their ability to evoke emotions within the viewer
- 3) their ability to constitute (truths about) security

In the three empirical chapters (*Chapters 6-8*), I match each lens to one of the visual nodes: I explore the visual manifestation of the protection suit in terms of the alleged iconic status of

protective clothing in the context of infectious disease (*Chapter 6*). I analyze the motive of the body in pain departing from the literature that claims for images to be especially powerful by evoking emotions when depicting bodily suffering (*Chapter 7*). The microscopic image of the virus, finally, I explore under the assumption that the image not only proves the existence of the virus but takes active part in its constitution as a viral agent (*Chapter 8*).

The usage of different theoretical lenses is inspired by Nicolini (2009) who suggests the switching of the lenses as a way of re-positioning in the field that foregrounds certain aspects while bracketing others. Accordingly, I do not apply them in an exclusionary manner to the respective nodal points. Instead, the dynamic of fore- and backgrounding taken from Nicolini (2009) allows for more flexibility. Importantly, I reckon that the three lenses are ideal types and that their separation is somewhat artificial. Hence, their purpose is not to be matched with exact counterparts in the empirical material, but to provide the analysis with structure and focus. On an empirical level, the lenses offer guidance when I follow the images and thus keep me on track in Ebola's fuzzy visual network. In theoretical terms, the lenses are useful to add nuance and depth to the case of images' agency that I want to make in this thesis. The ANT focus of my theoretical framework holds these lenses together and enables me to make sense of their interconnectedness and co-constitution. In the following, I unpack each lens and its empirical implications for this thesis.

3.3.1 Lens I: icon

The lens of the icon is applied in the analysis of the visual manifestations of the protection suit (*Chapter 6*). The aim, however, is not to *prove* the iconicity of the protection suit. In the literature on iconic images, it is held that such a status can only be assessed in retrospect after at least a decade of republications (Hariman, Lucaites 2007; Hansen 2015: 271). Rather, I want to ask what we can learn about the doing and meaning-making of the protection suit if we study it through the lens of the icon. This focus is promising provided that the suit is frequently referred to as icon of infectious disease, both in academia (Pallister-Wilkins 2016; Lynteris 2018; Gerlach 2019) and also news media (Kale 2020).

In this section, I firstly highlight some qualities of iconic images that are relevant for the purpose of this thesis. Secondly, I specify the power (ANT scholars would rather say "agency") that is ascribed to iconic images by pointing out how iconic images can condense and fixate the meaning of certain events and animate a sense of community and purpose. Furthermore,

by referring to the circulation and appropriation of iconic images, I add substance to my usage of the ANT concept of the *network* and the role of materiality.

Nick Út's 1972 Vietnam War photograph of the child Kim Phúc fleeing her village naked and injured after a Napalm attack and Kevin Carter's photograph of a starving child crouching on the ground watched by a vulture taken in the Sudan in 1993 are two frequently referenced works in the context of iconic images (Hansen 2015: 288; Bleiker 2018a: 8). Despite the common argument that the *golden era* of iconic images has ended with the rise of digital media, due to which potentially iconic images are produced, appear, and disappear in high frequency and speed, scholars still pay a lot of attention to iconic images and how their emergence and circulation is influenced by digitalization (Perlmutter 2006; Hariman, Lucaites 2018). In the growing field of visual IR, Hansen's (2015) study "How Images Make World Politics", which conceptualizes and analyzes the iconic images of the torture scandal in Abu Ghraib as an example how international icons make world politics, is arguably the most influential and comprehensive work.

Given that the term icon is used with many distinctive (albeit often related) meanings in the fields of media and communication studies, history, theology, political science and more, it is important to specify how I conceptualize this lens and how it resonates with the ANT-inspired framework. In the thesis, I build on the definition by Hansen (2015: 268) who, with reference to Hariman and Lucaites (2007: 27), suggests icons to be

those [photographic] images appearing in print, electronic, or digital media that are widely recognized and remembered, are understood to be representations of historically significant events, activate strong emotional identification or response, and are reproduced across a range of media, genres, or topics.

Other elements pointed out across different disciplines are a degree of *celebrity* reached by iconic images for instance through winning prizes and their *prominence* in terms of where they appear (for instance on magazine covers or newspaper front pages) (Perlmutter 2006: 54). In addition, Hansen (2015: 269) makes use of Perlmutter's (1998: 11) distinction between *discrete* and *generic* icon. Whereas the former refers to single images, like Nick Út's photograph, for instance, the term generic icon means "certain elements are repeated over and over, from image to image, so that despite varying subjects, times, and locations, the basic scene becomes a familiar staple, a visual cliché" (Perlmutter 1998: 11). I find this distinction particularly useful to analytically make sense of the many different images of protective

clothing that circulated during the Ebola epidemic and in the context of other health crises as well.

The reproduction that is emphasized in Hansen's definition of an icon needs further specification. Iconic images, Hansen (2015) demonstrates in case of the hooded prisoner of Abu Ghraib, not only circulate by re-appearing in different outlets. They also circulate as appropriations. Appropriations copy parts of the icon, add new elements, or situate the icon into a new context and can thus be conceptualized as "an intervention in a double sense: into the icon itself and into the discursive field of which the appropriation becomes a part" (Hansen 2015: 276). I make use of this concept when following the protection suit as news media image, Halloween costume, and infographic.

This is where the ANT's network proves particularly useful to trace how the protection suit as image and artefact acts and is enacted in complex networks. The notion of icons being appropriated, and thus altered and changed, resonates with Latour's (1999: 15, 2005: 106) argument that the ANT's network implies transformation and thus not presuppose stable actors. Callon (1984: 203), in this vein, coined the term *translation* as the process "during which the identity of actors, the possibility of interaction and the margins of manoeuvre are negotiated and delimited". This is an important claim to keep in mind when following the meanings and doings of iconic manifestations of the protection suit in order not to consider it a stable and static icon. This implies going beyond the sole content of images of the protection suit and to be sensible to where these images appear, how they are altered, and what material form (news media image, infographic, or costume) they take.

Having specified these key characteristics of iconic images, the question of what is achieved by these features needs to be explored in more depth. Importantly, Hariman and Lucaites (2018: 318) warn of naïve conceptualizations of a causal relationship between an icon and a specific change of affairs. Rather, they speak of "rhetoric power" (Hariman, Lucaites 2007: 9) possessed by iconic images, which they specify by the iconic image to be able to reproduce ideology, communicate social knowledge, shape a collective memory, model citizenship, and the provision of figural resources for communicative action (Hariman, Lucaites 2007: 9). The power of an icon, crucially, does not stem from its content alone. I follow Hariman and Lucaites (2007: 9) who emphasize the

complex relationships between formal characteristics of the image, its circulation across a range of media, and varied appropriations by diverse actors, all within a rich intertext of images, speeches, commentary, and other texts.

Again, I find these claims to strongly speak to my framework. It is precisely in this relationality where the theoretical lens of the icon is tied back to the ANT inspired theoretical framework I introduce and apply in this thesis.

Hansen (2015: 271) adds to this by pointing out that

[t]he epistemic-political status of the icon is, in other words, not just to document, but to actively animate a sense of community, identity, and purpose. The image, the political community and those constituting the meaning of images for the public thus enter into a productive relationship that establishes the meaning and authority of each: of what images mean, of who ‘the public’ is, and what it implies to speak with authority about images and the public good.

Icons are referenced as “primary markers” (Zelizer 2002: 699) and “visual quotations” (Sontag 2003: 22) with the power to “condense and constitute” (Hansen 2015: 265) meaning. They may help people to make sense of complex events. This is where I locate the agency of the iconic image. Here, I am especially interested in the icon’s ability to condense meaning and invoke national and international “wes” (plural) (Hansen 2015: 267) and in processes where they may evoke and manifest stereotypes (Bleiker 2018a: 9). In terms of the protection suit, which condenses the meaning of health crises to the risk of contagion, this means to ask what or who is contagious, who is held to be at risk, and how the threat of contagion may connect and separate persons inside and outside the suit.

3.3.2 Lens II: emotions

The second lens explores images’ agency based on their ability to not only depict but also to evoke strong emotions. This lens is applied in the analysis of the visual manifestations of the grieving, suffering, and deceased body in the context of the Ebola epidemic. Besides the protection suit, images of suffering, grieving, and deceased bodies are the second prominent motive of the award-winning image series constituting my initial empirical material. With reference to Scarry’s (1987) landmark work, I summarize this motive under the term *body in pain*.

I find the lens of emotions to fit the overall ANT-framework despite the relative absence of the role of affect, emotion, and feelings in ANT works. Scholars (Stark 2019; McCormack 2020)

who point out ANT's potential to grasp the affective capacities of non-human actors are the minority. In this lens, I appreciate the plea for ANT to be more open for "the capacities of bodies, both human and non-human, to affect and be affected" (Müller, Schurr 2016: 224) by suggesting the agency of the image to be its ability to make us feel something. Due to this ability, I suggest in this section and the thesis at large, images can connect as well as separate different bodies (bodies within the image, the body of the viewer, the body of the photographer, the body of the patient, etc.). The ANT framework here helps me to trace how these bodies relate and how they act and are enacted in the making of health security. To understand these linkages, I turn to the literature connecting images, bodies, and emotions, asking what this connection means in terms of the health-security nexus.

Since the early 2000s, scholarship in IR increasingly pays attention to the role of emotions.³ The need for IR scholars to take emotions seriously was most prominently formulated by Crawford's (2000) article on passion and world politics. Debates on what emotions do, how they can be studied and what separates them from feelings and affect followed (Åhäll, Gregory 2013; Hutchison, Bleiker 2014; Schlag 2018; Åhäll 2018).

The body plays a major role in these debates. Somatic approaches go the furthest in this regard by emphasizing the body as the place where emotions emerge. McDermott (2014: 560), for instance, holds that "emotion must necessarily be grounded in somatic experience in the physical body". Individual bodies, in this argumentation, thus have the predisposition to experience emotions (Meiches 2019: 243). This claim is challenged by scholars pointing out the political constitution of the body and its hence inseparability from society and culture. These approaches put emphasis less on the somatic aspect of emotions but more on their social production (Hutchison 2016). Within this realm of social production, the different representations of the body are regarded to be pivotal given that they are "as close as one can get to conceiving of emotions" (Hutchison 2014: 3).

This thesis follows this argumentation and holds the images it discusses to exemplify this point: they show bodies experiencing pain, grief, anxiety, and utter devastation, it is only by their visual display that a distant spectator can learn about and engage with them.

³ The definition of emotions is a complex topic and there is a lot of debate on how to best conceptualize and disentangle the terms *feeling*, *emotion*, and *affect*. For the purpose of this article I follow Hutchison's (2019: 237) definition as to which emotions are "conscious manifestations of bodily feelings" whereas affect is "nonconscious and precognitive and is thus outside of representation".

Furthermore, these images do not only capture emotions, but they also provoke emotions. They can “make us care” (Hansen 2018: 276) and evoke an immediate emotive response with the viewer (Hansen 2011: 55). To put differently, images can be representations as well as drivers of emotions (Schlag 2018: 211).

With reference to Hutchison and Bleiker (2014) and Ahmed (2014), Schlag (2018: 210) points out that the way we feel is never purely individual but embedded within social and cultural processes that make “emotions matter as an individual, personal, and collective social phenomenon” (Schlag 2018: 210). The cultural practice of visually representing bodies in pain to thereby turn internal emotions into a collective experience that can be assessed by a distant witness has a long tradition that shapes society and politics alike (Bleiker, Hutchison 2008: 130). Emotions, hence, can be understood not as individual but as phenomena “formed and structured within particular social and cultural environment” (Hutchison, Bleiker 2014: 504). Emphasizing the cultural and intersubjective component of emotions, Crawford (2000: 125) finds that while “[f]eelings are internally experienced, but the meaning attached to those feelings, the behaviors associated with them, and the recognition in others are cognitively and culturally construed and constructed”. Put differently, emotions constitute social and cultural phenomena and that it is through representation that we can learn about the connection of emotions, society and culture (Fierke 2012; Hutchison 2014, 2016; Adler-Nissen et al. 2020).

Visualizations of bodily suffering are held to provoke particularly strong emotions with the spectator (Dauphinée 2007; Zelizer 2010; Dauphinée 2018). Furthermore, images of suffering are pivotal to how a distant spectator can grasp and make sense of trauma as “giving voice to or visually depicting what are unique and somewhat incommunicable experiences of shock and pain, representational practices craft understandings of trauma that have social meaning and significance” (Hutchison 2016: 3). With reference to Scarry (1987), Dauphinée (2007: 142) addresses the difficulties of visualizing pain by explaining that “the visual expression of pain and trauma translates into a politics of representation that flattens the experience of pain by being able to capture only the visible causes or expressions of pain”. Images, in this vein, are the dominant medium to access the pain of others (Dauphinée 2007: 144). Here, the overall ANT framework’s combination with the lens of emotions enables me to trace the connections between bodies, visual materials, and ideas and to understand the relevance of these socio-material networks for the health-security nexus.

3.3.3 Lens III: proofing and making security

In her chapter on security and images, Hansen (2018: 273) poses that, inter alia, “[i]mages enter into these political debates over what security is and how we should respond to security problems as “evidence””. In the field of science, they do so in a specific way.

The third lens explores this specificity and looks at images’ agency based on their alleged ability to constitute (truths about) security (Hansen 2011; Andersen et al. 2015b) and thus to, instead of mere representations, being actual presentations. The emphasis here, to put differently, is not so much on images making visible but on images actually *making* or constituting something (Daston 2014: 321). I apply this lens to the analysis of the microscopic image of the virus and to trace and understand the constitutive agency of it.

Andersen et al. (2015b: 112) propose a strong empirical focus to analyze how visuals constitute truths, which is why I build this lens based on theoretical insights brought forward in visual security studies and the STS-literature on science and science communication in particular. Latour, whose work is a building block of the overall theoretical framework of the thesis, in “The Pasteurization of France” (1993) engaged with the day-to-day practices in the laboratory and by considering relationships, power dynamics, and activities traced how these practices led to scientific truth claims. Following Latour, STS researchers have “increasingly understood this space as composite and multi-layered, containing a range of instruments, protocols, processes, and power relations” (Buiani 2014: 541). Drawing on Latour’s work and on his colleagues, hence, constitutes an organic link between the overall framework of my thesis and the particular lens I want to bring forward in this section that looks at microscopic images.

While these early works largely focused on the laboratory as a site of “Production of Scientific Reality” (Pauwels 2006), more recent studies acknowledge the relevance and creation of scientific representations beyond that space (Coopmans et al. 2014b). In “Representation in Scientific Practice” edited by Woolgar and Lynch (1990), scholars associated with the then emerging field of STS sought to put emphasis on the practical, social, and material contexts of representations. In doing so they challenged the at that time prevailing conviction of representation as references to an independent world, where the literature on scientific representations was largely concerned with the transformation of objects into images (Daston 2014: 320; Coopmans et al. 2014a: 2). In that light, many works

that followed have abandoned the term representation all together opting for “mediation” (Pasveer 2006), “enactment” (Woolgar, Lezaun 2013) or, as I do in this thesis as well, “visualizations” (Wise 2006). The “Representation of Scientific Practice Revisited” (Coopmans et al. 2014b) has stuck to the term (albeit acknowledging its baggage) and is conceptualized as an update of Woolgar’s and Lynch’s volume from 1990. It takes into account digital technology and recent debates and developments in the STS literature.

Despite the 24 years that lie between the volumes, Daston (2014: 319), who was already part of the 1990 book, observes that the “specter of the perfect copy still haunts the history of science”(Daston 2014: 319). To abandon this ghost, Daston makes the case for a shift from the epistemological to the ontological treatment of images, opposing the notion as to which representation is

understood as direct mirroring or serial manipulation, whether the chain between object and image is long or short, straight or curvy, representation assumes a prior “presentation” [...] and therefore directs attention toward how rather than what we know, epistemology rather than ontology. (Daston 2014: 320)

Concluding that it is time to understand images beyond representation (Daston 2014: 320) she makes the case to consider the image as an actual presentation. Myers (2014: 156), in her work on visualizations of proteins, accordingly, suggests visualizations as an act of rendering claiming that a “[protein] model is a rendering in the sense that it embodies, performs, and sediments a modeler’s form of knowing”. A scientific image, hence, is no passive representation of a given object but is actively presenting.

These arguments are also made in relation to microscopic images of bacteria or viruses. Comparable discussions are taking place in the field of art history where Bredekamp et al. (2008: 8, own translation) point to the agency of the microscopic image finding that

[i]mages of the natural sciences do not passively reproduce the results they have to represent, but they shape and generate them genuinely from their own sphere.

By pointing out the many steps and decisions necessary for the creation of a microscopic image and its circulation, Buiani (2014: 541), furthermore, with reference to Barad (2007) finds that this type of image results from intersecting discursive practices and materialities. Summarizing the debates in STS scholarship, van Loon (2002: 118, emphasis added) thus concludes that “the objective status of ‘the virus’ has been an *accomplishment*, rather than a

matter of fact". Understanding what this accomplishment entails in terms of health security is the aim I pursue when looking at and following the different visual manifestations of the Ebola virus.

3.4 Interim conclusion

The aim of this chapter has been to develop a theoretical framework for this thesis and to thereby clarify my approach to images. I started with the acknowledgement of images' complexity, the impossibility to derive universal claims about them and with the formulation of two fundamental questions: *What are images? What is it that images do?*

I have addressed these questions from an ANT-inspired perspective. Importantly, I did not take ANT as a static theory but rather as a toolbox. This toolbox is useful, I argued throughout the chapter, for three interconnected reasons. Firstly, ANT's account for non-human actors enables me to consider images in ways that go beyond a narrow focus on their content alone. This more-than-human-approach implies to begin the analysis departing from the image and to explore its meanings and doings by considering them as potential actors. Secondly, the emphasis ANT approaches put on relationalities and entanglement enables me to trace the connections between bodies, visual materials, and ideas and to understand the relevance of these socio-material networks. Finally, the idea of the network consisting out of human and non-human actors appears especially well suited for a health-focused topic as it is sensitive to the diverse set of human (patients, doctors, nurses, etc.) and non-human (drugs, hospitals, laboratories, devices, protective clothing, etc.) actors. To flesh out these three points, this chapter makes the case for a material semiotic approach towards images. Here, I focus on two tools of ANT that also provided the answer to the first question (what are images?). Images, I suggest in this chapter, are, both, actors and (parts of) networks.

The second part of this chapter then departs from this conceptualization and ties back the theoretical framework to the health-security nexus which sits at the core of this thesis. To answer the second question (what is it that images do?) I introduce three lenses to understand images agency: their status as icons, their ability to evoke emotions within the viewer, and their ability to serve as proof of security and to make (truths of) security. These lenses, on the one hand, build on the visual IR literature, and on the other hand are also inspired by first screening of the initial image selection and the three visual nodes identified therein.

With the three lenses, I first and foremost seek to acknowledge the complexity of images' agency. Images matter in more than one way. To do justice to this complexity, I find Nicolini's (2009) concept of the "switching of theoretical lenses" most helpful. He suggests to make use of different theoretical lenses in order to "bring to the fore certain aspects while pushing others into the background" (Nicolini 2009: 1402). In this vein, I understand the lenses not as completely separated glasses to look through but as entangled and co-dependent. Emotions matter to the constitution of icons, presentations of viruses may become iconic, the body in pain, in many images, refers to iconic motives of suffering. I am aware of these overlaps and engage with them in the analysis. Matching each lens with a visual nodal point enables me to reposition myself in the field in a structured way throughout the analysis and to thus uncover different facets of images' agency.

Taken together, the answers proposed to the two questions of what images are and do, seek to take up the recent debates in visual IR and health security studies (*Chapter 2*) and to provide theoretical guidance for the analysis conducted for this thesis. Transferring this framework into a methodological approach is the task of the next chapter.

4 Methodological approach: how to follow the image

This chapter develops a methodological framework to answer the thesis' research question: *How do images shape our understandings of the link of health and security?* To answer this question, I propose a tripartite framework consisting of a vignette and of two steps of zooming-in and of zooming-out. Through these three steps, I reflect on my own position in the network and trace the content as well as emergence, proliferation, and meaning making of images in the context of the West African Ebola epidemic.

In the development of the methodological framework, I acknowledge that any use of method shapes the production of knowledge (Aradau, Huysmans 2014: 598). Furthermore, I am aware that there is not one universal answer to the question of what images do. I here draw, *inter alia*, on Hansen (2018: 276) finding that “[i]n reality, we all read images through our social context”. Taking an interpretivist stance, I consider research findings to be the results of intersubjective processes that require “theorizing [...] about the role of the self in all phases of the research process” (Schwartz-Shea 2015: 133). This interpretivist point of departure builds the basis for the research design that I introduce on the following pages.

This chapter proceeds in three steps. Firstly, in a discussion of the methodological consequences of my ANT-inspired theoretical conceptualization of images (*Chapter 3*), I develop ANT's methodological claim to “follow the actors” (Latour 2005: 12) into a more specific guiding principle for my empirical analysis: *I follow the images*. The second step explains how I decided which images to use as a starting point for the analysis and introduces the idea of snowball-sampling to get to an image collection that grows with the process of analysis. Thirdly, I propose three steps of analysis that, after a vignette reflecting my own positionality, entail both the *zooming-in* on specific images and the *zooming-out* to consider images' embeddedness and enactment in the visual network of the Ebola epidemic.

4.1 Analyzing images with ANT

The most fundamental implication of studying images from the perspective of ANT is the need to shift the focus away from the image as a single and isolated entity to the complex entanglements images are situated in. I address this challenge by using ANT not only as a theoretical but also as a methodological toolbox (Schouten 2014: 25).

4.1.1 Follow the images

It is hardly surprising that there is not one specific method to disentangle images. However, ANT's famous call to "follow the actors" (Latour 2005: 12) provides useful guidance. Latour (2005: 237) encourages scholars to "[j]ust follow the flow. Yes, follow the actors themselves or rather that which makes them act, namely the circulating entities". Transferring this call to my work means to *follow the images* in order to see how they act and are enacted in complex networks. Follow the image, in this regard, means to trace where it emerges, where and how it reappears, and how it relates to other human and non-human actors in the network it simultaneously builds and is a part of. Taking the ANT concept of the *network* seriously implies an analytical focus on the fluid and interdependent nature of images. Images, especially in a highly digitalized world, neither stand still nor alone. Rather, they are copied and moved around platforms and websites, they get hashtagged, commented on or modified (Niederer, Colombo 2019: 44). Following the image is a promising way of accounting for this dynamic.

Simply following the images, however, runs with the risk of being mostly descriptive and of losing track of the research focus. For this reason, the analysis of each nodal point is guided by the respective theoretical lens that anchors the analysis in the visual IR literature.

4.1.2 I follow the images

The claim *follow the image* does not only imply a flat ontology, but it also puts emphasis on my role as a researcher. In this vein, reflexivity, which can be described as the "awareness of the researcher's own presence in the research process" (Barry et al. 1999: 30) and as "cornerstone of all qualitative-interpretive research" (Arias López et al. 2021: 2) is a crucial element of the methodological framework and of this thesis in general. I agree with the statement that "[a]ll political scientists offer us interpretations" (Bevir, Rhodes 2006: 70) and hold that interpreting an image is not more or less subjective than interpreting written or spoken text.

Reflexivity, in this sense, is not only the demand to clarify the researcher's positionality but also poses a way to enhance our knowledge-making (Arias López et al. 2021: 3). Accordingly, opposing the claim for fixed research procedures and the disengagement of researcher and the researched, Leander (2016) suggests that it is precisely through reflections on values, feelings and knowledge embedded in the research process that "strong objectivity" (Harding 1995) can be achieved. The importance of reflexivity is emphasized by various scholars

(Schwartz-Shea, Yanow 2012; Boswell, Corbett 2015; Barbehön et al. 2019). Here, interpretation is taken as indispensable. The same goes for the need of being aware and transparent of one's own background in terms of knowledge and emotions (Reinke de Buitrago 2019: 246).

What do these claims mean for the research conducted in this thesis? First and foremost, it means to be aware that, in the end, *I* am the one who follows the images. My decisions, assumptions, and knowledge shape and guide the research process as “knowledge never exists in isolation” (Brigg, Bleiker 2010: 791). This is not only true for generating data but also for the presentation of the research findings as

[t]his visible, and preferably explicitly reflected-upon, engagement of the researcher in the presentation of research results does not hamper objectivity. It is a necessity if research is not to be biased against, or possibly lead to the physical endangerment of, the observed. (Leander 2016: 471)

To explicitly and reflexively engage with values, emotions, knowledge, etc. embedded in the research process is thus precisely what constitutes the “epistemological side” of objectivity (Leander 2016: 464). To acknowledge that I am myself a part of the network I seek to understand and to analyze as “all observation is embedded and embodied” (Leander 2016: 464), resonates with ANT's conceptualization of the network and the relationality of the human and non-human actors that simultaneously act and are enacted therein.

As a result of these reflections, I turn the neutral *follow the image* into the more precise *I follow the images* to consider myself the starting point of the research process. Operating under the headline *I follow the image* means being conscious of the subjectivity of my research. This is not an exceptional approach, “all scholars, diverse as we are, share one commonality: we serve as a type of ‘hub’ through which the world becomes known” (Brigg, Bleiker 2010: 780). Hence, I follow Brigg and Bleiker's (2010: 796) emphasis on the importance of making the decisions about data selection, generation, and interpretation transparent to the reader.

This not only resonates with ANT's concept of the network but also meets the claim that “[t]he way we see things is affected by what we know or what we believe” (Berger 1972: 8). Taking this claim seriously, the next step addresses the selection of images analyzed in this thesis.

4.2 Data generation through visual nodal points and visual sites: which images do I follow?

Importantly, being reflexive does not only start at the actual analysis but already entails the process of data gathering (Leander 2016). While the term *data collection* assumes the independent existence of data ready to be analyzed in a positivist fashion, the interpretivist notion of “data generation”, on the other hand, “reflects the premise of the emergent research design, that is, one which crystallizes in the process of research through learning in the field” (Kurowska, Bliesemann de Guevara 2020: 1214). In this reflexive-interpretivist spirit, I take the decision of which images to follow not as a step prior to the analysis but as an essential part of it. Rather than collecting a final dataset of images prior to commencing the analysis, by following the images I engage in a process of data generation that runs alongside the other analytical processes making up this research. This process of data generation, therefore, needs thorough reflection.

To start with, this reflection entails the question of what constitutes the *field* of my research. As explained in the introduction of this thesis, today’s visual age is significantly shaped by the digitality of images and the possibility of seeing and sharing them in a short time with a potentially global audience. For most of the time, I follow the images virtually, hence via the internet. Doing “virtual fieldwork” (Hammersley, Atkinson 2010: 137) means that the separation of “fieldwork” and “deskwork” (Yanow 2014) does not apply in the case of my research.

Having committed to the methodological tool of *I follow the image* poses the question *where* I start the following. Already in the introduction (*Chapter 1*), I identified the protection suit, the body in pain, and the virus as the three *visual nodal points* this thesis attends to. They provide a part of the answer of where the process of following the images begins. Selecting three visual nodal points to start from is helpful as it is impossible to map the entire visual health security network encompassing the Ebola epidemic. Both, the sheer multitude of images and the theoretical notion that a network is no stable entity but develops over time through relations between different human and non-human actors, renders this endeavor impossible. In fact, given the fluidity and complexity of images and the interpretivist stance I take in this thesis, I hold that there is no such thing as one stable visual network but a myriad of networks unfolding differently depending on where and how one enters and becomes part

of it. Thus, collecting data in a way that would presume that there is one stable network ready to be analyzed would not only oppose the ANT's concept of a fluid network but would also contradict the claim I have made about the significance of my own position within the network and the research process. Thus, the three nodal points offer orientation also in methodological terms.

In addition to these three nodal points, I identify three *visual sites* that connect me with the epidemic and shape my seeing: 1) news media, 2) pop culture, 3) health sector. *News media* is the main medium through which I, as a Europe-based researcher, initially learned about the epidemic. I do not have first-hand experience on the ground. For instance, I do not know how wearing a protection suit whilst caring for patients feels. I know how it *looks*. For this reason, news media images (broadly defined) are the starting point of my analysis. The first instance, that really resonated with me and got me interested in the visuality of the epidemic was the fact that in the year 2015 the three most prestigious photo prizes have been awarded to photo reportages on Ebola: photographer John Moore won a *Sony Photography Award* for his reportage on Ebola and its consequences in the Liberian capital Monrovia. Daniel Berehulak was awarded a *Pulitzer Prize* for his work on the spread of the epidemic in Sierra Leone, Liberia, and Guinea. Pete Muller won a *World Press Photo Award* for his photo series on Ebola in Sierra Leone. All images are accessible via the awarding institutions' homepages. These 39 images thus constitute the starting point for my research. The following table summarizes the image collection.

Institution	Photographer	Award	Topic/title of photo series	Number of Images
Sony World Photography Award	John Moore	L'Iris d'Or in Current Affairs	"Ebola Crisis Overwhelms Liberian Capital"	10
Pulitzer Prize	Daniel Berehulak	Winner in Feature Photography	Spread of Ebola in Liberia, Sierra Leone and Guinea	19
World Press Photo Award	Pete Muller	1 st Prize Stories: General News	"Ebola in Sierra Leone"	10
				Total: 39

Table 4.1 Award-winning images

To broaden the scope of the analysis, I consider pop culture and the health sector as two additional visual sites that have been shaping my seeing of the epidemic. Next to news media, pop culture is the second medium through which the epidemic became and becomes close to

me. Drawing on the rich IR literature, I understand pop culture as a source of knowledge and as a practice of world politics (Hamilton 2016: 4) and build on the idea that the lines between cultural, popular, and political are increasingly blurry due to the dynamics of digitalization (Shepherd 2017: 217). If we agree that “cultural texts and images are seen as storage places for meaning in a particular society” (Neumann, Nexon 2006: 13), pop culture is an important site for this thesis. Examples are the many references to the epidemic in the context of Halloween in October 2014, which struck me during my semester abroad in Washington DC, and block busters like *Contagion* (2011) or *Outbreak* (1995) which I watched as a teenager and the memory of which resurfaced during the Ebola epidemic and the COVID-19 pandemic. I expect pop culture, for instance through movies, comics, and festive traditions, to offer insights into fears and hopes of societies in ways news media analysis may not (Fishel, Wilcox 2017: 335).

In addition to news media and pop culture, visual material published by actors in the broadly defined *health sector* invested into tackling the epidemic are the third medium through which I saw and made sense of the epidemic. One actor that sticks out is MSF. Months before the WHO declared Ebola to be a PHEIC, MSF issued a warning stating that the epidemic’s spread was “unprecedented” (MSF 2014a). Both MSF’s expertise in acute medical assistance in crisis situations, such as safety protocols to protect medical staff and patients and its experience in the development of operational standards and procedures, are held to have been invaluable in the fight against the epidemic (Deloffre 2016). For this reason, I include images published by, inter alia, MSF into the analysis.

This list is, however, only the starting point of the analysis. Following the images means to adhere to a kind of snowball-sampling method that is not prior to the analysis but a constant part of it. While the image selection summarized in the table above kicks off the analysis, images are constantly added on the go based on how the visual networks unfolds in front of me. It is hence the analysis itself that generates the data to be analyzed.

Given the complexity of Ebola’s visual network, it is probably not surprising that the analyses conducted on the three different visual nodal points have different empirical beginnings. Both the analysis on the protection suit and on the body in pain commence with images from the award-winning image collection (Table 4.1). This is because both motives – the protection suit and the body in pain – are prominent tropes in the collection which often

appear alongside each other (for instance in images of health workers in protective clothing taking care of patients). The chapters on the protection suit and the body in pain thus start with a close interpretation of images of the award-winning collection and move from there to other images published in the spheres of news media, pop culture, and the health sector. The analysis of the visual manifestations of the Ebola virus itself has a different, yet again similar starting point. The analysis here starts with the first micrograph of the virus. The starting point in this case, hence, is not a news media photograph but an image produced in the laboratory and thus the health sector. That image, however circulated widely in news media outlets which underscores that the three visual sites this thesis attends to interrelate and overlap.

4.3 Steps of Analysis: how to follow the images?

There are many – arguably fuzzy and messy – ways to *follow the images*. It is thus necessary to introduce some methodological structure to my encounter with and following of images. Therefore, I suggest the three interconnected steps. I begin the analysis with a vignette that situates myself and the curiosity that drives my following of the images into the chapter. The subsequent two steps then are inspired by Nicolini’s (2009, 2012) strategy of “zooming in and out”. Although this approach is mostly rooted in practice theory, Nicolini also draws on ANT (2012: 229) and develops a research procedure in line with the theoretical framework of this work. The process of zooming in and out constitutes a dynamic of re-positioning to foreground some aspects while temporarily bracketing others (Nicolini, 2009: 1412). This means that

we zoom in on the details of the accomplishment of a practice in a specific place to make sense of the local accomplishment of the practice and the other more or less distant activities. This is followed by, and alternated with, a zooming out movement through which we expand the scope of the observation following the trails of connections between practices and their products. (Nicolini 2012: 219)

Here, both modes of zooming are achieved through ethnographic inspired approaches. A method like this does justice to the relationality of agency that is also emphasized by ANT scholars. To provide some guideline, each step is structured by a set of research questions. In the following, I unpack the three steps in more detail.

4.3.1 On vignettes

One key challenge for my methodological approach is how to relate my encounter with images to the different strands of literature it speaks to and is influenced by. To address this challenge, each of the empirical chapters commences with a reflexive vignette in which I

outline and reflect upon my expectations and decisions that went into the research conducted for the respective chapter. For instance, I clarify why I focus on the visual nodal points of the protection suit, the body in pain, and the virus itself and how these decisions relate to my own seeing of the epidemic, with what expectations I commenced the *following* of the images, and what challenges I faced when doing so.

The vignettes have a twofold purpose. Firstly, they are meant to make my research accessible to the reader as they render more transparent with what kind of knowledge and rationale I approach each nodal point. The writing of vignettes has gained traction and appreciation in the social sciences in the last decade. In her chapter on secrecy vignettes, de Goede (2019) summarizes the value ascribed to them. Building on her, I follow Humphreys (2005: 842) who takes vignettes as “window[s] through which the reader can view some of the pleasure and pain” of the research process. These windows enhance the knowledge generated in the analysis (Arias López et al. 2021: 3). Dauphinée (2010: 805), furthermore, takes them as a specific genre to express one’s “academic voice” adding nuance to the more traditional repertoire of academic writing. Essentially, they are a way of rendering explicit ethical dilemmas (de Goede 2019: 262) and enable us “to draw broader lessons” (Michael 2012: 28). Vignettes, de Goede (2019: 262) summarizes, “in themselves are a way of rendering visible that which normally remains invisible in research”. This resonates with my hitherto made claim that I am myself a part of the network I seek to explore and understand. I take the vignette as a tool to reflect on my own positionality, to situate and add to my research, and to thus offer an additional layer of context.

Secondly, writing the first drafts of the vignettes *before* actually following the protection suit, the body in pain, or the virus was also a way for me to become more aware of my expectations and assumptions. Rendering visible (on screen and paper) and explicit my assumptions, questions, and ideas before conducting the research was an important step to reflect about my biases. Transparency, in this sense, is not only achieved for the reader but for me as well.

4.3.2 Zooming in: looking at isolated images

Zooming-in in the case of this work means that I, in this step, focus on a few isolated images. This, first of all, raises the question of which images I choose for such in depth analysis. The plain answer here is that I choose images that I deem powerful in the context of health

security. This can be due to its popularity (as the *first* image of the Ebola virus, for instance) or because I find it particularly moving. If an image resonates strongly with me, I use this step to look at it in detail to answer *why* it evokes strong feelings. Again, this is a highly personal decision that needs transparency and reflexivity.

The key questions I ask myself at this stage are:

- What do I see?

Connected to the first question:

- What do I feel when seeing the image?
- Where and when does the image appear?

I ask these questions through the respective theoretical lens and draw on a prominent method in the field of visual analysis: compositional interpretation. The guiding assumption of this method is that images “catch the gazes of spectators and affect them in some way, and they do so through how they look” (Rose 2016: 56). Thus, images have agency as they show and thereby do something to the spectator. To understand what they do *exactly* it is important to understand *how* something is shown. For this reason, this methodological step carefully explores the images’ content. Being rooted in art history, compositional interpretation offers a structured way as well as a vocabulary for describing both content and form of an image. In her chapter on compositional interpretation, Rose (2016) introduces five components of the image:

- 1) *Content*: While the question *what does the image show?* might seem rather trivial on the first sight, it might indeed be a tricky one to answer in the case of some images. Think, for instance, of photographs with unconventional angles, difficult light situations, or special events/settings that require some background information. It is thus necessary to take sufficient time to thoroughly answer this question (Rose 2016: 63f).
- 2) *Color*: Considering hue, value, and saturation is especially important when describing paintings. However, colors are also an important site of investigation for any other type of visual. Andersen et al. (2015a), for instance, hold that security is both enacted and contested through the usage of color. Colors may draw the attention of the spectator to certain elements of the image while concealing others and add atmospheric perspective (Rose 2016: 64ff). A reoccurring color-palette may also build a visual bridge between various images.

- 3) *Spatial organization*: Here, attention is paid to the question of how elements in an image are organized and related to another and the geometrical perspective they create. This is important, as, for instance, this affects the position of the spectator. Are they looking at the scene from above, are they part of the depicted scene, distanced or looking up at it? Building on Kress and van Leeuwen (2006), Rose (2016: 66) holds that looking up to a scene puts the spectator in a somewhat inferior position while a bird's eye perspective might ascribe some sort of power or controllable distance to the spectator. In a similar way, close up images of persons may create intimacy while larger crowds may foster a feeling of anonymity.
- 4) *Light*: Connected to the role of color and space the usage of light is of particular importance in photography. Light might highlight certain aspects and can create a particular atmosphere. Candlelight, for instance, might contribute to a peaceful even romantic setting, while harsh neon light could be perceived cold and clinical.
- 5) *Expressive content*: This last element in a sense puts together the previous aspects to capture the general “feel” of an image (Rose 2016: 79). Hence, the key concern here are the emotions that an image might generate. It is crucial at this stage to be reflexive about the own social background that certainly influences the emotional impact we as viewers ascribe to images.

4.3.3 Zooming out: “follow the flow”

Having discussed the image in isolation, zooming out considers the interconnectedness of images. Claiming that “in order to understand what happens here and now we also need to understand what happens somewhere else” (Nicolini 2012: 229) this is in line with the ANT notion that meaning is not made in isolation and puts emphasis on the relation formed by the images. Zooming out, hence, means to pay attention to what happens in the (visual) network. Thus, this step is less interested in images' contents but rather in actually following them as interconnected and fluid objects with agency. It is directed at acknowledging and tracing the fluidity of images and to detect changes of meaning and materiality. In terms of interconnectedness, it is also at this stage where new images from the three different visual sites are generated as a result of the following-process.

Hence, the guiding questions are:

- How do images travel through and built the network?
- Where and how do they appear?
- How do images and viewer interact with each other?
- How do images and photographer interact with each other?
- How do images and text interact with each other?
- How do images interact with visual artefacts?

Similar to the zooming-in part, these questions are again asked through the respective theoretical lenses. This is based on the interpretivist argument that theory and empirics are intertwined and that knowledge can be generated through an iterative back and forth between theory and empirical data (Kurowska, Bliesemann de Guevara 2020: 1215). Based on these questions, I follow images to their places of publication – for instance the cover of magazines or online news pieces.

To follow specific images, I rely on the reverse image search engine TinEye. Through image recognition technology TinEye finds copies (exact or altered) of an image in the world wide web. While this service is also offered by google images or other commercial search tools that may offer more results, I found TinEye the most user-friendly option, and given that I am not undertaking large quantitative studies, suitable for my research. I complemented the findings of the reverse image search engine with information provided by the images' creators. In the case of the protection suit and the body in pain, this means to include statements and interpretations made by the photographers John Moore, Daniel Berehulak and Pete Muller into the analysis. For the microscopic image, this means to consider statements and explanations offered by the scientists involved in the creation of the micrographs.

The following also tends to (changes in) the image's materiality. In order to do so, research on where and how (as printed poster, exhibition piece in museums, part of online (social)media) particular images materialize is needed. Taking materiality seriously at this stage is key here as "materiality precisely emphasizes the relational qualities of photographs in a social context" (Edwards 2009b: 33). Following the image – through, for instance, image tracking tools and background research on photographers – is an important step to do so and in line with the argument that "[t]he ethnographic appreciation of things can also extend to their creation and manufacture" (Hammersley, Atkinson 2010: 136). Hence, with the help of

TinEye, I follow the images on their way through the network and explore their entanglements with other human and non-human actors.

Closely connected to this step is the question on image-viewer interaction. Andersen et al. (2015b: 112) call for an “emancipation of the spectator” in a sense that more attention is paid to what viewers actually do with images. In the case of images published online this might mean tracing how often and where images are shared and commented on, in the case of museums the “technologies of display” (Rose 2016: 233) that might hinder or in fact encourage interaction with an image are of interest. Following the image here means to trace the many ways of “showing and seeing” (Heck, Schlag 2012) in how image and viewer might or might not engage with each other. Considering also the role of multisensory artefacts (Callahan 2020) (like, for instance, the protection suit as a Halloween costume) and their entanglement with two-dimensional images adds nuance and relevance to the question of the possible engagement of the viewer. Looking at the two steps of zooming-in and zooming-out, it is key to note that there is no static chronological order. They are heavily co-dependent, and their separation is rather artificial as I deem it crucial to move back and forth between them.

5 Empirical point of departure: Ebola in West Africa

This chapter illuminates the Ebola epidemic as the empirical point of departure of the thesis. I firstly sketch the symptoms caused by an infection with the Ebola virus and then turn to the academic debates that exist around the securitization of Ebola. The Ebola epidemic in West Africa 2013-2016 marks the third time the WHO announced an international health emergency, after swine flu and polio. Ebola Virus Disease (EVD), commonly referred to as Ebola, is no new phenomenon. Its history dates to the year 1976, where a haemorrhagic disease appeared simultaneously in former Zaire (today's DRC) and Sudan. So far, scientists have identified five different strains of the Ebola virus and named them after their place of origin: Bundibugyo, Ivory Coast, Reston, Sudan, and Zaire (CDC 2015). Since its discovery in 1976, Ebola outbreaks have been reported on a steady base in, for instance, the DRC, Sudan, Uganda, and Gabon (WHO 2021b). The epidemic of 2013-2016, which commenced in the Guinean village Meliandou in 2013, however, spread in so far unknown dimensions causing both new levels of infections and fear.

What set the Ebola epidemic apart from previous PHEICs is its high fatality rate up to 90% on the one hand and its rather low contagiousness on the other (Honigsbaum 2020: 200; WHO 2021b). Unlike H1N1, SARS-CoV-1, or SARS-CoV-2, the Ebola virus is not airborne, and transmission only takes place via the bodily fluids of symptomatic patients (WHO 2021b). This means scenarios like the traveling doctor Liu, who unknowingly caused the infection of more than 4,000 persons during the SARS pandemic (Elbe 2010: 38), are unlikely. In the case of Ebola, transmission rather occurs in immediate contact with patients. This puts especially family members, care givers, and burial teams at high risk. Some measures taken to prevent a global spread, like airport screenings (Wilkinson, Leach 2015: 140), and quarantines of asymptomatic western health workers returning from West Africa (Boseley 2015), however, suggest an entanglement of security and the epidemic that does not fully match the diseases characteristics. The Ebola epidemic is, hence, a critical site for asking how health security is actually made.

5.1 History and symptoms

The Ebola virus is difficult to diagnose as the first symptoms are non-specific like fever, muscle pain, sore throat, and headaches which are easily confused with malaria or Lassa fever

(MSF 2016a). These symptoms are followed by diarrhea, vomiting, and possible liver or kidney failure. External or internal bleeding are additional symptoms of a late infection.

While fruit bats likely are the natural hosts of the virus, having once infected a human being the transmission of the virus thereafter mainly happens from human to human via bodily fluids like blood, feces, and urine. The incubation period is between two and 21 days long. Humans are not infectious as long as they show no symptoms. The fatality rate of Ebola, depending on the strain, varies between 25% and 90% (WHO 2021b). The fatality rates of COVID-19 (approx. 2% (Johns Hopkins University 2022)) and SARS (approx. 11% (Chan-Yeung, Xu 2003)), set Ebola apart in this regard.

The origin of the epidemic can be traced back to the village Meliandou in the southeast of Guinea. There, in December 2013 the 2-year-old Emile Ouamouno, who later became known as *patient zero*, was infected with the virus, assumingly as a consequence of contact with a bat (Leach 2015: 817). Meliandou is only a few miles away from the trade city Guéckédou which is located close to the borders of Liberia and Sierra Leone. Due to this geographical location and the high mobility and sociability of the populations in that area, the virus, other than in previous outbreaks, spread fast and reached big cities (Honigsbaum 2020: 198). Three months passed until the Zaire Ebola virus strain was identified as the cause of the increasing number of patients in different clusters. Samples had to be sent to France for analysis due to a lack of local expert laboratories (MSF 2016). In March 2014, the WHO officially reported an Ebola outbreak in Guinea (WHO 2014b). Only a few days later, MSF issued a warning stating that the epidemic's spread was "unprecedented" (MSF 2014a). At this time, the first cases of Ebola had been reported in Liberia. As of 31 March 2014, 112 cases had been confirmed in Guinea. In May the disease was also confirmed for the first time in Sierra Leone. Due to the experience with previous Ebola outbreaks, which had been easily contained and because of severe budget cuts, the WHO initially did not expect the outbreak to become a serious crisis. However, the number of cases and their geographical distribution grew dramatically and on 8 August 2014 the WHO declared Ebola a PHEIC (WHO 2014c). Only three days later, the WHO, due to the high fatality rate, decided to allow for the treatment of patients with experimental drugs that so far had not been tested on humans (WHO 2014d) and the search for a pharmaceutical solution for Ebola commenced (Roemer-Mahler, Elbe 2016: 490). Drugs and vaccines have been tested during the outbreak, but it was only in December 2019 when the

first vaccine was approved by the US *Food and Drug Administration* (FDA) (2019). Already in October 2014, the WHO Ebola Response Team explained that, while promising for future outbreaks, due to the early stages of development neither the expected quality nor quantity of a vaccine could make a difference in the epidemic. The response, the WHO recommended, should therefore focus on contact tracing, case isolation, community engagement, and the strengthening of the health sector (WHO Ebola Response Team 2014: 1494).

In the meantime, the virus had reached Liberia's capital Monrovia where the military's attempt to impose a quarantine in the West Point neighborhood in late August 2014 resulted into violent riots leading to the fear of government collapse and fueled mistrust between the local population and health workers (Wenham 2019: 1102). From September to October 2014 the virus spread exponentially. In Sierra Leone, for instance, around 250 new cases had been reported weekly which constitutes an epidemic doubling time of 30 days (WHO Ebola Response Team 2014). As a consequence MSF called for military deployment as "a last resort" (MSF 2014a), a novelty in the organization's history. In the mid of September, the international support took up speed. The United Nation's Resolution 2177, which identified Ebola as a "threat to peace and security" (UNSC 2014), also a novelty for a disease, marked a turning point which is also reflected in the creation of UNMEER (UN 2014) and the deployment of international health workers, military, and material support. Besides international agencies and non-governmental organizations, foreign governments provided assistance: the United Kingdom leading in Sierra Leone, France in Guinea, and the US in Liberia (Leach 2015: 818). Two weeks after the UNSC Resolution, the Liberian citizen Thomas Duncan traveled from Monrovia to Dallas where he was diagnosed with Ebola on 30 September 2014. He died on 8 October. In the following two weeks the infection of two nurses who had taken care of Duncan were confirmed (Hasian 2020: 167). The case of Duncan served as a confirmation of the looming fear of a transmission to the Global North that was increasingly associated with the epidemic and finally turned Ebola into an "epidemic of fear" (Gilsinan 2014).

In January 2015 the WHO announced a "turning point" and reported falling numbers of new patients in Liberia, Sierra Leone, and Guinea (Toppa 2015). However, low level transmission continued. Only in early January 2016 the WHO declared West Africa Ebola-free. This statement was outdated just within two days when a new case of Ebola was confirmed in

Sierra Leone (WHO 2016b). So far the virus has infected more than 27,000 people of whom more than 11,000 died (WHO 2021b).

This outbreak has caused the so far worst Ebola epidemic in history. In previous cases, only few people contracted the virus, and the outbreaks were quickly contained. This epidemic, which is the largest and most complex one in the disease's history (WHO 2021b), was different in several ways. Firstly, Guinea, Sierra Leone and Liberia, where more than 99% of the Ebola infections occurred, are young post-conflict societies with weak health infrastructure (Harman, Wenham 2018). Secondly, these countries never had any cases of Ebola before, so the disease struck health workers unprepared. Referring to the famous work of Galtung, Leach (2015) argues that the depth and extent of the epidemic can be explained by "structural violence" eminent in the three most affected countries. Even though the epidemic, after several setbacks, was declared to be finally over in March 2016, the consequences are regarded to be severe and long lasting (WHO 2016c). Furthermore, the end of the epidemic did not mean the end of Ebola. Ebola outbreaks are recurrent in the DRC, most severely in North Kivu-Ituri between 2018 and 2020. This outbreak, which caused 3,481 cases and 2,299 deaths, is, as of today, the second largest outbreak after the West African epidemic (WHO 2020b).

5.2 Between panic and neglect: different facets of Ebola

Even though the Ebola epidemic significantly exceeded previous outbreaks in terms of geographic spread and numbers of infections, the extent of its securitization and the kind of global attention it received still are somewhat surprising (Lakoff 2015). The labeling of the epidemic as a "threat to peace and security" (UNSC 2014) and "potential threat to global security" (The White House 2014), on the one hand, and the unlikeliness of the virus spreading uncontrollably on a global scale due to its pattern of contagion (McInnes 2016: 382) on the other, appear contradictory. The entanglement of health and security in the case of Ebola, hence, seem complex and far from causal. In their work on the governing of Ebola, Harman and Wenham (2018) accordingly find a structural tension in global health security existing between medical humanitarianism and global health and argue that while Ebola was framed as a health emergency, the epidemic required first and foremost standard humanitarian responses. This tension between how the epidemic was labelled and how it should have been addressed is further discussed and fleshed out in other works that analyze the social

construction of health security in terms of the epidemic (Nunes 2016; McInnes 2016). These works inform the research conducted in this thesis.

McInnes (2016) emphasizes the social construction of the epidemic as a crisis and how this construction gained traction through the narrative currently dominant in global health. This narrative, McInnes (2016: 383) holds, does not rest on number of infections or fatality rates per se but rather on a mixture of perceived “globalisation, securitisation and politicisation”. While emphasizing that the suffering caused by the epidemic should not be denied, McInnes (2016: 392) summarizes that

[t]he outbreak tied into the narrative’s theme of the impact of globalisation on health, through both ideas of shared risk and a globally accepted pathway of response which, when it failed, enhanced the sense of crisis. The outbreak was presented as a global health security risk through speech acts which claimed potential state failure, threats to regional and global security and that the spread of the disease threatened the well-being of citizens outside the region. And the poor response to the outbreak revealed weaknesses in global health governance exacerbating the sense of crisis, as well as the privileging of the national interest in response to exogenous threats.

The, also for the research conducted in this thesis, fundamental claim that informs McInnes’ (2016) argumentation is the social constructiveness of a health crises like Ebola through narratives. While the data McInnes (2016) presents to support this claim are mostly speech acts of actors like MSF, the WHO director-general, or the UNSC Resolution 2177 focusing on political decisions taken to address the epidemic, images remain, once again, absent.

The work of Nunes (2016) is one other engagement with the intertwinement of health and security in the context of the Ebola epidemic. He holds that the attention, securitization, and media spectacle caused by the epidemic reinscribed the neglect of Ebola and circumvented a thorough engagement with the epidemic’s complexity. Neglect and the attention generated through securitization, Nunes (2016) compellingly shows, are not opposite poles. Instead, while the securitization narrative emphasized the potentially global implications and the vulnerability of especially the Global North, “the regions, populations and individuals that were mostly affected by the disease were merely the background, or secondary characters” (Nunes 2016: 550).

Both works, in my opinion, emphasize the importance of the in *Chapter 2* raised questions of whose security is neglected, whose security is prioritized, and what, or rather *who*, gets lost

in the entanglement of health and security. While the “visual shock value” (Honigsbaum 2020: 199) of Ebola is acknowledged, a thorough investigation of how images, health, and security are entangled and how this entanglement relates to the questions is missing. The following three analytical chapters seek to contribute to the filling of this void.

6 The epidemic's icon: disentangling the protection suit

Looking through the theoretical lens of *the icon*, I explore the protection suit's different visual manifestations, the network they built and are part of, and how they make and shape the health-security nexus.⁴ I begin this chapter with a vignette tracing how my seeing of and engagement with protective clothing has inspired and shaped the analysis presented in this chapter. To analyze the performative power ascribed to iconic images, I firstly *zoom in* on two images of the award-winning series. In the *zooming out* section, I then follow the protection suit through the three different but interconnected sites of news media, health sector, and pop culture analyzing the meanings and doings of the protection suit as a news media image, as infographic, and as a costume. This following shows how the protection suit as a visual trope connects and interweaves the different genres to a visual network where the protection suit – as device on the ground, as two-dimensional image, and as visual artefact – acts and is enacted as an icon not only of the Ebola epidemic but of health crises in general. I start the analysis based on the rather small initial image collection which consists out of the award-winning images. 21 out of the 39 images in this collection are images showing health workers. Except one of these images, all of them show the health workers wearing protective clothing. All links to the images and artefacts discussed in this chapter are included in the Annex (pp.110).

6.1 Vignette

In many ways this entire PhD project started with the protection suit. In 2014, as part of my master's degree, I spent a semester abroad at the American University in Washington DC. Before I left for the US, I had just learned about different theoretical takes on security, securitization theory being one of them. With these concepts and debates in mind, I heard and watched the news about the Ebola epidemic unfolding in West Africa. In late summer, the university sent out an email informing its students about the emergency plan that would take action in case of an outbreak on campus. This was the first time that I thought health and security would be a fascinating research topic. I started delving into the literature on the health-security nexus that now informs the second chapter of this thesis. Then, with October came Halloween and several of my friends dressed up in protection suits and I started to

⁴ Parts of this chapter are published in the essay: Krause, Katharina, 'Disentangling the Protection Suit. Images, Artefacts, and the Making of the Health-Security Nexus', *Millennium* 49 (3), pp. 472-497. Copyright © [2021] (Katharina Krause). DOI: 10.1177/03058298211040157.

wonder about how health, security, and images might be interrelated. And this topic stuck with me.

I think this story offers more than just an anecdote on how to find a research topic without actively searching for it. Rather, it seems like a good starting point to ask how we relate to and are embedded in our research. This is because my seeing of the protection suit does not end with Halloween 2014. When the Zika pandemic received international attention in the first months of 2016, images of health workers spraying insecticide started circulating. Even though the task of the health workers and the virus their action was directed at was fundamentally different from the Ebola epidemic, seeing the white or yellow protection suit, I could not help the thought “this again” – the visual link to the Ebola epidemic was obvious and tells us about the iconic status of the suit. This notion of “this again” got a different twist with the COVID-19 pandemic where, again, protective clothing played a major role. This time it was not only about seeing protective clothing but about wearing and making it. I have reflected in short texts and diary entries⁵ about the role of mask making (Krause 2020a) and wearing (Krause 2020b) in April 2020 and how the mask is not only a icon of the pandemic's impact on everyday life, but also works as a “multisensory artefact” (Callahan 2020) through which people connect with and make sense of the pandemic. It is based on these experiences – of seeing and wearing – that I want to investigate the protection suit and its location in the health-security nexus in this chapter.

⁵ The *Global Public Health COVID-19 Diaries* is a blog project organized by Owain Williams where scholars from the field of global health and beyond have posted diary entries since the beginning of the pandemic.

6.2 Introduction: protective clothing everywhere

The NYT's cover letter nominating photographer Daniel Berehulak for the Pulitzer Prize begins with the protection suit:

For four long months, Daniel Berehulak performed the same exacting ritual, cloaking himself from head to toe in a protective suit, face mask, three pairs of gloves — and chronicling the full, excruciating arc of Ebola as it tore across West Africa. (The Pulitzer Prizes 2015a)

Apparently, the significance of the Ebola epidemic cannot be understood without the protection suit. The necessity of wearing a suit to be protected from infection and the hardship that comes with wearing it in the “stifling West African heat” (The Pulitzer Prizes 2015a) serves as proof of Berehulak's dedication and his willingness to take enormous risks and troubles to photograph the epidemic. The protection suit, hence, is not only a dominant motive in Berehulak's Pulitzer Prize-winning image series (The Pulitzer Prizes 2015b), but it also shaped the process of taking these images in the first place.

These are just two examples of the many roles protective clothing plays in pandemics and epidemics. The protection suit is without doubt regarded to be a, if not *the*, key device for facilitating medical responses to disease outbreaks today. Using a protection suit during epidemics like Ebola is a complex endeavor and requires the adherence to strict safety protocols (WHO 2014a). It determines the daily tasks of the health workers and especially their interaction with patients. Beyond its medical application, it features in news media reports on health crises, it is used in information material of humanitarian organizations to promote their work and to attract donors; the protection suit even became a popular Halloween costume in 2014 in the US (Brandsonsale 2014). The protection suit, hence, appears to be deeply entangled with the epidemic, both as a medical device and as a visual trope.

Starting from this omnipresence, in this chapter I shed light on to the alleged iconic status of the protection suit (Lynteris 2018: 452). The literature engages with the protection suit as a material object and its role in humanitarian action and health security through Barad's (2007) concept of entanglement (Wezel 2019) or with a focus on protective clothing as a mediating device in humanitarian action (Pallister-Wilkins 2016). Works outside the realm of political science point out the strong visual presence of the protection suit in news reporting (Joffe, Haarhoff 2002; Gerlach 2019) or movies (Albertini 2008) on infectious disease

outbreaks and trace the emergence of protective clothing back to plague masks worn during the 1910-11 Manchurian plague outbreak (Lynteris 2018). Departing from this literature, and coming back to it throughout the chapter, my focus is not so much on the suit as a device deployed on the ground by medical personnel but on its different visual materialization beyond the immediate medical context of a health crisis.

Within the thesis, this chapter serves a twofold purpose. Firstly, on an empirical level, it introduces the protection suit as the first nodal point of Ebola's visual network and explores how health security is enacted and performed through different visual manifestations of the protection suit. Secondly, on a more theoretical level, it constitutes an analysis of the agency of icons and how their circulations and appropriations shape and make health security. In doing so, it broadens the analytical view beyond the two-dimensional image by demonstrating how images *and* artefacts are entangled in connecting and separating different actors of Ebola's network.

The argument carved out in the analysis is that the protection suit as an icon of infectious diseases summarizes and condenses the meaning of the epidemic to the threat of contagion. The protection suit, this is shown throughout the chapter, constitutes a generic icon manifesting not only, as Perlmutter (2006: 54) holds, in "many images across time and space and events" but also in multisensory artefacts (Callahan 2020) like interactive infographics and costumes. In this sense, by "scream[ing] contagion" (Moeller 1999: 92), images and artefacts of the protection suit may constitute "iconic acts" (Heck, Schlag 2012) with their own agency independent from captions and verbal explanations.

Importantly, I pose that the agency of the visual manifestations of the protection suit cannot be fully grasped by conceptualizing it as an "act of showing and seeing" (Heck, Schlag 2012) but that *engaging* (by wearing the suit as a costume, learning about it with an infographic, donating for it, etc.) should be added. Health security, hence, is not made solely between a viewer and image but in a fluid network of human and non-human actors. The different multisensory artefacts – such as infographics and costumes – that enable a more active engagement with the suit beyond seeing and looking speaks to the concept of "appropriation" (Hansen 2015: 275) through which the protection suit circulates and becomes part of a collective visual memory as a "visual cliché" (Perlmutter 2006: 54) of the Ebola epidemic and of infectious diseases in general.

Considering the protection suit as two-dimensional image and as multisensory artefact, I argue that whilst protective clothing physically separates bodies from each other, its visual materializations build and constitute a network that, through the threat of contagion, visually and sensually links bodies of patients, health workers, photographers, and distant viewers. These at times competing makings of health security enable us to see different layers of health security that unfold within the image, between in front and behind the camera, between depicted and viewing person, and, ultimately, between Global North and Global South. The following zooming-in and zooming-out unpacks this argument.

6.3 Zooming in: taking a close look at images of the protection suit

Taking a detail-oriented look at images that feature protective clothing means to take the image itself seriously and to acknowledge that “there is no point in researching any aspect of the visual unless the power of the visual is acknowledged” (Rose 2016: 56). Following the concept of compositional interpretation and thus to consider content, color, spatial organization, light, and the expressive content of an image provides “one way to increase the experiential, embodied response to visual images, because the method entails close attention to all aspects of the image itself” (Rose 2016: 58).

In this spirit, this section starts with two images from the award-winning series as a first attempt to grasp the iconic power of the protection suit. The *celebrity* that comes with the awards the images received is one element of iconic images identified by Perlmutter (2006: 54).

Analyzing two images of the award-winning series, I pose that the protection suit, which dominates both images, puts visible emphasis on the contagiousness of Ebola. In both images, the sharp contrast between the heavy protected health workers and the unprotected children underlines the vulnerability of the unprotected body and the need for protection from the virus. The threat of contagion, furthermore, connects the body of the health workers with the bodies of the patients. Health security, importantly, in the two images takes place exclusively within the image, the viewer remains a passive, distant, and ultimately unaffected spectator.

6.3.1 Figure I.1: two health workers in Monrovia, Liberia

Berehulak took the image (fig. I.1) of two health workers carrying a child on 5 September 2014 in Monrovia, Liberia. This image, I claim in this section, not only emphasizes the

contagiousness of the Ebola virus, it also, due to its otherworldly atmosphere, creates distance between the depicted persons and the distant viewers. In the following, I unpack this argument.

The background of the image, which is taken outside, is dominated by a bright blue wall out of corrugated iron. In the foreground, walking into the image from the right side, we see two health workers in bright yellow protective clothing including white respiratory masks and safety goggles. The health worker on the right carries a disinfectant on his back which is blue as the wall of the building in the background. Due to the plastic hoods, the safety goggles, and the large suits, we cannot tell the sex of the health workers. Between them, the health workers carry a child wearing brown trousers and a shirt with orange and black stripes.

Thinking back to the point where I compiled the images for the in-depth analysis, I remember that I immediately knew that this image had to be included. I now wonder why this was the case. The short, yet unsatisfactory answer, would probably be that I find this image to be *striking*. It is one of the first images that comes to my mind when I think of the Ebola epidemic. When I click through Berehulak's images this is still the one image where I pause, even after working with the image collection for years. Considering the fast circulation of this image, the fact that this image is often the first one referenced in relation to Berehulak's Pulitzer Prize, and that it was also added to the permanent Pulitzer Prize exhibition of the *Newseum*⁶ in Washington DC in 2016, where it was one of 40 large scale photographs that trace the history of the award, suggests that my fascination with the image seems not to be unique.

Tracing the image shows that it was not only published in news pieces describing specific situations in West Africa but also served as a visual summary of the epidemic (and beyond). It achieved a position in Ebola's visual network that meets many of the criteria Perlmutter (2006: 54) defined for an icon: not only did it gain a degree of celebrity by being awarded a Pulitzer Prize and by subsequently being added to the permanent Pulitzer Prize exhibition of the *Newseum* representing the history of the award, it also was included into the end-of-the year reviews (NBC News 2014b) summarizing the year 2014 in pictures. It even represents the epidemic in a "The Decade in Pictures" feature of the NYT (2019) and visualized the Ebola

⁶ The Newseum closed in December 2019 and is currently (as of April 2022) seeking a new location.

epidemic in a feature on “Photos from a Century of Epidemics” (Cowell 2020). This presence of Berehulak’s image speaks to the *prominence* named as one criterion of iconic images (Perlmutter 2006: 54). Hence, this image seems a promising starting point to explore the visuality of the protection suit. Based on my interpretation of the image and by situating my personal encounter with the image into the literature, I identify two elements of the image that demonstrate the relevance of the protection suit and its visualizations for the health-security nexus.

The first reason why I hold this image relevant for the health-security nexus and why I included it into the zooming-in section is that it moves me. The caption tells us that the child’s name is James Dorbor and that he had laid outside the treatment center for at least six hours before the health workers picked him up. Due to the stiff body of the boy, I was not sure if he was alive when the image was taken. I remember googling his name when seeing the image for the first time desperately hoping for a happy ending only to learn that he died the day after the image was taken (Laurent 2014). With the dark skin and clothes in muted colors the contrast between the child and the health workers dressed in bright yellow is immense and highlight the boy’s vulnerability. Apparently trying to touch him as little as possible, one health worker (the one in the front) carries him by one arm, the other one is carrying the foot with one hand, holding the pipe of the disinfectant with the other one. What the image, hence, does – through the visual contrast between the heavy protected health workers and the unprotected child and the lack of physical comfort offered to James Dorbor – is that it in very graphic terms turns Ebola into a highly contagious pathogen of utmost danger, that either leaves the body highly vulnerable (as in the case of James Dorbor) or (as in the case of health workers) in the need of massive protection preventing any compassionate forms of caring.

This threat of contagion is further enhanced due to the contrasting colors blue and yellow that dominate the image. The blue and yellow contrast is picked up by a yellow “X” sprayed on the blue wall of the building. We do not know if it is even related to the Ebola outbreak or if it is only a random graffiti. Nevertheless, given the visual context, it seems like a marker for death and/or danger of contagion. Blue is also the frequent color of the tents and wall paint at treatment centers that re-appears in several other images of the award-winning series. A doctor deployed in Liberia during the epidemic describes the contrast between the blue plastic used in the treatment center and the forest outside as an otherworldly experience (Newman

2015: 30). How close the blue color became connected to the Ebola epidemic is demonstrated by the case of a Liberian school used as a provisional treatment center during the peak of the epidemic. The “haunting blue walls, which surrounded patients dying on thin mattresses on the floor” (MacDougall 2015) have been painted white as a part of the renovation preceding the reopening.

The sober rational behind the bright yellow of the protection suits, which caught my immediate attention, is that it facilitates the detection of contamination with, for instance, bodily fluids. Despite this simple explanation, the effect the color has for a distant viewer like me might be more complex. Colors are in fact held to be “an important locus of research for studying societal issues because, through the significations attached to them, colors (can be used to) do things in a performative sense” (Andersen et al. 2015a: 441). For instance, yellow is oftentimes used as a warning color and thus associated with caution and danger. Looking at the yellow protection suits immediately makes me think of the yellow triangular radiation symbol or the yellow barrel for radioactive waste. The warning sign for toxic material depicting a black skull on yellow ground also comes to mind. In this regard, the color yellow of the heavy protective clothing again emphasizes the contagiousness of the virus that is enhanced and emphasized by the gloomy atmosphere created by the color scheme, the protection suit suggests that utmost defensive action is necessary against a highly aggressive virus. The color scheme of the image, hence, further securitizes the virus by turning it into an aggressive, fast spreading, and hard to contain pathogen.

The second reason why I find this image important in the terms of health security, is that it creates a distance between me as a viewer and the depicted persons. My first association when seeing the image was that of a space mission on a foreign and hostile planet. This is on the one hand due to the contrasting colors, that, to me, create an uncanny aura that resembles a spaceship. On the other hand, this also stems from the images' simple composition. It only shows three persons in front of a steady background, there is no distraction, the blue wall blocks my view, and the image has no vanishing point nor depth. The only minor exception takes place in the right upper part of the image: if we look at this image closely and maybe even zoom in, we see a tree and a small group of people next to the blue wall but both elements are so small that they are easily overlooked and do not distract the attention from the scene in the foreground.

The image, in its simplicity, seems somewhat staged. I remember, that at first glance, I found it hard to believe that I am looking at a *real* photograph and not at an arranged painting or a poster of a science fiction blockbuster. This brings me back to the health workers and the way they carry James Dorbor. Talking about the depicted situation, Berehulak himself says the health workers not being properly dressed picked the boy up “like he was a bag of garbage” (Medhora 2015). The apparent lack of comfort and empathy appears counterintuitive and almost cruel to me. It makes the health workers seem to be cold and emotionless. This is even more the case as we cannot see their faces. The association of the health workers as unemotional and somehow un-human resonates with the notion of the situation taking place in an otherworldly setting. The visual space analogy contributes to an othering of the disease as “part of a world of make-believe” (Joffe, Haarhoff 2002: 967), the *cultural resonance* linking the image to a space mission, constitutes another iconic element (Perlmutter 2006: 55). Monrovia in this image, for me as a distant viewer, does not appear like a city on earth but like a place in outer space. While I am moved by the fate of James Dorbor, the situation feels very distant, almost surreal to me. Security, to put differently, here has its reference point *within* the image and is made between the infected and protected body.

6.3.2 Figure I.2: health worker and treatment center in Paynesville, Liberia

The second image (fig. I.2) I discuss in detail in this chapter was taken by Moore on 5 October 2014 in Paynesville, Liberia. It shows a health worker in an MSF treatment center carrying a child. The headline tells us that the girl and her mother showed signs of infection and were waiting for the test results when the image was taken. I chose this image for in-depth analysis for two reasons. Although the general motive (health worker carrying child) is similar, it differs significantly in terms of colors and composition from the previously discussed image by Berehulak and thus offers additional insights. Secondly, and I further discuss this below, this image is not only widely circulated (like many of the award-winning images) but is also used as a background for presenting statistics on the outbreak and turned into an interactive info-graphic for MSF. Given the high number of images, it is impossible to pick one iconic “Ebola image”, but similar to Berehulak’s image, this one, it seems to me, comes rather close. It, hence, makes sense to me to get to a deeper understanding of what the image shows and does.

In the center of the image, we see a health worker walking towards the viewer. They – again, we cannot tell the sex – is dressed in a yellow protection suit, an additional apron, gloves, a white hood, respiratory mask, and safety goggles. In the right hand, the person carries a blue plastic bag, the left arm carries a child. The legs of the child are naked, it only wears a blue and pink striped shirt. We cannot see its face as it looks over the shoulder of the health worker, the back turned towards the viewer. In the back of the image is a white tent, the front yard consists of grey gravel. There are treetops, maybe of a forest, behind the tent. On the right side, structuring the front yard, fences out of orange net mark corridors that apparently lead the ways to the treatment tent. Parts of this net, partially lying on the ground, are also visible on the left side of the image and thus frame the health worker. There are several wooden and metal made masts with cables hanging between them. Extending into the left foreground of the image, we see a high wooden fence or gate with the white sign inscribed “SUSPECT”.

The atmosphere of this image, in my perception, fully comes to light if I compare it with the previously discussed image by Berehulak. The images differ significantly, yet, in some ways, they do the same. First of all, not being dominated by bright contrasting colors, Moore's image appears more realistic to me. This is also true concerning the way the child is carried. While the health worker in Berehulak's image carry James Dorbor with extreme caution, the child in this case is carried in a much more casual way. Unlike James Dorbor, it also does not show any visible signs of infection. My eyes got immediately caught by the tiny, outstretched hand of the child which seems to touch and hold the health worker's chest in a sign of affection. Maybe I find this particularly moving as I oftentimes carry my daughter the same way and there are images of the two of us in similar poses. This comforting familiarity is interrupted by the protection suit. The suit constitutes a harsh reminder that this is not a scene between parent and child, but the result of an existential crisis. The threat of deadly infection that makes the displayed heavy protective clothing necessary, is further enhanced by the “SUSPECT”-sign. The fence in the left corner reminds me of a prison and while the gate is still open, the sign communicates a looming threat and thus works similarly to the yellow graffiti cross in the previously discussed image.

The protection suit, hence, visualizes the invisible threat of contagion, “[e]veryone outside of the suit is either diseased or diseaseable” (Gerlach 2019: 206). Both, health workers and

patients are located in the health-security nexus – the infected persons are *threatening* as carriers of the virus, the health workers are *threatened* by the risk of contagion. While the protection suit visually separates the body of health workers and children, the imminent threat of contagion connects them. In both images, the protection suit makes the health workers stick out and attracts the immediate attention of me as a viewer. The yellow protection suit suggests a high contagiousness of the virus and turns it, albeit Ebola is not a new and unknown disease, into a mysterious and uncontrollable threat.

Furthermore, the strive for sterility and thus the prevention of infection is visualized through the protection suit, the disinfectant (in Berehulak's image), and the orange fences (in Moore's case). These highly visible measures dominating the two images suggest that utmost defensive action is necessary against a highly aggressive virus. This action, however, is sabotaged by the surroundings. In Berehulak's image, the garbage on the ground contrasts with the sterility of the protection suit. In Moore's image, the seemingly improvised cables, and the traces of nature in the background have a similar effect. The failed sterility and the, although highly visible, only basic medical equipment point to the poverty of the situation reinforcing colonial tropes about "Africa and disease" (Gerlach 2019: 206). This poverty appears especially striking when comparing the scenes in the two images with the prevalent images of COVID-19 patients in Europe or the US which are dominated by highly equipped intensive care units in hospital settings. This sense of failed sterility not only makes the threat of contagion all the more pressing, it also furthers the distance between the depicted situation and the distant viewer. This notion is even stronger in Berehulak's image suggesting the epidemic taking place at a hostile planet.

To sum up this section, the two images of the protection suit emphasize Ebola's contagiousness. The threat of contagion connects the (possibly) infected children with the health workers. The epidemic and its security implications are firmly rooted within the depicted situation. Health security in this zooming-in, hence, takes place within the image remaining distant to me as a viewer. For the following zooming-out, this raises the question of how the threat of contagion unfolds when considering not isolated images but the network they build and are part of. Does the threat of contagion remain fixated within the image? Is the distance between viewer and the depicted situation enhanced or questioned? These are the two questions the zooming-in section poses for the next step of analysis.

6.4 Zooming out: following the protection suit

In this section, I follow the protection suit tracing its circulation and appropriation to further explore its iconic status and what this does to our understanding of the health-security nexus. By zooming out from three different vantage points – news media, the health sector, and pop culture – I discuss the protection suit as photograph, infographic, and costume. The findings in the field of news media show how through the protection suit the body of health worker, patient, and photographer are entangled. The protection suit, which is worn by health workers and photographers, I argue, constitutes a visual barrier separating not only (potentially) sick and healthy, but also draws a line between prepared and un-prepared, strong and weak, and thus ultimately, between Global South and Global North. The visible unavailability of protective clothing renders the affected populations vulnerable, fixates the threat of contagion in the West African context, and evokes a distance between the depicted situation and the distant viewership. However, the analysis of the protection suit as multisensory artefact, I find, challenges this fixation and distance by including the viewer as either appreciating and supporting the mission of the health workers or by haptically engaging with the potential of a spread of Ebola beyond West Africa.

6.4.1 The protection suit's circulation in news media

The first site to be explored in the analysis is the vast field of news media. The findings presented in this section suggest three different facets of the threat of contagion, each associated with different bodies, namely those of the health worker, of the potential patient, and of the photographer. I find that images of the protection suit and their intervisual and intertextual embeddedness separate these different bodies by locating them in the health-security nexus. In doing so, the protection suit, is not only separating sick and healthy but ultimately Global South and Global North firmly fixating the epidemic in the West African context.

The award-winning images discussed in the zooming-in section of this chapter build the first points of departure for assessing the visual circulation of the protection suit. Circulation and the associated frequency and prominence of re-appearing are criteria of icons (Hansen 2015: 271; Dahmen et al. 2018: 285). Following the protection suit, hence, adds substance to its alleged iconic status and sheds light on the configuration of the threat of contagion that is carved out in the zooming-in section.

Protection suit and health worker

In this section, I point out that the suit and the health worker – not only on the ground but in its visual manifestations in different sites of news media – are deeply entangled. Images of health workers in protective clothing make the protection suit visible for a potentially global audience. The agency of the suit is, hence, extended beyond its application on the ground. It locates the health worker in the health-security nexus, putting them in relation to the threat of contagion in two competing ways: as threatened and as threatening.

Departing from the zooming-in section, I firstly follow the images of Berehulak and Moore via the reverse image search tool TinEye. Both images were published for the first time in big media outlets only days after they were taken and, as I will trace in this section, reappeared frequently during the course of the epidemic and also thereafter. Secondly, to broaden the scope, I add two magazine covers to the analysis.

In the case of Berehulak, TinEye identifies the NYT as most frequent place of publication, which is little surprising given that Berehulak took his image series whilst on assignment for the NYT, but also indicates other news outlets like *NBC News* or *El Mundo* as results. For Moore, who worked for *Getty Images* when shooting his award-winning series, the results are more diverse but equally include major international news outlets like the *Guardian*, the *Washington Post* but also MSF. The latter is especially interesting as this already indicates the visual interconnectedness of the realm of news media and the health sector, that is also discussed later in this chapter.

To begin with, it is important to note that only one of the 21 images of health workers in the image series show health workers without protective clothing: Berehulak's image (fig. 1.3) shows a group of six health workers praying in a treatment center before commencing their work shift. In all other images the bodies and faces of the health workers are mostly concealed by protective clothing.⁷ I take this finding as a first indication that suit and health worker are hardly separable.

⁷ One image, taken by Muller, shows two health workers in the process of putting on their protective clothing. While this image shows the health workers with their protective clothing, it constitutes an exception in so far as we can see their faces as the suit is partly removed.

Tracing Berehulak's work in the NYT reveals an interest in the working conditions and daily tasks and challenges faced by the health workers. One example is the article titled "In Layers of Gear, Offering Healing Hand to Ebola Patients in Liberia" (Fink 2014) that was published online on 16 October 2014 and a day later on the front page of the print version of the NYT. The article is part of the seven-piece series called "The Ebola Ward" where between September and November 2014, the NYT reporter Fink and Berehulak documented the epidemic from the perspective of a clinic in Suakoko, Liberia. Images of health workers in protective clothing are the prominent visual motive in these pieces. The text from 16 October 2014 narrates how the meticulous procedures of taking on and off the protective clothing and the exhaustion that comes from wearing it shaped the work of the American volunteers Steven Hatch and Bridget Anne Mulrooney. The visual and textual emphasis that is put on the protection suit throughout the article, where the suit is referenced as a "plastic and rubber armor" (Fink 2014), highlights the constant threat of getting infected and the dedication of the health workers who volunteered to work in such grim settings.

The zooming-in section has already demonstrated how the protection suit condenses the meaning of the epidemic to the imminent threat of contagion. Images, however, do not have any predefined form of agency but are highly relational and act and enact each other in the health-security assemblage. The answer to what (or rather who) is contagious and who is threatened, is hence not a static one.

Consider the two magazine covers of the *TIME* (fig. 1.4) and *The Economist* (fig. 1.5). In October 2014, *The Economist* published an issue titled "The War on Ebola" (The Economist 2014) and in the same year *TIME* magazine named the "Ebola fighters" the "Person of the Year 2014" (TIME 2014). It is a common argument in arts and media studies that magazine covers constitute a genre of their own and have to be understood as iconic culture artefacts (Johnson 2002; Spiker 2017). Magazine covers are held to make a lasting impression on viewers as they aim to attract passers-by with a crisp visual and textual summary of the magazine (Spiker 2017: 377). Furthermore, covers of globally sold magazines like *The Economist* or the *TIME* magazine do not only attract the attention of interested readers but also are noticed by a multitude of random passers-by at the showcases of stores at high frequented places like train stations, airports, and supermarkets. They are part of the everyday life of people around the globe. The fact that the protection suit made it on the covers of news magazines can thus be

regarded to be a sign of its iconic significance. This is especially the case if we consider the “iconic global status and recognition” of the *TIME* magazine (Meisner, Takahashi 2013: 256) and the international attention paid to the annual “Person of the Year” nomination. Even though both covers feature health workers in protective clothing, the message they communicate is rather different.

TIME: Ebola fighters as Person of the Year

The magazine cover shows a portrait shot of a male health worker in front of a white background.⁸ He is wearing a white protection suit. The hood of the protection suit and the white respiratory mask cover large parts of the face. Only the eyes are visible behind transparent safety goggles. The image is surrounded by a red frame. On the top is the headline “Person of the Year” written in black letters, followed by the lettering “TIME” in light grey. In the lower left corner, it says “the Ebola fighters” followed in smaller font by the text “Dr. Jeremy Brown, the Liberian surgeon, 48, turned the chapel of his hospital into an Ebola treatment center”. The white color of the background and the protection suit build a strong contrast to the bright red frame that makes the image an eye catcher. This is not a cover one simply overlooks. The angle and composition of the image correspond with those of a classical portrait photograph and remind me of official images taken for passports or for applications. The protection suit and the covering of the face, however, do not fit this notion. This contradiction puts even more emphasis on the protective clothing, that appears to be grown together with the depicted person as a type of clothing that cannot easily be removed but instead constitute a vital part of his identity.

The fact that the protection suit is prominently featured on the cover of the magazine’s “Person of the Year” series is in itself significant and sets the mood of the cover. It puts emphasis on the risk of contagion and thus the heroic action, courage and dedication of the health workers as they are “the man, woman, group or concept that had the most influence on the world during the previous 12 months” (TIME 2017). The term “Ebola fighter” furthermore adds the notion of war and soldier to the image due to which the protection suit appears to be not only work clothes but a sort of military uniform. A uniform which one does

⁸ It is important to note, that the *TIME* magazine issued five cover versions for the ‘Person of the year 2014’ issue. Four of the covers show health workers without or with very light protective clothing. However, the cover with Jeremy Brown is arguably the most referenced one.

not remove when being photographed. Emphasizing the risk of the health professionals' work not only shines a light on the contagiousness but also on the deadliness of the virus that is portrayed as a cruel war enemy.

The Economist: The War on Ebola

The Economist picks up the war-narrative with its cover headlined "The War on Ebola". The cover shows three health workers in protective clothing. One health worker is situated in the center of the image, the other two are slightly blurred in the background and partly cut off. All three wear a white protection suit. The health worker in the front and the one in the left wear additional yellow plastic aprons. The heads and foreheads of all three are completely covered by white plastic hoods. Tinted safety goggles and respiratory masks cover eyes and mouth, we neither see a single piece of skin nor the eyes of the health workers. Due to the war-reference in the headline, the association of the protection suit with a military uniform from the *TIME* cover is repeated and enhanced.

Even though the general motive is rather similar, I find the atmosphere of this image to be significantly different from the already discussed *TIME* cover. The image in general is darker, the background is unsteady. Thus, the entire setting, compared to the white, illuminated *TIME* cover, appears gloomy and oppressive. This sentiment is further enhanced by the way in which the health workers are depicted. Firstly, the number of persons in the cover makes a difference. For the *TIME* cover it is only one person and we even learn his name, occupation and age. It is easier to emotionally connect with him than with the health workers in *The Economist's* cover. Bleiker et al.'s (2013: 399) analysis of the visual dehumanization of refugees explains this with reference to social-political studies according to which close-up portraits induce compassion whilst images of groups more likely evoke emotional distance between viewers and depicted persons. In the case of the two covers, this effect is further enhanced by the fact that in *The Economist's* cover, we cannot see the face of the health workers, neither does the cover provide any additional written information on them. What we see is a faceless, nameless *army* (consider the headline!). The composition of the image, especially the cutting off of the health workers in the background, also invites speculation on whether there are more health workers outside the image, which makes the notion of an *army* even more threatening.

Why is this relevant for the health-security nexus? First of all, Pallister-Wilkins (2016: 514) points out that the protection suit, while designed to protect the health worker, also constitutes a possible side of transmission. With reference to Voelkner's (2011) notion of circulation of material objects as simultaneously necessary and risk laden for human security, she argues that the protection suit "is an important risk-mediator where its wearers are both *at* risk of catching the virus and simultaneously *a* risk as a possible transmission vector" (Pallister-Wilkins 2016: 519). I find the cover to pick up this element of transmission but to transfer it to the health workers themselves, the emphasis being not so much on the transmission from suit to health worker but setting in one step later with the transmission from health worker to viewer.

Comparing the two covers and Berehulak's image shows how protection suit and health worker are entangled and that the answer to *what* (or *who*!) is threatening is complex and variable. On the one hand, the protection suit visualizes the need to protect the body from a brutal virus. The fact that it resembles a military uniform fits the *war on Ebola* narrative and puts emphasis on the high risk of contagion and also the heroic dedication of the health workers. The visualization of the health workers as a hero, as in the *TIME* magazine cover, is problematic. On first sight, acknowledging and appreciating the dedication of the health worker and their central role in stopping a disease outbreak seems laudable. The hero narrative, however, comes with the risk of romanticizing the precarious work conditions of health workers and glosses over, for instance, underfunded health systems and poor equipment. Health workers should be able to perform their duties without risking their lives. In broader terms, headlines like "War on Ebola" also reflect the growing militarization of global health governance.

On the other hand, health workers may not only be perceived as in need of protection, they may also be regarded to pose a threat to others. The oftentimes emphasized contagiousness and deadliness of the virus easily backfires and comes with the risk of considering not the virus but the actual health workers as a security threat. Admiration, hence, may easily turn into fear and the clear (visual) division between the threatened health workers and the infectious patients is put into question. The dehumanizing effect of the protection suit, as already carved out in the zooming-in section, and repeated in the *The Economist's* cover, visually constitutes the health workers as a distinct and gloomy even threatening species. The health worker –

visually entangled with the protection suit – enters the health-security nexus hence in a two-fold position: as *threatened* by the risk of contagion and as *threatening* by constituting a potential vector. *Chapter 7* on the body in pain shows a similar dynamic surrounding the infected body. Other than the previously discussed image by Berehulak and Moore, I find *The Economist* cover to connect and include the viewer, who (despite the tinted safety goggles), has eye contact with the health worker in the front. The *securitization move*, to use the vocabulary of the Copenhagen School (Buzan et al. 1998), now for the first time, exceeds the image and includes the viewer.

Protection suit and potential patient

In this section, I show that the “bodily barrier” described by Pallister-Wilkins (2016: 512), which determines the interaction between patient and care taker, also becomes a *visual barrier* that not only physically separates health worker and patient in the depicted situations but also draws visual lines between sick and healthy, weak and strong, and ultimately between Global South and Global North. This section focusses not on who is wearing the protection suit but on who is *not* and by doing so explores the visual contrast between the heavily protected health workers and the unprotected lay persons.

The lack of protective clothing for persons outside the health sector becomes visible in images like the one taken by Moore (fig. I.6) on 16 August 2015 in Monrovia showing two men covering their nose and mouth with a handkerchief and the collar of a coat. The blue wall in the background draws a visual line back to the blue treatment centers making the absence of proper protective clothing even more noticeable. Images of newly built Ebola treatment centers by international humanitarian agencies appear like otherworldly islands that contrast the precarious situation of the national health systems and the vulnerability of the local population. The lack of protective clothing and the consequences thereof are also visible in two images depicting (the impossible) interaction with infected bodies. The first shows a crowd of persons surrounding a dead body (fig. I.7). In the other image, a crowd is watching an infected child (fig. I.8). Both images, through the distance kept between patient/body and the bystanders, show that safe interaction with infected persons without protective gear is impossible and the desperation that arises thereof.

This dichotomy easily evokes racial stereotypes by suggesting the inadequacy of the local response, portraying the local population as passive victims, dependent on the help of distant others. One thing, the *visual barrier* of the protection suit does, hence, is emphasizing an apparent unpreparedness of the affected region and the linkage of this with racial stereotypes.

This point becomes immanent when following Moore's image (fig. I.2). Taken a month after Berehulak's image (fig. I.1), it appears not so much alongside news articles describing specific situations of health workers but more in pieces that criticize the missing progress in the fight against the epidemic. For instance, a *Washington Post* piece beginning with Moore's image titled "Here's What the Ebola Epidemic (Still) Looks Like in West Africa" (Larimer 2014) reports on the raising numbers of cases in West Africa despite international efforts. Within the article, which begins with Moore's image, we find many other images showing infected people and their relatives. Similarly, a *Guardian* piece featuring Moore's image from 9 October 2014 states "Ebola Crisis. Global Response Has 'Failed Miserably', Says World Bank Chief" (Elliott 2014). Again, the health worker in protective clothing in the image is not referred to in the text, but rather seems to serve as a visual summary for the epidemic, which, once again highlights its iconic status.

This visual summary appears to be so stable that Moore's image is also used to head a news piece by *Sky News* (2019) about the Ebola outbreak in the DRC in 2019. Neither the situation in Liberia in 2014 nor in West Africa in general at that time is mentioned in the text, the image's caption also misleadingly talks about "The ebola epidemic in the Democratic Republic of Congo has killed more than 600 people" (Sky News 2019) causing the impression that Moore's image is taken in the DRC. The same dynamic is in play in a piece in the *Insider* from June 2019, where Moore's image is again published with a text on the DRC outbreak (Dodgson 2019). Despite the outbreaks and their circumstances being significantly distinct, this difference is hardly reflected in these two examples. I take them as emblematic for an ignorance towards the complexity of the respective disease outbreaks that reflects the broader issue of a colonial perspective that does not make a difference between different African countries.

The protection suit, both in its visibility as well as in its absence, "marks out these West African nations as a hot zone in the midst of a hot crisis and, in the process, frames the outbreak as simultaneously a spectacle and a familiar scene" (Gerlach 2019: 206). The "bodily

barrier” (Pallister-Wilkins 2016: 512) the protection suit constitutes between health worker and patient, hence, when circulating in images, appears to work as a *visual barrier* between Global South and Global North. The images of the (missing) protection suit both visualize and enact the gap between the oftentimes foreign health worker and patient, defining who is unprotected, dependent and in need of assistance and who has the means, power, and knowledge to handle the epidemic. As the next section shows, this gap extends from in front of the camera to the space behind it. This happens through the role of the photographer.

Protection suit and photographer

The scarcity of protective clothing is almost grotesquely illustrated by Berehulak arriving in Liberia “armed with 300 pairs of gloves, 35 Personal Protective Equipment suits, goggles, surgical face masks, hand sanitizers and countless rolls of tape” (Laurent 2014) while the most basic equipment was lacking in the Ebola-affected regions and people took care of their relatives without any or highly improvised protective clothing. (Sung-Joon and Umlauf, Park, Umlauf 2014). In Laurent’s (2014) piece, the photographer is introduced as an actor to the visual network of Ebola who is not only involved in the production of the image, but whose working conditions (remember the quote at the beginning of this chapter) and the background experience offered in interviews play an essential role in the meaning-making of the image. The photographer themselves, hence, becomes located in the health-security nexus.

News pieces like “See How a Photographer is Covering Ebola’s Deadly Spread” (Laurent 2014) or “Q&A: Photographer in Liberia’s Ebola Zone Encounters the Dead – But Also Moments of Joy” (Cole 2014), similar to the articles chronicling the daily work of the health workers (Medhora 2015), emphasize the risk and hardship faced by the photographers. In the case of Berehulak, this interest intensified after the awarding of the Pulitzer Prize in April 2015. For instance, in an article (Estrin 2015) on Berehulak and his Pulitzer Prize, which was published with his image series, NYT’s international picture editor David Furst points out:

Daniel was a veteran of war zones, but this was a new kind of danger [...] He had to face senseless death day after day, and it was soul crushing. He was not ever able to let his guard down and was working in excruciating heat with layers of protection. (Estrin 2015)

The news pieces focusing on the achievements of the photographers come with a less direct text-image relationship where the text does not focus so much on the experiences of the persons within the image but on how the photographers experienced and prepared for

the taking of these images. Security here, hence, is not primarily about who is in the image, but about the person taking the image. The *securitization move* (Buzan et al. 1998), so to speak, exceeds the frame of the image including the space behind the camera. Thus, the protection suit becomes detached from health workers and is associated with the photographer. The same dynamic can be found in case of Moore where, for instance, in an interview piece about him in *National Geographic* (Cole 2014) the dangers of the epidemic were linked to his previous assignments in war zones and the protective clothing he brought to Liberia and wore during his work was discussed in length and also visualized in a photo of Moore himself in protective clothing holding his camera (fig. 1.9).

Following visuals of the protection suit in the field of news media and situating them in the initial image collection specified the iconic threat of contagion associated with the protection suit. It firstly has been shown that the health workers and the protection suit are deeply entangled and put into the health-security nexus both as threatening and threatened. In contrast to this dynamic and tension laden position, following the protection suit furthermore reveals how the body of the patient, who is in void of protective clothing, is located in the health-security nexus in rather static terms, namely as unprepared and vulnerable in the face of the threat of contagion. The protection suit, as I have claimed in this section, is not only a bodily barrier on the ground, but through its visual circulation works as a visual barrier, too, not only separating sick and healthy but ultimately Global South and Global North by firmly fixating the epidemic in the West African context. Finally, in addition to the health worker and the potential patient, the photographer themselves is introduced as an actor to the visual network of Ebola by picking up the contrast between health worker and patient as a contrast between photographer and patient, thus affirming the agency of the protection suit as a visual barrier not only separating bodies but world regions. This zooming-out indicates that health security – alongside the lines of sick/healthy, prepared/unprepared, and thus ultimately safe/unsafe – to be made on not only within the image, but also between the space in front and behind the camera, and between Global North and Global South. So far, the viewer is no actor in the health-security nexus. The next section broadens this view.

6.4.2 From image to artefact I: the protection suit as infographic

Having followed the protection suit as a two-dimensional image in the field of news media, I now further zoom out to explore the meanings and doings of the protection suit as a

multisensory artefact. One decisive element of icons is their widespread circulation across genres (Hansen 2015: 264), which is why I find it crucial to look beyond the news media genre.

The first step to do so is an example situated in the field of the health sector. If one looks up “Ebola” on the MSF website, one soon stumbles across the protection suit as an infographic titled “Learn About Our Ebola Protective Equipment” (MSF n.d.). The graphic is based on Moore’s photograph (fig. I.2). The background of the image is blurred, and different elements of the protection suit (goggles, face mask, gloves, suit, plastic apron, rubber boots) are labelled with red letters on white background. When clicking on these labels, detailed information on the usage of the respective items as well as the price fade in in an extra info-box.

This graphic suitably demonstrates the at times fluid transition from visual image to multisensory artefact. The fact that a photograph (and especially a rather famous one) is used for the graphic instead of, for instance, some animated image of a health worker, is significant. It gives the graphic a naturalist hinge of representing some sort of objective reality (Bleiker, Kay 2007: 140) and thus closely links the graphic to the life of the health worker in West Africa. What sets the infographic apart from images, however, are its interactive features. These features are also the reason why I consider the graphic to be a multisensory artefact instead of simply an image. Instead of *only* looking at the graphic, the viewer can actively click on different elements of the protection suit and by this request additional information.

The MSF infographic is an example of news media image circulating into the health sector. This circulation, however, is by no means one-directional. Following the protection suit as infographic reveals that key health actors like the WHO (2015b) or the CDC (n.d.a) published guidelines and infographics on proper handling of the protection suit in 2014 and 2015 in the context of the epidemic. These guidelines circulated into the field of news media. For instance, in reaction to the infection of two nurses who took care of Thomas Duncan in Dallas, the CDC issued new Ebola protection guidelines. Two days later, on 22 October 2014, the NYT (2014) dedicated an extensive online piece to the “Changes to Ebola Protection Worn by U.S. Hospital Workers” featuring a graphic (fig I.11) illustrating the intensified regulations and four videos originating from the CDC website demonstrating the correct and safe removal of the different items of the protection suit. The videos about the correct removal of the suit point to the double ontological status of the protection suit as a mean to protect from infection and as a possible site of infection. The infographic shows three different levels of protective gear: the

suit based on the original CDC guidelines for health workers who are not exposed to bodily fluids, the “level 2 suit” to be worn in case of contact with bodily fluids, and, finally, the “level 3 suit” featuring an impermeable gown. The “level 3 suit” suit reflects the new safety standards put in place after the Ebola infection of the second nurse was confirmed.

In terms of health security, the two infographics do three things: Firstly, they again emphasize the high contagiousness of the virus and the extraordinary measures it takes to protect the health worker. The protection suit, here, is a solution to this threat and thus as a prerequisite for MSF’s engagement in the epidemic and part of the hospital’s reaction to the possibility of treating Ebola patients. The emphasis on the contagiousness of the virus via the extraordinary protective measures that are necessary – consider the “two pair of extra gloves” and the “extra apron” (MSF n.d.), or the escalating levels of protection (NYT 2014) – “performatively cements” (Wezel 2019: 85) security problems as “notions of security and safety are reinscribed into gloves, trash bags, and rubber boots” (Park, Umlauf 2014).

Secondly, the interactive setting of the MSF graphic connects the visitor of the website with the health worker. By actively clicking on chosen elements of the suit, the visitor of the website can learn more about the suit and the costs associated with it. The donation, which is likely the intended consequence of the graphic, gives the website’s visitor the opportunity to actively contribute to the safety of the health worker and to thus support the *fight* against the epidemic. The visitor of the website who engages with the graphic, thus, becomes a part of the health-security nexus and has the opportunity to support the work of the health personnel. The agency of the infographic goes beyond the act of “showing and seeing” (Heck, Schlag 2012) as it also enables active engagement of the viewer with the protection suit by *clicking* on the different items of the suit and by subsequently *donating* money or by *learning* about the updated standards as in the case of the infographic in the NYT.

Finally, what both infographics share is that they locate the protection suit as a “technological fix” (Pallister-Wilkins 2016: 508) in the health-security nexus. Scott-Smith (2013: 914) in this context proposes a “fetishism of humanitarian objects” that are “credited with magical powers and increasingly seen as indispensable in inflexible approaches to relief”. The focus on protective clothing as a key element in tackling the epidemic, hence, appears symptomatic for an understanding of security as focused on and directed at Western settings while ignoring the situations and dynamics in non-Western settings (Park, Umlauf 2014).

6.4.3 From image to artefact II: the protection suit as costume

This section explores the visual role of the protection suit beyond news media and the health sector. The protection suit is not only a dominant visual motive in the realm of news media and the health sector, but we also find it in various pop cultural manifestations. In this section, I take a closer look at these manifestations and their relevance for the health-security nexus. I do so through the theoretical lens of appropriation, which the literature on icons identifies as a specific form of an icon's circulation (Hansen 2015: 287). Hariman and Lucaites (2007: 37), for instance, contend that “[c]opying, imitating, satirizing, and other forms of appropriation are a crucial sign of iconicity”. Appropriations of icons oftentimes constitute a “site of contestation” (Hubbert 2014: 118) by confirming, confronting or humorizing the “hegemonic vision of society crystallized in iconic images” (Mortensen 2017: 1146).

The first pop culture site that comes to mind when thinking about protective clothing are outbreak blockbusters that tell different pandemic scenarios. Prominent examples are the movies *Outbreak* (1995) or *Contagion* (2011). In both movies, protective clothing plays an important role and is worn by health workers trying to contain the spread of aggressive viruses. In *Outbreak* a fracture in a protection suit even leads to the infection and dramatic death of a health worker. The protection suit here is not only a visual requisite signifying the risk of infection, but an active part of the story. The suit, hence, works as a visual summary of the threat of contagion. How closely pandemic movies and real disease outbreaks are intertwined is demonstrated by the fact that the COVID-19 pandemic led to *Contagion* and *Outbreak* becoming one of the most popular movies on iTunes and online articles comparing them to the current pandemic (Hilderbrand 2020).

Even more interesting and relevant than film seems to me the suit's detachment from the screen and transformation into a Halloween costume (fig I.12) that is sold from 2014 onwards as “the most “viral” costume of the year” (Brandsonsale 2014). The protection suit costume offers entirely new ways of engagement with the epidemic as distant viewers of news media images or outbreak movies may leave the auditorium. By putting on the costume they can (to a very limited extend, of course) experience how it might *feel* to be a health worker. The costume connects the body of the distant viewer with the body of the health worker. Through masquerade they can articulate fears in a much more direct way while simultaneously being protected by the notions of exaggeration and humor as essential parts of Halloween. The

protection suit of the Ebola epidemic is not the only example in this regard. The iconic plague doctor robe, invented by the French physician Charles de l'Orme in the 17th century (Boeckl 2000: 15; Lynteris 2018: 449), experienced a revival in the context of the COVID-19 pandemic as a pop culture artefact and reference for looming death, featuring in Halloween costumes, memes, and TikTok videos. Here, the protection suit as visual artefact reflects, despite humor and irony involved, fears that exist in the respective society (Fishel, Wilcox 2017: 335).

But what exactly are those fears? The threat of contagion has already been mapped with reference to the suit as a medical device and to the MSF infographic. However, this meaning is modified through the translation into a costume. The Halloween protection suit was promoted with the phrase “[t]he deadly Ebola virus has landed in the United States and the crisis has reached new levels [...] are sure to be prepared if any outbreak happens at your Halloween party” (Brandsonsale 2014). Here, the costume gets a xenophobic connotation as it emphasizes the virus as a foreign enemy threatening to invade the US. The costume, hence, does not only embody fears for the physical wellbeing but also the fear of the foreign, the invader, so to speak. The invader in this case is not the virus itself but its personification by the health worker in protective clothing. This constitutes a significant difference to the infographic published by MSF. Whereas in the latter case the health worker was in need of heavy protective clothing and the visitor of MSF website was encouraged to make this protection available by donating, the Halloween costume turns health workers into a security risk themselves.

This dynamic was also in place outside the festivities of Halloween. After the infection of two nurses in the US the NYT (Healy et al. 2014) published an article about the closure of two schools, the quarantining and tracing of possible contact persons of the nurses, and about the possibility of the then-president Obama appointing an “Ebola czar” responsible for all measures taken to prevent a spread of the virus in the US. The article comes (without referring to it) with an image of Jeff Hulbert, wearing a protection suit, safety goggles, and respiratory masks, demonstrating in front of the White House holding a poster above his head saying “STOP THE FLIGHTS!”. The article and the image were published on 16 October 2014 online and a day later on the front page of the NYT's print edition, the image of Jeff Hulbert right at the center. The image is interesting, because, right next to Hulbert is a smiling woman (without protective clothing) posing for a photograph making the victory sign with her left hand. The

image's caption states "Jeff Hulbert of Annapolis, Md., protesting Thursday by the White House against flights from West Africa, was a tourist attraction" (Healy et al. 2014). Both the woman next to Hulbert and the NYT in the caption seem to somewhat mock Hulbert and his demand. Hulbert's action seems like an exaggeration of the concerns voiced and measures taken that are described in the article. Similar to the context of Halloween, the suit as a costume seems to offer ways of, maybe ironically broken, referencing and expressing fears existing in a society (Fishel, Wilcox 2017: 335). Importantly, appropriations, however, "run the risk of feeding into preconceived stereotypical narratives" (Bleiker 2018a: 9).

How these stereotypes in case of the Ebola epidemic looked like in practice, can be seen in several troubling examples. For instance, several states in the US issued a 21 day long mandatory quarantine for health workers returning from West Africa, regardless of whether they were showing symptoms of infection or not (Boseley 2015). The transport of infected Western health workers from West Africa back to Europe or the US was met with enormous media coverage, and Donald Trump, in August 2014 tweeted (most likely without any subtle irony involved) "[t]he US must immediately stop all flights from EBOLA infected countries or the plague will start and spread inside our borders" (Riotta 2020).

On a more theoretical level, the costume demonstrates that images and artefacts are deeply entangled and interdependent. For instance, Bleiker (2018c: 191) points out that the lines between images and artefacts at some point become blurred given that artefacts oftentimes circulate via images and thus can overcome their spatial and temporal fixations. The entanglement of the protection suit, as visual artefact and two-dimensional image, serves as a case in point in this regard. Images of health workers in protective clothing make the protection suit visible for a much broader audience. The agency of the suit is extended beyond the persons wearing it as a medical device and those who are in direct interaction with them. Similarly, the above discussed infographic as a visual artefact is based on a photograph and the Halloween costume can be regarded to be a reference to images taken in Liberia, Guinea, and Sierra Leone during the epidemic. Images and visual artefacts, thus, do not have any predefined form of agency but are highly relational and act and enact each other in the health-security assemblage. ANT with its focus on how human and non-human actors interact and are enacted is a useful theoretical tool to account for the relationality and interconnectedness of images and artefacts (Mol 2010: 253).

6.5 Conclusion: from bodily to *visual* barrier

This chapter analyzed and connected different visual manifestations of the protection suit in the context of the Ebola epidemic and infectious diseases more broadly. It departed from the observed omnipresence of the suit in the initial image collection. Starting with zooming in on two of the award-winning images and by subsequently following the protection suit through news media, the health sector, and pop culture, this chapter moved beyond the award-winning image series and aimed at shedding light on the different doings of the protection suit and its relevance for the health-security nexus. The analysis suggests three interconnected answers to the question of what visual manifestations of the protection suit do to our understanding of the health-security nexus.

Firstly, I showed that, due to its circulation and appropriation, the protection suit can be considered an icon of disease outbreaks condensing their meaning to the threat of contagion. This entails a very specific and narrow notion of health security. The protection suit, as demonstrated in the analysis of images, infographics, and costumes, can be understood as a generic icon manifesting as two-dimensional image and as multisensory artefact, becoming part of our collective visual memory as a “visual cliché” (Perlmutter 2006: 54) of the Ebola epidemic and of infectious diseases in general.

Secondly, I argued that the threat of contagion, which is summarized in images and artefacts of the protection suit, links bodies of patients, health workers, photographers, and distant viewers in different, at times competing, makings of health security. While the analysis of the two images in the zooming-in section suggested a rather straight forward division between the threatened health worker and the threatening patient, this dynamic became more complex if we consider the protection suit’s visual network. For instance, the analysis and comparison of the two magazine covers traced how the health workers are deeply entangled with the protection suit. The suit – this became most clear in a cover of the *TIME* magazine – is a part of the health worker’s identity and visually sets them apart from patients and lay persons. Following the protection suit demonstrated that this entanglement is ambiguous as it is either shaped by a fascination and appreciation of the risks taken by the health workers or by turning the health workers into possible vectors and a threat of infection themselves. The “bodily barrier” (Pallister-Wilkins 2016: 512), which the suit constitutes in shaping the interaction between health worker and care taker, also acts as a *visual barrier*

separating health workers and (potential) patients along the dichotomies of sick and healthy, weak and strong, and active and passive. It is through this dynamic that the suit not only locates the health worker in the health-security nexus but also connects the bodies of the (potential) patient and of the health worker through the threat of contagion. Images of the absent protection suit visualize and enact the gap between the oftentimes foreign health worker and patient, defining who is unprotected, dependent and in need of assistance and who has the means, power, and knowledge to handle the epidemic. The answers to what/who is contagious, hence, are, on the one hand, the virus or Ebola in general, on the other hand, the health workers themselves are rendered contagious due to the dehumanizing effect of the protection suit and the composition of the respective images. This double status highlights the dynamic of Ebola's visual network and suggests that the answer to who is the referent object of the threat of contagion is complex and variable.

The complexity of the protection suit, thirdly, became even more apparent when moving from two-dimensional image to artefact. Exploring the visibility of the protection suit as infographic and costume showed how the distant viewer is included into the making of health security, either through learning and donating or through role playing. The chapter adds theoretical nuance to the making of health security. It demonstrates that health security is not exclusively made between viewer and image in an act of "showing and seeing" (Heck, Schlag 2012) but that the protection suit as multisensory artefact offers various different forms of *engaging* (as in wearing the suit as a costume, learning about it with an infographic, donating for it, etc.) that need to be considered as well. The different visual materializations of the protection suit enable different interactions between suit, health worker and viewer that challenge the notion of the distant and passive spectator.

Overall, following the protection suit enables us to see different layers of health security that discuss the threat of contagion either as a threat *to* the body or *through* the body. Depending on these layers, the bodies of (potential) patients, health workers, photographers, and viewers are connected *and* separated. Security, this becomes clear in the images and artefacts analyzed in this chapter, is made not only within the image, but also in the space before and behind the camera, and between viewer and protection suit.

I. Annex: disentangling the protection suit

- Figure I.1 Two health workers and a child in Monrovia, Daniel Berehulak – 5 September 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure I.2 Health worker and child in Paynesville, John Moore – 5 October 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>
- Figure I.3 Health workers at Bong County treatment center, Daniel Berehulak – 6 October 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure I.4 The Ebola Fighters, TIME Magazine – 10 December 2014; source: <http://time.com/time-person-of-the-year-ebola-fighters-choice/>
- Figure I.5 The war on Ebola, The Economist – 16 October 2014; source: <https://www.economist.com/weeklyedition/2014-10-18>
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- Figure I.9 John Moore in protective clothing in Monrovia, Raymond Zarbay – n.d.; source: <https://www.nationalgeographic.com/adventure/article/140821-ebola-pictures-photographer-john-moore-africa-liberia>
- Figure I.10 Graphic "Learn about our Ebola Equipment", MSF – n.d.; source: <https://www.msf.org/interactive-learn-about-our-ebola-protective-equipment>
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- Figure I.12 Ebola Containment Suit Costume, Brandsonsale – n.d.; source: <http://www.brandsonsale.com/halloween-costumes-2014.html>

7 Feeling pity, feeling fear: the body in pain and the health-security nexus

After the protection suit, the body in pain is the second visual node this thesis explores. Besides the protection suit, images of the body in pain are the second prominent motive of the award-winning image series.⁹ Out of the 39 images of the award-winning image series, 25 of them show either sick, dead, or grieving bodies. Generally, they are characterized by close-up pictures making visible the physical and psychological distress and suffering caused by the epidemic. The chapter commences with a vignette that reflects on the challenges I faced and the curiosity that motivated me while writing this chapter. From there, I move to zooming in on three different images of the award-winning image collection. Each of them shows different elements – sickness, grief, and death – of the body in pain. Building on that, the zooming-out section then explores how the body in pain resonates with the emotional registers of pity and fear. The following process in this chapter is, different to the chapter on the protection suit, not so much guided by the goal to evenly cover the three different sites of news media, pop culture, and the health sector. While, as I point out throughout the chapter, the body in pain also visually manifests in the realm of pop culture and the health sector, in for instance, educational posters made available by the CDC or in comics featuring zombies, this is not the focus of the chapter. The emphasis, instead, is on photographs published in news media outlets. I choose this focus, because photographs, especially of traumatic images showing human bodies, are held to “illuminate the visceral nature of tragedy and human hardship far better than can any words” (Hutchison 2018: 307). All visual material discussed in this chapter is linked in the Annex (pp.143-144) of this chapter.

7.1 Vignette

In retrospect, out of the three empirical chapters of this thesis, this was the hardest one for me to write. Not because the analysis was particularly difficult or fruitless, but because I found the work with the graphic images and the many personal stories attached to them emotionally challenging. Several breaks were necessary to keep me going and I was and still

⁹ Parts of this chapter are published (and translated into German) in the essay: Krause, Katharina, (2021) ‚Leidende Körper sehen – Bilder, Emotionen und der Nexus von Gesundheit und Sicherheit‘, *Zeitschrift für Internationale Beziehungen* 28 (1), pp. 127-150. DOI: doi.org/10.5771/0946-7165-2021-1.

am constantly struggling with how to deal with these images, both, as a private person and as a researcher.

I was working on the first draft for this chapter when the first wave of the COVID-19 pandemic reached its peak in the spring 2020. It was then when I noticed that my interaction with the images of the body in pain (images with which I have worked for years) changed. On the one hand, I noticed that what I thought was some sort of professional distance got lost. Telling myself that the situation depicted in the image is over now, that the suffering in this image belonged to the past, became harder and almost impossible in the midst of a pandemic. The moment I realized that locating the images in the past and thus achieving some distance between myself and the image was my coping mechanism, it stopped working. I found myself hastily clicking through the images, actively avoiding those I found the hardest to look at. I also stopped printing the images and pinning them on the board over my desk at my (home)-office, because I did not want to see them (anymore). Looking back, I believe this was partly because I felt compassion for the persons in the image, but most certainly also due to my own fears related to the current pandemic. I felt guilty because this seemed inappropriate, and I was afraid I was not doing these images justice. I also began to wonder how emotional distance (or the longing for it) and emotional proximity related to images of the body in pain. Why did the experience of an actual pandemic (from a very privileged position, too) made it harder for me to look at the images taken during the Ebola epidemic?

On the other hand, I sensed that the COVID-19 pandemic somewhat sharpened my view for the images of the body in pain taken during the Ebola epidemic. In a diary entry (Krause 2020c) on 24 July 2020 I wrote:

In March and April 2020, when Europe was the epicenter of the pandemic and cases in the US started to rise as well, I found photographs of Ebola and COVID-19 to be very different. In the former case, images of grief, sickness and death were the norm. Whereas the graphic nature of bodily suffering is striking in the case of Ebola, it is the visual absence of the body in the case of COVID-19 that caught my attention. Here, I find the body not to be simply invisible. Rather, the body seems to be present through different kinds of invisibility. For instance, the body is 'actively absent' in images of places usually crowded with people. Images of the deserted Champs de Mars in Paris or the Brandenburg Gate in Berlin demonstrate how the pandemic and the lockdown fundamentally shaped and stopped everyday live forcing bodies out of public places. Furthermore, we (with 'we' I refer to the viewers of mainstream media in Europe in March and April 2020) see images where the body is invisible in a somewhat concealed form. [...] In addition to exposing the colonial gaze on humanitarian crises, the visual absence of the dead and suffering body in the case of COVID-19 in Europe and North America raises the question if the magnitude of the pandemic can be fully understood without 'visual proof' of

the devastation the virus can cause in the body. Given that we cannot see pathogens with the mere eye, seeing what a virus does to the human body is one essential way of how we perceive, understand, and ultimately deal with health crises. Referring to the 'identifiable victim effect', Sarah E. Lewis argues that the 'virus is much harder to combat' without seeing the pain of individuals. This argument implies that graphic images of, for instance, intubated persons and grieving relatives could counter the persisting trivialization of the pandemic as 'just another flu'. I am, however, not sure if this would necessarily be the case. After all, graphic images of suffering not automatically create compassion but may work in the opposite direction by fostering 'compassion fatigue'. So, is there some sort of 'need' to see and show bodies in pain? There are a multitude of reasons why I find the images of dead, sick and grieving bodies in the case of the Ebola epidemic problematic. Yet, the different forms of invisibility of the body in the case of COVID-19 seem to be (for very different reasons, but still) difficult as well. In the end, I do not know if asking for a 'need' to see bodies is the right question in the first place.

I am still not sure, if there is an actual *need* to see suffering bodies. What I am convinced of, however, is that images of the body are powerful and thus play an important role in how we make sense of humanitarian crises. My experience whilst working with the images of the body in pain consolidate my motivation to explore the interplay of images, the body, and emotions and the sorts of distance and proximity they can support.

7.2 Introduction: bodies in pain

His stark and irrepressible images, at once brutal and compassionate, helped force the world to care about a region where suffering is expected, even tolerated. (The Pulitzer Prizes 2015a)

Pathogens are invisible for the human eye.¹⁰ Instead, the marks they leave on the human body constitute one decisive visual element through which people make sense of health crises. These type of images, which I summarize with reference to Scarry's (1987) landmark work under the term images of the "body in pain", are spectacular and dramatic – they not only depict intense emotions; images of that sort are also held to evoke strong emotions within the viewer.

But what exactly is it that seeing bodies in pain does to our understanding of the Ebola epidemic in West Africa? The above quoted NYT's cover letter nominating Berehulak for the Pulitzer Prize provides a straightforward answer to these questions: Berehulak's images of pain and suffering are regarded to be powerful and performative as they "force" the global audience to "care". This statement is rooted in the widely shared belief that graphic images of suffering are instrumental to the mobilization of humanitarian action.¹¹ Due to their assumed ability to cause emotions like sympathy or compassion that prompt the viewer to take some sort of humanitarian action, images of suffering are held to be "one of the core mechanisms" (Käpylä, Kennedy 2014: 257) of modern humanitarianism.

I agree with the quote to the extent that images of the suffering body are powerful and certainly played a major role in attracting attention to the epidemic. The analysis in this chapter, however, complicates the assumed causal connection of seeing suffering and feeling compassion. Following the visual manifestations of the body in pain throughout the course of the epidemic and through different health crises demonstrates that they can both evoke a sense of distance *and* proximity and may cause allegedly positive emotions like sympathy, pity, and compassion as well as negative ones like apathy, disgust, and even fear. The answer to the question of what images of the body in pain do, hence, is not a simple one and cannot be found in the analysis of the isolated image's content alone. Instead, zooming in and out on the different visual manifestations of the body in pain and following it through the network to different sites proves to be a productive way to trace its different meanings and doings.

¹⁰ The role of the microscopic image, through which this invisibility can be overcome, is the subject of *Chapter 8*.

¹¹ For an overview of the history of emotions, see Hutchison (2019).

Understanding how visual manifestations of the body in pain contribute to the making of the health-security nexus helps us to understand the fluid and dynamic nature of health security.

In this chapter, I follow the motive of the body in pain through the theoretical lens of emotions asking how it contributes to the epidemic's visual network and what it does to the health-security nexus. Building on the premise that emotions are socially and culturally constituted (Hutchison 2014: 4), this chapter argues that seeing the body in pain in the context of the Ebola epidemic did not only speak to the emotional register of pity, that is usually associated with seeing suffering in humanitarian crises, but simultaneously activated the emotional register of fear socially and culturally (think about all the outbreak movies but also about past pandemics like SARS) associated to contagious diseases.

Therefore, I maintain that infectious disease outbreaks constitute a specific kind of humanitarian crisis that challenges the assumption of an almost causal relationship between seeing suffering and feeling compassion by demonstrating how seeing the suffering body connects the feelings of pity and fear. Here, the overall ANT framework enables me to trace the tension between the threat the epidemic poses *to* the body and the threat the virus constitutes *through* the body and hence to understand how different bodies and their visual manifestations are connected as well as separated in the health security assemblage. By zooming in and out, this chapter demonstrates how the emotional register of pity is not situated somewhere outside the health-security nexus but plays an active part in it.

7.3 Zooming in: taking a close look at images of the body in pain

Each of the three images discussed in this zooming-in section focuses on a different aspect of the body in pain: Muller's image (fig. II.1) of a patient in a treatment center is an example of visual representations of a body that has contracted the virus. These kinds of images show the viewer what an infection with Ebola does to the body. The second image (fig. II.2), taken by Moore, shows an infected person and a desperate relative as one example of how the contagiousness of the virus leaves relatives unable to help and to take care of their loved ones. The final image (fig. II.3) by Berehulak depicts a dead body suggesting death as the ultimate and inevitable consequence of infection. Analyzing the three images in depth is the first step to approach the three elements that in this thesis together constitute the body in pain: infection, grief, and death. The zooming-in shows, I argue, how the body in pain is located in

the health-security nexus with a double role: of the vulnerable body existentially threatened by a cruel virus and as a contagious body that can transmit the virus to others.

7.3.1 Figure II.1: patient at a treatment center in Hastings, Sierra Leone

Muller's award-winning image series starts with a photograph of two health workers and a patient (fig. II.1). The image was taken on 23 November 2014 in Hastings, a city close to Sierra Leone's capital Freetown. It appeared in a variety of international news outlets in late 2014 and 2015 and is probably the most popular one of the award-winning series. In an interview with Muller, the magazine *National Geographic* (Weintraub 2015b) referring to the image, tells its readers "Muller has covered wars and other catastrophes, but in Sierra Leone he witnessed one scene so searing he hopes never to see another like it". Again (remember the "War on Ebola" cover of the *The Economist* (2014)), the epidemic, and specifically its effects on the body, is put into proximity with war, suggesting that the scenes photographed by Muller might be even harder to endure than images of war cruelties. Whereas visual manifestations of protective clothing (*Chapter 6*) visually marked the health workers as soldiers, visual manifestations of the body in pain appear to focus on the war's victims.

The picture is taken outside. In the image's center, we see three persons: two health workers who are holding and lifting a man in between them by his arms. The two health workers wear protective clothing, including rubber gloves, respiratory masks, additional face shields, and safety goggles. Like in previous images (*Chapter 6*), we cannot see their faces. The man in the middle only wears white trousers. The mud stains on his trousers suggest that he fell and is now about to be pulled up again by the health workers. The man is emaciated, we see the ribs shining through his skin. The man's eyes are wide open but empty. The depicted scene takes place in the corner of two massive stone walls that is topped with barbed wire. The ground is uneven, mud is piling up and the man in the middle seems to be kneeling in some sort of pit. From the caption we learn that the man, apparently in a late stage of Ebola infection and delirious, escaped the isolation ward and tried to climb over the wall of the treatment center where he collapsed and was eventually retrieved by health workers.

I find the image horrific and extremely hard to look at. The delirious look in the patient's face, the fact that he is so weak that he needs to be lifted up by health workers, and the emaciated body leave no room for optimism – we see a man shortly before his death. What I find especially unsettling about this image is not only that the depicted person is about to die,

but the way he dies. Due to the barbed wire, the treatment center resembles more a prison than a medical facility. As if all of this is not grim enough, it is raining. To me, this image depicts complete misery. Everything about this image is awful. There is no hope, neither for recovery, nor for a peaceful death.

In terms of health security, I find this image to do several things. Firstly, it shows how much devastation the virus can cause in the human body. In the image, we see a man that has not only lost control of his body but also of his mind. The suffering depicted in this image is clear and inescapable to the viewer. The virus, without doubt, is an existential threat to the body. Secondly, the image clearly speaks to the previous chapter on the role of the protection suit. The visual contrast between health workers and patient once more highlights the omnipresent risk of infection. The body in pain and the protection suit are enacting each other. Thirdly, there is the notion of imprisonment suggesting the need to separate patients from society, even against their will. Muller himself seems to be aware of these associations. In the interview with *National Geographic* (Weintraub 2015b) he explains that “I fear that the picture gives an impression that things at Hastings are out of control, but that's not the case. It's just a graphic picture of how bad Ebola gets”. The image of the body in pain is thus framed as offering “glimpse of the real” (Bleiker 2018a: 12) having ““eyewitness” authority” (Zelizer 2005: 29).

7.3.2 Figure II.2: patient and family member in Monrovia, Liberia

The second image was taken by Moore in a closed primary school that had been transformed into a treatment center on 15 August 2014 in Monrovia (fig. II.2). It depicts two persons: an Ebola patient called Ibrahim Fahnbulleh and his wife Omu. I picked this image for in-depth analysis as it is remarkable in various ways. First of all, it sticks out due to the dominant blue color of the walls and thus speaks to the images already discussed in the previous chapter (*Chapter 6*). Secondly, it however differs from these images as it is one of the few images that show patients without health workers. This also sets the image apart from the first photograph discussed in this chapter. I find this to be a new, and in this thesis so far unexplored, aspect that is worth looking into.

The picture is taken inside a room with blue walls that draw. There is no furniture. A chalk board on the wall in the left part of the image is most likely a left over from the room's original purpose as a primary school. In the image's center we see a woman, her hands are pressed

against her forehead in what appears to be a gesture of desperation. We cannot see her face but based on the body language, I assume that she is crying or screaming. In front of her, we see a man lying on the floor, he is only dressed in white shorts. The caption tells us that the woman is Omu Fahnbulleh and on the floor is her husband Ibrahim, who, weakened from the virus fell and got unconscious. The floor is wet, it is impossible to say whether this is due to bodily fluids, disinfectant, or something else.

Like the first image, I find this image devastating. We see Ibrahim Fahnbulleh lying on the ground in a stiff unnatural way, it is hard to imagine that he had a chance to recover, his imminent death seems unavoidable. Similar to the first image, the loss of control and dignity that comes with infection is omnipresent. Lying on a wet, hard floor, barely dressed and without help and comfort seems like a horrible way to endure sickness and to await death.

Unlike in the first image, however, it is not so much the suffering of the infected person (although this is already horrific), but more the devastation of Omu Fahnbulleh that oppresses me the most. Besides images of health workers either taking care of patients or evacuating and burying the bodies of Ebola victims, this image sticks out as it does not depict physical interaction between patient and health worker but shows the grief of a family member. Different from the health workers in the first image, there is nothing Omu Fahnbulleh can do to help her husband. Without protective clothing, physical contact to infected persons comes with the high risk of contagion, which is why she cannot touch and comfort her husband. The image shows her in a state of helplessness that it is painful to witness even from the point of a distant observer. Ebola in these images poses a massive threat to the body of the patient and of people close to them, leaving friends and relatives of infected persons in agony. When accepting the Pulitzer Prize, Berehulak vividly described the cruelty of Ebola: “It preys on our humanity — on everything that makes us human. People can’t hold their loved ones in their last dying moments because that’s when the virus is the most potent” (Estrin 2015).

7.3.3 Figure II.3: dead body and health worker in Monrovia, Liberia

Having discussed visual examples that depict both grief and sickness, the third motive that dominates the award-winning image collection is the dead body. We either see the dead body wrapped and concealed in plastic body bags which are carried away by health workers, or we see the precursor of these images, namely the uncovered body that is, for instance, disinfected or examined and prepared to be eventually removed by health workers. One

example of the latter is an image Berehulak took of the body of a 30-year-old woman in Monrovia (fig. II.3). I find this image to continue and alter the story told by the two previous images, which is why I included it into this section of in-depth analysis.

Other than the two previously discussed images, this photograph is rather crowded. We see five health workers in protective gear and one body of an Ebola victim. In addition, the arm of a sixth health worker holding a disinfectant pipe, extends into the image from the left side. The arm is disinfecting a health worker who faces the pipe of the disinfectant with slightly outstretched arms. The other four health workers are moving around the body that is lying on the floor. From the caption, we know that this is the body of a 30-year-old woman who presumably died of Ebola. She is lying on her back, up to the chest she is covered in blankets, we see her head and one arm. Looking closely at the image, we see that the body lies on a black plastic sheet, which is most likely the body bag which one of the health workers is about to close.

I am not sure if the image is taken inside or outside. In the back, we see the walls of a building. The surroundings seem very poor and simple to me. The walls in the back are dirty, the floor is muddy, the entire atmosphere speaks of misery and poverty. There is clearly an aesthetic element that echoes the previously discussed blue and yellow contrast. The blue shirt of the woman builds a visual connection to the blue protection suit of the arm of the health worker on the left side. The yellow rubber gloves link to the yellow blanket that partly covers the body.

On first comparison, one could argue that this image shows less emotions than the first two. There is no pain like in the first image, and no grief as in the second one. Instead, this image shows health workers apparently following calmly (we cannot see their faces, so we have hardly any clues on their emotions), what I assume are, the standard procedures of retrieving a dead body. Nevertheless, and this again emphasizes that images not only depict, but also evoke emotions, I am deeply moved by this image. What strikes me most and what makes the image so oppressive to me, is the loneliness I see in it despite the depicted crowdedness. There are no family members, no friends. The woman in this image seems alone, no one is grieving for her. The caption gives a horrible explanation of why this is the case. It quotes a health worker saying: “we came here for the husband last week, we’re back today for the wife, and maybe next week we’ll be back for the children” (The Pulitzer Prizes 2015b).

Keeping this thesis' network perspective in mind, it becomes apparent that the body in pain does not work in isolation but is enacted in relation to the motive and images of the protection suit. Both elements speak to each other. The body in pain is what the protection suit seeks to protect the health worker from. The body in pain, so to speak, is the consequence of the absence of the protection suit. This dynamic is in play in images that depict both the body in pain and health workers in protective clothing (see fig. I.1, fig. I.2, fig. II.1., fig. II.3), but also works in the visual network where images of the body in pain and images of the protection suit enact each other.

In sum, the zooming-in into the three images discusses the body in three states: in sickness, in grief, and in death. The security element common in all of them is the visualization of the pain the virus does to the human body – both, in physical terms to infected persons and on a psychological level to relatives and friends. The body in pain is shown in a state of vulnerability and helplessness emphasizing the threat an infection with the Ebola virus poses. The images resonate with the “killer virus” narrative (Cullinane, Park 2015) and portray the virus as a deadly and utmost atrocious threat. Furthermore, the three images already hint the tension between the vulnerable and the contagious body that is more thoroughly unraveled in the following parts of this chapter. Key questions that this section raises for the next part of the analysis are how the double status of the threatened and threatening body are embedded in the emotional registers of pity and fear. How is the threat of infection negotiated in these two registers? How do they connect and separate bodies and what does this imply for our understanding of the health-security nexus?

7.4 Zooming out: following the body in pain

The zooming-out section of this chapter analyzes how images of the body in pain during the Ebola epidemic resonate both with the emotional register of pity and with the emotional register of fear. In a first step, I follow the body in pain through time arguing that, by visually echoing previous crisis photography, the body in pain is deeply entangled with the socially well-rehearsed emotional register of pity. Pointing out the stereotypical portrayal of and the colonial gaze on the persons directly affected by the epidemic, I argue that the emotional *distance* associated with feeling pity separates the body in pain and the body of the viewer. The body in pain, in this regard, is fixated in the West African context.

The second part of this section, then, explores the connection of the body in pain to the emotional register of fear, which, with a focus on contagion and viral spread, is deeply entrenched with infectious disease outbreaks. I argue that, while the emotional register of pity is characterized by emotional *distance*, feeling fear is characterized by the perceived physical *proximity* of the body in pain and the body of the (not so) distant viewer. The body in pain, hence, becomes global and dislocated from West Africa. In the conclusion I argue that the fixation of the body in West Africa on the one hand, and its dislocation on the other hand are no contradiction but rather one key characteristic of the role the body in pain in the health-security nexus.

7.4.1 Feeling pity: Ebola as a threat *to* the body

Research on images of suffering, especially in the context of humanitarian crises, finds that images of suffering, even though habitually published with the aim to mobilize aid and compassion, often turn the depicted persons into dependent and passive victims and thus objects of pity (Campbell 2003; Bleiker, Kay 2007; Campbell 2012; Hutchison 2014).

Pity, and this resonates with the research presented in this chapter, as Hutchison (2014: 8) points out, connects and involves “an actor (viewer) and the acted upon (sufferer)”. The connection between viewer and victim is, hence, characterized by a social and emotional hierarchy and distance as the “politics of pity” evoke sympathy and compassion for the sufferer but simultaneously leave the audience in a state of detachment (Hutchison 2019: 229) that Hannah Arendt ([1963] 2006: 85) describes as a way “to be sorry without being touched in the flesh”. Tracing that images of dead bodies featured in the media are more likely the bodies of foreigners, Campbell (2004: 64) speaks of a “cultural anaesthesia” given that these bodies are “little more than a vehicle for the inscription of domestic spaces as superior”.

I suggest in this section that the visual network of the Ebola epidemic resonates with and reinvokes this notion. In theoretical terms, this underscores the importance and richness of the network as an analytical tool. The meaning and doing of an image do not only reside within the image itself. Instead, its enactment through and interconnectedness with other images in the network matters. The next section follows the motive of the body in pain back in time showing how it links Ebola to previous crises. To do so, I draw on the rich literature published on photography of the suffering body and put it into relation with images taken during the Ebola epidemic. Building on that, I then demonstrate how the colonial gaze on images of the

body in pain in the context of Ebola is not only characterized by a passivation and victimization that is well established in previous crises but also by elements that blame and ascribe guilt to the body in pain.

“Lone women and children in distress”¹²

While the health workers in the award-winning series mostly remain nameless and faceless (*Chapter 6*), the captions showing the body in pain oftentimes specify the names and also parts of the story of the grieving, deceased or infected person. Following the images of the body in pain from the award-winning series leads me to news media pieces that in detail narrate the stories and tragedies of the depicted persons. In these cases, image and text are directly connected. The image is not a random illustration for but the actual subject of the written text. Such attempts to humanize a crisis not only run the risk of resulting in the objectification of its victims (Hutchison 2014: 8), but a “over-representation” of pain might also fixate the person experiencing pain in their suffering and dependency on (most of the time foreign) aid (Ahmed 2014: 22).

One example in this regard is the short *NBC News* piece of 10 October 2014 (NBC News 2014a) telling the story of “Ebola’s Pain” through the story of Mekie Nagbe, a woman who died of Ebola. The text is embedded in two of Moore’s award-winning images. The first one (fig. II.4), above the text, shows Sophia Doe, Mekie Nagbe’s mother, and two children sitting and lying on a muddy floor outside. Sophia Doe is crying; her arms are outstretched in a gesture of desperation. On her lap lies a toddler and next to her a slightly older child who is crying as well. From the caption we learn that these children are her grandchildren. This image is hard to endure as it graphically summarizes the pain, desperation, and the helplessness of the surviving relatives. The text further explains that due to safety protocols and the infectiousness of the body after death, burial ceremonies are impossible. The text ends with an image (fig. II.5) of a woman who, whilst crawling, throws a hand of sand on the body of her deceased sister who is, wrapped in a plastic body bag and put on a stretcher, carried away by health workers. Like the first image, this is a particularly haunting one as it gives the viewer an

¹² In his seminal work on famine photography, Campbell (2012: 80) identifies and problematizes the image of “lone women in children in distress” as a key motive in disaster photography.

idea of the pain the relatives of Ebola victims must endure and again highlights the severity of the virus that makes a dignified burial ceremony impossible.

Following the image of Sophia Doe and her family via TinEye also leads me to a *Daily Mail* piece from 12 October 2014 showing “The Heartbreaking Reality of Ebola” (Evans 2014) based on 21 images of desperate family members, dead bodies being retrieved by health workers and only short textual descriptions of their content in between. Importantly, the images here do not seem to illustrate the text, instead, the news-value of the article seems to rest on the high number of images that are specified by short text sections. Most of the images in this piece are taken by Moore. The number of images in this piece is, for me as a viewer, overwhelming. There are many images of the same situation taken from different angles and apparently only minutes apart and while one image would have been (probably more than) enough to visualize the “heartbreaking” situations caused by the epidemic, the mass of images included in this piece seem clearly voyeuristic to me and resonates with the argument that seeing distant atrocities is a “spectator sport” (Humphrey 2013: 102) objectifying victims and generating indifference and distance instead of care and affection. The “[r]eality of Ebola” (Evans 2014), in this image, is narrowed down to the grief and helplessness of the relatives of persons who succumbed to the virus. There is no agency, no resilience, and, after all, no hope.

Taking a step back, it is striking that the motive of the family of Sophia Doe strongly resembles the prominent motive of disaster photography that Campbell (2012: 80), with reference to famine photography, summarizes as “lone children or women in distress”. This motive is held to constitute “a classic—as well as stereotypical and readily identifiable—emotional humanitarian symbol” (Hutchison 2014: 9) emphasizing the helplessness and passivity of the affected persons. Hutchison (2014) lines out this dynamic of disempowerment in the context of the 2004 Asian tsunami and its visual representation in western news media. I find the motive, especially the gesturing of Sophia Doe to be very similar to the image of a woman hospital in Nagappattinam in the southern Indian sitting on the floor of a hospital next to dead bodies of children that Hutchison (2014) discusses in her article. In both cases, there is nothing subtle about these images. They immediately and directly confront the viewer with loss, grief, and utmost desperation. I agree with Hutchison (2014) that this type of image, due to the cultural symbolism and the emotional power associated with it, provides

a very powerful yet one-dimensional view of a humanitarian crises fixating women in the gendered cliché of being vulnerable, helpless, and passive.

Another visual node in the network, besides famines and the Asian tsunami of 2004, that is encountered when following the images of the body in pain, is the HIV/AIDS pandemic. Bleiker and Kay (2007: 147-151), for instance, discuss the humanist aspirations of the 1986 image by Ed Hooper, depicting a Ugandan woman named Florence and her baby Ssengabi. Florence is holding the sleeping Ssengabi her eyes directed at something or someone outside the frame. The photograph shows them sitting outside in front of their home in Gwanda. Both appear to be emaciated and sick. The image circulated widely and provided a face to HIV/AIDS in the early days of western public awareness of the health crisis (Bleiker, Kay 2007: 147). The motive of a sick person weakly and seemingly apathic and helplessly sitting on the ground is visually echoed by photographs of the tsunami of 2004 and the Ebola epidemic.

The same dynamic can be found in famine photography (Edkins 2000; Campbell 2003, 2012). Here, the (visual) emphasis on bodily suffering, according to Edkins (2000: 39), contributes to a “medicalization of famine” that ignores structural factors and systemic inequalities. Chouliaraki (2018: 163) with reference to Lissner (1979) describes the generic visualizations of the starving body as

devoid of individualizing features and taken out of their context. They are naked or half-naked. [...] They do not reflect real human bodies with a life history. They are, rather, curiosities of the flesh that mobilise a pornographic spectatorial imagination between disgust and desire.

In addition to the grieving mother, these images also share the depiction of children. The “spectacle of the suffering child” (Burman 1994: 246) condenses the complexity of an event and again “taps into stereotypical sentiments that again promote particular understandings of the image as well as the trauma of the catastrophe more generally” (Hutchison 2016: 194). I find this focus on the motive of the lonely child to visually link the Ebola epidemic to famine photography. Consider this iconic example: The images of the child Luke Piri appeared in the Daily Mirror in the context of the famine in Malawi on 21 May 2002 under the headline “Africa’s Dying Again” (Antonowicz 2002). In the images the distended belly, the exposed ribs, and emaciated arms of the boy are clear signs of severe malnutrition. In his work on famine iconography, Campbell (2012) discusses the images and demonstrates the visualization of

famine to be based on individual passive victims that feed into the depiction of Africa as a sick and lost continent.

Examples from the award-winning image series seem bitterly familiar in this regard. Two examples are the images by Muller and Berehulak that both show young children that were orphaned by the epidemic. According to the caption, the picture by Muller (fig. II.6) depicts Molai Kamara, 12 years old, who lost his entire family to Ebola, while he tested negative for the virus. His picture illustrates a *National Geographic* story (Weintraub 2015a) about the difficult situation of the more than 11,000 children who Ebola left without parents and family to take care of them. A girl, nicknamed Sweetie Sweetie, shares this fate. She was photographed by Berehulak (fig. II.7) in a care center in Porto Loco, Sierra Leone, after she had lost both her parents to the virus. Her story is featured in a NYT piece (Gettleman 2014c) which recounts that Sweetie Sweetie, after both her father and sister had died from Ebola, followed her already sick mother to a treatment center and took care of her, even if she is just about four years old. After her mother's death she wandered through the treatment center, asking people "Do you want me?". None of her relatives wanted to take care of her out of fear that she may contract the virus. I find these images, even though they do not depict sickness, death, or vivid grief, extremely hard to look at because of the loneliness they communicate. The lack of a caring parent or oftentimes any adult is devastating.

Despite famines, the tsunami, the HIV/AIDS pandemic, and the Ebola epidemic being very distinct crises, images of the body in pain – and especially the motive of the "lone women and children" connect and to some degree equalize these crises. Considering the images in the award-winning series, I find that the lines between active and passive do not exclusively run along gender lines, but also alongside lay persons and health workers. It is, in this regard not only women and children that are visually fixated as passive victims but the affected populations of Sierra Leone, Guinea, and Liberia as a whole.

More than victims: the colonial gaze on Ebola

The existing works on photography in the case of famine (Campbell 2003, 2012), the tsunami of 2004 (Hutchison 2014), and on HIV/AIDS (Bleiker, Kay 2007) already convincingly show how the motive of the helpless and passive victim provides only a one-dimensional view on humanitarian crises that is oftentimes laden with colonial stereotypes.

I maintain that in the case of Ebola the colonial gaze on the body in pain is not only characterized by the passivation and victimization but also by “colonial tropes of “native” resistance and indigenous interference” (Hasian 2020: 106) that renders the people in Sierra Leone, Guinea, and Liberia not only dependent of foreign aid but also as causing disturbance to international aid efforts. Departing, once again, from the award-winning images series, I analyze the interplay of images and text that further removes the body in pain in West Africa from the realities of the viewers in the Global North enforcing and specifying the element of distance as a characteristic part of the emotional register of pity.

On 27 November 2014 an article appeared both online (Gettleman 2014a) and on the NYT’s front page (Gettleman 2014b) on the same day telling the story of a 16-year-old girl in Kissi Town, Sierra Leone whose family and neighbors “called an Ebola hotline more than 35 times, desperate for an ambulance” before the girl eventually died at home. The print article comes with an image of the girl’s family waiting for the burial team in front of their home. The online article has six more images, the first one shows the girl laying on the floor with empty eyes, one hand outstretched to the viewer. The other images show a burial team collecting her body and the cemetery where she was buried. The image series ends with a photograph of the grave with a wooden sign with the girl’s name: Isatu Sesay. All images are taken by Berehulak, the image showing the sick Isatu Sesay (fig. II.8) on the floor is part of his Pulitzer Prize series. The image of Isatu Sesay clearly speaks to the already discussed motive of the vulnerable and innocent child. However, if we do not consider the image alone but also its textual embeddedness, the image (meant literally and metaphorically) becomes more complex.

Different from the already discussed *Daily Mail* piece (Evans 2014) or the NBC (2014a) article that focus exclusively on the “pain” and “heartbreaking” generated by the epidemic, the NYT (2014a, emphasis added) – notice the headline “*despite* aid push” – stresses the difficulties existing *on the ground* that international aid could not mend. The article puts the efforts of “[n]early a thousand British soldiers [...] on the scene, ferrying supplies and hammering together new Ebola clinics. Crates of food and medicine [that] are flowing into the port, and planeloads of experts” (Gettleman 2014a) in contrast with the story of the girl who did not receive any medical support in the days before her death. This disparity is eventually explained with the quote of a British adviser who referring to burial practices states that “unless you change behavior, it’s not going to stop transmission” (Gettleman 2014a). The

extraordinary international effort, the article seems to suggest, is sabotaged by the population's burial rituals.

Following the images of the body in pain indicates how this contrast is further mobilized in contrasting western modern medicine with cultural rites. The in my opinion most striking example can be found in the case of the work of Muller, that has been published, inter alia, in several *National Geographic* articles in first half of 2015. Drawing on spiritual burial practices, the article "How the Fight Against Ebola Tested a Culture's Tradition" (Maxmen 2015) emphasizes how "science confronts culture" and how only with the work of anthropologists and the support of "chiefs, imams, pastors and traditional healers" burial practices could have been transformed and adapted to gain the peoples' acceptance. Even though the article shows genuine interest in local rituals and seeks not to portray them as barriers that need to be overcome but more as elements that need to be incorporated into the Ebola response, the images of grieving family members witnessing the collection of the bodies by health workers in protective clothing draw a visual line between the apparently hygienic, clean, and reasonable action of the medical personnel and the emotional, desperate, and overwhelmed local population.

Another article published on 10 July 2015 in *National Geographic* (Mutchler 2015) (not only) visually links rituals to the spread of the virus. One image in this text shows a woman sleeping next to body of her brother. The text tells the reader that the man did not die of Ebola but argues that the custom of relatives sleeping next to their deceased family members is dangerous in the context of Ebola. The situation shown in the image, hence, has no relation to the epidemic. Nevertheless, it is mobilized as visual proof of the dangerous rituals of the local populations that are potential drivers of the epidemic. Whilst in the summer of 2014 the Ebola epidemic became detached from the West African context and was securitized as a potential global pandemic, it seems that it subsequently became relocated and tied to specific cultural practices.

This association of local traditions, beliefs, and practices (Leach 2015: 818) happened, as traced in this section, both via text-image interaction and also within single images and between images. In case of the former, the interpretation of the depicted situation by the photographer or the accompanying journalists plays a key role. This dynamic is striking, for instance, in the follow up piece on the story of Isatu Sesay published on 20 December 2014

where Gettleman (2014d) under the headline “Ebola Should Be Easy to Treat” recounts his experience in Kissi Town. Throughout the text, that is headed by Berehulak’s award-winning image of Isatu Sesay, Gettleman repeats his frustration and also disbelieve concerning the lack of medical equipment and the impossibility of organizing aid for Isatu Sesay. Gettleman (2014d) recounts: “The fact that Ebola can be battled back so easily is what makes it so frustrating and depressing — and even at times maddening. I learned that my first day.” Instead of connecting the ineffectiveness of aid efforts with burial rites as in his first piece, Gettleman in this article takes a more self-centered perspective critically reflecting on his personal role in Isatu Sesay’s death regretting that he did not buy medical supply for her.

The image of Isatu Sesay itself together with Gettleman’s reflections reminds me of the famous and controversial photograph taken by Kevin Carter in Sudan in 1993. The photograph shows a young, malnourished child crouching on the ground, the head in its hands. A few (too few) meters behind the child sits a vulture, apparently gazing at the child. After its publication in the NYT on 26 March 1993, Carter was heavily criticized by the NYT’s readers for taking the picture without helping the child (Merlijn Geurts 2015). This piece and the debates it initiated come with parallels to the image of the Isatu Sesay that go beyond the motive of the child alone. The shift from the photograph to the photographer or journalist, debates on their moral obligation, and the ethics of photographing people in traumatic situations, link the work of Gettleman and Berehulak to the famous work of Carter putting the Ebola epidemic again in line with previous humanitarian crises.

In the case of Gettleman (2014d) the expression of regret and self-doubt, the conviction that he – other than, for instance, Isatu Sesay’s parents – would have been able to organize medical aid, and the apparent complete absence of any ethical concerns of showing Isatu Sesay while being severely sick rings the tones of the “white man’s burden” to save the weak and helpless (Easterly 2006). Hutchison finds a similar dynamic in the case of the 2004 tsunami where images pivoted “both the inability of local actors to step up and help themselves, and the concomitant need for help from the outside – specifically, from the West” (Hutchison 2014: 15).

The already in the protection suit chapter (*Chapter 6*) mentioned *TIME* article from 2 October 2014 is remarkable and symptomatic in this regard. The article is titled “See How a Photographer Is Covering Ebola’s Deadly Spread” (Laurent 2014) and includes a 17-piece

photo series by Berehulak. This photo series contains the above discussed image of the health workers preparing the body of an Ebola victim as well as the image already discussed in the chapter on the protection suit (*Chapter 6*). The accompanying text discusses the “denial” of the local population as a contribution to the “deadly spread of the virus” and quotes Berehulak explaining “I went inside the house and saw physical proof of Ebola – blood around the victim’s mouth and on the sheets” yet “every single family maintained that it wasn’t Ebola” (Laurent 2014). The suggested stubbornness and denial of the local population described in the text is contrasted by the visual proof of illness represented by the photographer’s images.

In both cases, the *TIME* piece and the two NYT articles, this notion of superiority is emphasized by images that show the visual contrast between health workers in protective clothing embodying modern medicine and unprotected and highly emotional persons. As a result, the local population here seems not only ill prepared but resistant to modern medicine. This form of representation that lacks any form of context causes the depoliticization of the circumstances and enforces the colonial stereotype of contrasting the “adult and superior global North with an infantilized and inferior global South” (Campbell 2012: 84).

The social and emotional hierarchy not only between photographer and victim, but also between viewer and victim and ultimately between Global South and Global North as well, is concomitant with the emotional register of pity. Pointing out the neglect that surrounds Ebola, Nunes (2016: 548) urges us to “engage with the cultural and emotional processes through which interests are defined together with an anxiety over (certain kinds of) groups and bodies”. Attempting to answer Nunes’ plea, this section demonstrates how the emotional register of pity, which is deeply entrenched with previous crisis photography, also resonates with the images of the body in pain taken in the context of the Ebola epidemic.

Following the body in pain shows how both, the motive of the “lone mother and child” and the connected colonial gaze on the suffering of distant others, links the Ebola epidemic to previous humanitarian crises. In the case of Ebola, the lines of active and passive not exclusively run alongside gendered lines but really come to fore in the visual gap between the passive victims and their grieving relatives on the one side and the active and well protected health workers as well as the knowledgeable photographers on the other side. Secondly, the colonial gaze here rests not only on the allegedly passive and vulnerable victims, but, in addition, on a social and emotional hierarchy defined by “primitivism, public resistance, and

problematic burial practices [that] were configured as the major hurdles” (Hasian 2020: 107) in the containment of the epidemic.

The distance implied in feeling pity is significant for the health-security nexus. While images of the body in pain clearly have a securitizing power that turns the depicted body into a referent object experiencing existential threat, they at the same time also *de*-securitize in a sense as they fixate the body in pain in a specific context that assures the safety of the distant observer. As Bleiker and Kay (2007: 159) put it:

[g]azing at the suffering of others in far off places may also become no more than a way of affirming the safety of the here and now, thus undermining the very humanist aspirations for social change.

Seeing the body in pain through a “prism of misery” (Kean 1998: 2) rooted in colonial thought is associated with the emotional register of pity that enables the viewer to feel sorry for the depicted body whilst at the same time resting reassured of their own safety. The securitization move, thus happens exclusively within the image and thus within West Africa, the distant viewer is not threatened.

However, the visual story of the body in pain does not end here. Zooming out further indicates that the body in pain in the context of Ebola not only speaks to the emotional register of pity but that fear is closely connected to it as well.

7.4.2 Feeling fear: Ebola as a threat *through* the body

Building on the premise that emotions are socially and culturally constituted, I claim in this section that seeing the body in pain in the context of the Ebola epidemic did not only speak to the emotional register of pity, which is usually associated with seeing suffering in humanitarian crises, but simultaneously activates the emotional register of fear socially and culturally (think about all the outbreak movies but also about past pandemics like SARS) associated to contagious diseases. Therefore, I maintain that infectious disease outbreaks constitute a specific kind of humanitarian crisis that challenges the assumption of an almost causal relationship between seeing suffering and feeling compassion by demonstrating how seeing the suffering body connects the feelings of pity and fear.

Images of suffering are generally held to be a strong call for securitizing the responsible agents or conditions (Hansen 2011: 59). Agreeing that “threat construction is an emotional

phenomenon” (van Rythoven 2015: 459) it is frequently argued that the emotions evoked by an image may “facilitate the ‘purchase’ of a securitization argument” (Vuori 2010: 260). Collective fear, furthermore, depends on

culturally specific fears whose emergence hinges upon the appraisal of recognizable memories, identities, images, metaphors, and other tropes to construct a plausible, yet anxiety inducing, future. (van Rythoven 2015: 466)

In the case of infectious disease outbreak this specific fear is concisely summarized by Wald’s term (2008: 2) “outbreak narrative” that is concerned with emerging infections being able to fast and easily spreading around the globe due to “human interdependence and the triumph of human connection and cooperation”. The outbreak narrative was well rehearsed beyond the realm of pop culture and fiction when Ebola entered the stage in 2014. The SARS pandemic in 2003 and the rapid spread of SARS-CoV-1 due to air travel had already sensitized the international community to the issue of global health threats. The fear of contagion, hence, can be considered as an established emotional register tied to disease outbreaks.

Does this imply that fear cancels out pity and is simply replacing it? I argue the relationship between the two emotional registers to be more complex and that the example of the images of the body in pain in the Ebola epidemic suggests that they co-exist in tension but also in interdependence. I find that it is precisely through that tension between threatened *and* threatening that bodies – of the distant viewer and of the person in the image alike – are (dis)located in the health-security nexus.

To elaborate this argument, this section zooms out and follows the body in pain with two interconnected foci. Firstly, I analyze how the body in pain became visualized as a threat in and to the three most affected countries. In addition to the award-winning image series, I also consider posters published by health actors. Secondly, moving away from the initial image selection and towards magazine covers and pop culture elements, I show how Ebola is visualized as a global threat dislocated from West Africa and potentially harmful to the West. Throughout these steps, I seek to carve out the different layers of health security tied to the body in pain and to understand how the emotional registers of pity and fear enact each other through different notions of security.

The body in pain as a threat to and in West Africa

Even though the focus of this chapter is on news media images, I deem it important to briefly take a step back at this point to fully grasp the significance of the body in pain in the context of Ebola. Looking at the material published by health agencies, we find a different type of visualizations of the body in pain. Health actors like the CDC (fig. II.9) and also the *United Nations Children's Fund* (UNICEF) (fig. II.10) published posters to be used in West Africa or in West African communities in the West that depicted the symptoms of an infection with the Ebola virus (fig. II.9) and proper engagement with an infected or dead body and other prevention measures (fig. II.10). The visual emphasis on the body in pain in these cases does not resonate with the emotional register of pity. Instead, the focus is put on the action that the visible symptoms of an infection require. Instead of suffering and grief, aspects like contagion and contamination are inscribed to the body in pain. Images, especially of the human body, can translate somewhat abstract representations of security into something specific (Hansen 2018: 276). The visible symptoms in this regard serve as proofs of insecurity (Hansen 2018: 275). Obviously, these posters belong to a genre that is very much different from photography. The body in these cases is rendered visible through colorful drawings and not through photography. Even though the posters are very graphic, they appear much more detached from the *real* experiences of the people. They do not so much speak to the emotional register of pity but due to their educational purpose render the body a warning sign contributing to its pathologizing. It is this pathologizing that we should keep in mind when returning to the award-winning images to understand interrelation of pity and fear.

One image that in my opinion in a powerful way shows and unites the interconnectedness of the emotional registers of pity and fear is one image taken by Moore on 19 August 2014 (fig. II.11). It shows the naked 10-year-old Saah Exco sitting on a bucket with his back turned to the viewer. According to the caption, Saah Exco who was pulled out of a treatment center by protestors. After disappearing from the health center, he did not receive medical treatment at a local clinic due to fear of infection. The residents of West Point also refused to take care of the boy for the same reason which is why he was left alone lying severely sick in a corner of a street (Tomlinson, Williams 2014). The motive of a barely dressed black child in a passive pose is a typical motive constantly reoccurring in images of humanitarian crises and resonates within the emotional register of pity. However, this image differs in one significant aspect. Saah Exco is not alone. He is surrounded by a group of 15 persons looking down on him. The

people of the group (as indicated by the folded arms of some of them) seem keen not to get too close, no one is touching Saah Exco or reaching out to him. The image in a sense shows the behavior required by the posters – keep distance to people showing symptoms. Yet, the emotions evoked by this photograph are very different.

The visual distance between the fully dressed persons and the naked child is striking and seems counter-intuitive and almost cruel. Despite the crowded image, Saah Exco seems utterly alone and abandoned. The fear of infection visualized by the distance kept from (assumed) patients sets images like the one of Saah Exco apart from iconic photographs of famines and (despite being an infectious disease as well) HIV/AIDS. This notion is enhanced by the protective clothing worn by health workers when taking care of patients which is an iconic feature of Ebola photography.

This adds complexity to the threatened body. Due to the contagiousness of the virus, the infected body becomes threatening and, thus, like in the case of the image of Saah Exco, combines referent object and existential threat. Images of the Ebola epidemic complicate the narrative of the vulnerable body in need and, with the threat of contagion, add a new dynamic. The body in pain in this image and in the discussed posters is transformed from victim to vector.

Sorting the award-winning images, I found two more images, one from Moore (fig. II.12) the other one from Berehulak (fig. II.13), that add a different perspective on the body in pain that I deem important in the context of health security. Moore's image shows a soldier chasing a screaming woman. The soldier is holding a machine gun in one hand, the other one holds a stick aiming to beat the woman. Berehulak's image shows a group of more than 30 persons who argue with and push towards one person in the lower right corner of the picture. The image is extremely crowded. The angle by which the image is taken supports the tension of the situation, the person in the right corner is almost pushed out of the frame. Both images are taken in West Point, Monrovia in late August 2014, where both photographers covered the same event. Berehulak arrived in Monrovia on 22 August 2014 where he met Moore, who had arrived a few weeks before him, to learn from his experience (Laurent 2014). We can thus look at Berehulak's and Moore's images not only as connected in terms of the at times similar visual language, but also in regard to the two photographers who exchanged their expertise *in the field* and took pictures of the same event. Due to an increasing number of cases, the

Liberian government issued a quarantine on West Point, one of Monrovia's most impoverished townships that is located on a peninsula. The quarantine led to violent protests, as parts of which a treatment center was overrun and closed by protestors (Hasian 2016: 163).

The images both photographers took do not so much focus on individual stories about the fates of the victims of an Ebola infection or about the grief of their friends and relatives. The captions do not provide any names but focus on the depicted rage and violence. Even though the images, hence, do not show the body in pain as discussed in this section so far, they show the conflicts evolving around measures to *control* the body in pain. It is for these reasons that I find them to be highly relevant for this chapter.

Following the two images reveals a new visual layer of the health-security nexus that is so far unexplored in the zooming-out section: these images do not only show the body as threatened but enforce the notion of the threatening body either due to the risk of contagion or due to causing violence and chaos. I find that the emotions of pity and fear become blurred as they in a sense overlap and intersect, either within one image, or through the interaction with other images.

Berehulak's image (fig. II.13), which got published from the end of August 2014 onwards, continues this narrative. The earliest appearance of Berehulak's image that can be found by image reverse search is an online article for the NYT from 28 August 2014 (Onishi 2014b) where it appears as the second image of a nine piece image series. Part of that series are already familiar images of health workers collecting or disinfecting bodies of Ebola victims, but also one image of a paraplegic man who was beaten and thrown out of his wheelchair during a conflict about food distribution, as well as one image of a graffiti on a mural reading "Ebola is real". The accompanying text describes how citizens of West Point circumvented the quarantine and how they begged the visiting president Sirleaf for food and freedom and continues with assessing the risk that the military-imposed quarantine may cause chaos and actually worsen the epidemic. I find this image series and the text it is attached to very important and telling in terms of health security. In the image series the stereotypical image of heavily protected health workers collecting dead bodies being watched by passive residents who can only protect by covering nose and mouth with their bare hands is put in relation with images of anger and violence. The notion of the passive, helpless, and vulnerable body in pain is thus complicated and we – as distant viewers, clicking through the image series and reading

about chaos and breaches of the quarantine – can observe a shift from threatened to threatening.

Moore's (fig. II.12) image of a soldier chasing a woman circulated widely in western news outlets and picks up that element. It is, for instance, part of a *Huffington Post* (Alfred 2014) piece on "shocking fotos" of the quarantine. A NYT (Onishi 2014a) article with the same image discusses the protests and the loss of control of the Liberian government. The image also features in a *Washington Post* article (Larimer 2014) explaining that the people who breached into the treatment center were shouting "No Ebola in West Point" as they mistrusted the government's information on the spread of the virus. In an article in the *Business Insider* with the title "These Photos From Ebola Ground Zero In Liberia Are Horrifying", images of assumed Ebola patients being carried out of the center, of contaminated mattresses, medical supply, and clothes come with Moore's diagnosis that "if they did not have Ebola in the community before, it is fair to say that they do now" (Jacobs 2014). Like in previous examples the seemingly omniscient photographer offers an interpretation of the depicted situation.

The threat of losing control, as discussed in the zooming-in section, appears not only to apply to the human body but encompasses the entire nation state. Images of protests, rage, militaristic violence against civil society evoke the notion of state failure and chaos. In these images,

West Point became the dystopic, post-apocalyptic example of what the rest of Africa would look like if national, regional, or international governments did not work together to stop the spread of EVD. (Hasian 2020: 157)

While the image of the ill-equipped local population is contrasted by the knowledgeable behavior and interpretation of the photographer certainly echoes the colonial gaze that is discussed above, the notion of state failure renders this behavior not pitiable but dangerous. These images do not only speak to the impact of the epidemic but suggest the *disobedience* of the local population as one cause of the spread that not only leads to sickness but to chaos as well. This highlights that the motive of the body in pain is dynamic and fluid and has – depending on the network – different implications. Firstly, images of infected persons fleeing from treatment centers turns victims into agents that actively contribute to the spread of the virus. The infected body, hence, is not only threatened but actively threatening. Secondly, the

body in pain, as it is visualized and enacted in the network during the beginning of the epidemic, links the collapse of the body to the collapse of the state.

Connecting pity and fear, Aradau (2004: 258) finds that the politics of pity do not work for those who are considered dangerous. Connolly (1999: 129) accordingly holds that suffering does not necessarily create pity

when people suffer from injuries imposed by institutionalized identities, principles, and cultural understandings, when those who suffer are not entirely helpless but are defined as threatening, contagious, or dangerous to the self-assurance of these identities.

Thus, the threshold from pity to fear when looking at images of the body in pain seems to be crossed when it is no longer about the insecurity of the distant *other* but when the own national security is at stake (Hansen 2018: 276). This, as the next section shows, is not only relevant within West Africa but also beyond Sierra Leone, Liberia, and Guinea.

Sick bodies and/in 'the West': bodies in pain as vectors of disease

Roughly two weeks after the UNSC Resolution, the Liberian citizen Thomas Duncan traveled from Monrovia to Dallas where he was diagnosed with Ebola on 30 September 2014. He died on 8 October 2014. In the following two weeks, the infection of two nurses, who had taken care of Duncan, were confirmed (Hasian 2020: 167). The case of Duncan served as a confirmation of the looming fear of a global spread, which was increasingly associated with the West African epidemic, turning Ebola into an “epidemic of fear” (Gilsinan 2014). This case demonstrates that “[w]hen it is said that ‘pathogens know no borders’, what is really meant is that their hosts cross those borders” (Rushton 2019: 111).

It is within this context and development where I find a shift from the emotional registers of pity to fear, that I unpack on the next pages. To do so, I firstly turn to two US-American magazine covers and then subsequently to a NYT-piece to show how they together resonate with the “outbreak narrative” (Wald 2008). To close this section, I turn to again to the health sector, and with an example from the CDC show how the cultural trope of the zombie manifests the notion of the threatening body.

One day before Duncan’s diagnosis, the cover of *Bloomberg Businessweek* visualized the growing fear of an Ebola outbreak in the US. On the cover (fig. II.14), we find the words “Ebola is coming” written as a sort of graffiti with what appears to be blood. Below the lettering,

much smaller, typed in black, it says “The U.S. had a chance to stop the virus in its tracks. It missed”. The bloody letters build a network with external and internal bleedings as a common and frequently described symptom of infection and with the (previously discussed) drastic images of human suffering. From an US perspective, the distant suffering suddenly becomes very close.

Another striking example with a strong visual element is the *Newsweek* cover (fig. II.15) of 29 August 2014. It shows a close up shot of a chimpanzee and the title “The back door to Ebola. Smuggled bushmeat could spark a U.S. epidemic”. “Bushmeat” is a term used to describe non-domesticated animals that are consumed as protein source. Technically, this would also include the practice of hunting deer to eat venison. However, the term is hardly used in a western context (Seay, Dionne 2014). Many things are wrong with this cover. First of all, as Seay and Dionne (2014) explain, the “outbreak likely had nothing to do with bushmeat consumption” and chimpanzees are unlikely consumed as bushmeat in Sierra Leone, Guinea, and Liberia. Secondly, even though the essay in *Newsweek* on bushmeat and Ebola that prompted the cover seeks to make the case against irrational fears, the cover supports those fears. The interplay between text and visual “piggybacks off all the ideological baggage that comes from worries about immigration, migrations, and pathological vectors carried through public transportation” (Hasian 2020: 25). Thirdly, the deeply racist move of linking apes and Africans and the focus on “exotic” eating behavior as a cause of the epidemic can be understood as a case of othering that not only juxtaposes the seemingly civilized West with Africa but suggests the latter to be a threat to the former.

The focus on Ebola as a potential threat to the West got intensified from September 2014 onwards. A NYT print edition of 2 October 2014 (fig. II.16) opens with an image taken in a hospital in Makeni, Sierra Leone depicting two children lying deliriously on a hospital floor wet with bodily fluids. Here, the motive of very sick patients lying on the floor, which also appears repeatedly in the award-winning image collection, is followed by an article that in very bleak terms describes a devastating collapse of the hospital in Makeni. Looking at the image and the text in isolation, this is one other (powerful) manifestation of the existential threat posed by the virus to individuals and health systems in Sierra Leone and West Africa in general. However, if we consider the entire front page, where the image and text was published, it gets more complex. Right next to the image, on the right side, we find an article headlined “Scrutiny

in Texas to Detect Whether Ebola Spread” that discusses the failures of Dallas hospital to isolate Duncan when he arrived.

While the text ends (it is continued on another page) with the statement of confidence on the containment of the virus, the described failures in Dallas, the overwhelmed hospital in Makeni, and the image of two severely sick children builds a powerful textual-visual network of its own, threatening the present in Sierra Leone to become the US’s future. On a sober scientific assessment, this is a highly unlikely scenario, given the health system and infrastructure in the US and the fact that Ebola virus is not airborne but needs contact with bodily fluids to be contracted. Nevertheless, a Gallup poll in November 2014 found that one in six US Americans considered Ebola as the country’s top health problem (Saad 2014). I find both, the covers and the NYT page, to be a visual example of Wald’s (2008) conceptualization of the “outbreak narrative” where diseases that “invariably emerge from Africa, occasionally from Asia or South America [...] turn space into time, threatening to transform a contemporary “us” into a primitive “them”” (Wald 2008: 45).

In addition to posing a threat to the bodies close to it, the body in pain becomes dislocated from the West African context and seen as part of a shrinking globalized world constituting a threat even for the distant viewing body. This indicates that the position of the body in the health-security nexus is complex, fluid, and subject of constant contestation. Whereas the initial focus on the outbreak and unfolding epidemic was on West Africa, from late August 2014 onwards Ebola became dislocated. On 18 September 2014, the UNSC’s Resolution 2177 declared the Ebola epidemic “a threat to international peace and security” (UNSC 2014). The emotional distance evoked by the emotional register of pity, hence, becomes challenged by the perceived physical proximity of the traveling body that is a key element of the “outbreak narrative”.

Ebola as a cultural phenomenon

Hofman and Au (2017: xvi) find that in August and September of 2014 Ebola had turned into “a cultural phenomenon worldwide”. Shedding light on Ebola as a cultural phenomenon – albeit the focus of this chapter is on news media images – shows how the body in pain as a visual trope connects the genres of news media, pop culture, and the health sector. A case in point is the public health communication campaign of the CDC that ran from 2011 to 2015.

The campaign titled “Preparedness 101: Zombie Pandemic” used the scenario of a zombie apocalypse as a cultural trope to encourage the public’s preparedness for real life disasters. Consisting of a website, a blog, and a graphic novel, the campaign received remarkable attention in the US (Polak 2021). The graphic novel (CDC n.d.c) is still accessible online.

In the graphic novel, a Zombie virus is spreading rapidly in the US. The protagonists – the couple Julie and Todd and their dog Max – only manage to escape to a Safe Zone because of the emergency kit Todd had prepared in advance. In the end, everything turns out to have been a bad dream after a horror movie. The necessity to prepare an emergency kit – this is the not-so-subtle moral of the novel – remains real. Polak carefully analyzes how this campaign not only rests on what can be considered standard zombie narratives but also maintains that

many cultural objects that are (or dovetail on) popular culture are worth studying because of their very triviality, through which they ‘give away’ something about the culture in which they exist. (Polak 2021: 44)

I follow this argumentation and Polak’s (2021: 42) claim that the Zombie campaign and the Ebola fear in the US are “eerily linked”. This is not to say that there is a clear-cut causal link between the campaign and the perception of the Ebola epidemic in the US. Rather, I deem the campaign important to understand the cultural embeddedness of the emotional register of fear and how the body in pain and health security more generally are placed in it. This is even more so as I find Polak’s analysis to echo several of the elements of the emotional registers of pity and of fear that have already been carved out in the chapter.

Firstly, the notion of the zombie apocalypse “as an attack from actors which have already lost their humanity as a result of being (potentially) infected” (Polak 2021: 46) resembles the othering and the colonial gaze already fleshed out in the section on feeling pity. This, however, does not lead to the zombies being helpless victims. Rather,

the subject position in both the outbreak narrative and the concomitant zombie fantasy is reserved for the people running away from it; the victims or zombies are objects made to stare at. (Polak 2021: 50)

Secondly, contrary to the emotional distance created by pity due to the evocation of hierarchies and colonial stereotypes, the fear of contagion physically links bodies. This narrative comes with a “mythic frame” (Wald 2008: 261) that pathologizes behaviors and

practices of people who are portrayed as not only dirty and diseased but actually dangerous. The danger in this narrative is not so much the danger a virus poses to the individuals directly affected by the outbreak but is seen in the ““microbial traffic” [...] *from* the primordial rainforests of the impoverished developing world *to* the metropolitan centers of commerce and capital” (Wald 2008: 34). The focus, both in the comic and in the Ebola epidemic, is not so much on the security of the victims (the zombies, in this case) but about the potential victims.

7.5 Conclusion: from pity to fear (and back)

This chapter began with a quote from Berehulak’s NYT cover letter praising his “stark and irrepressible images” and their power to make people “care about a region where suffering is expected, even tolerated” (The Pulitzer Prizes 2015a). By analyzing images of the body in pain, I asked *how exactly* images of suffering, grief, and death make people care and questioned the premise of suffering inevitably leading to compassion that seems to be implied by the quote. The analysis of the visual representations of the body in pain in this chapter demonstrated the multiplicity of disasters’ emotional characteristics (Aaltola 2012: 63) and showed that they may not only vary from crisis to crisis but that there can be variation within crises as well. The work on the role of emotions in IR builds the theoretical lens through which I explored how visual manifestations of the body in pain act and are enacted and what implications this has for the health-security nexus.

Throughout the chapter, by zooming in and out on the body in pain, I developed and brought forward the argument that the body in pain shapes the health-security nexus in two ways: as the body that is *threatened* by an atrocious “killer virus” (Cullinane, Park 2015) and as the *threatening* body that, as a vector, is carrying and spreading the virus. This finding resonates with the findings presented in *Chapter 6* highlighting the tension between the threatened and threatening health worker.

To make sense of this tension in the case of the body in pain, this chapter suggests different visual dimensions of health security that are embedded in different yet interdependent emotional registers. Depending on these dimensions, the body in pain can be both: referent object and existential threat and do both: create distance or proximity with the viewer. The fluidity of the meanings and doings of the body in pain is the first finding of this chapter suggesting that the emotions raised by seeing the body in pain may both separate and connect

bodies. This ambiguity has been carved out in this chapter by exploring the two emotional registers of pity and fear and how the body in pain relates to them.

The emotional register of pity corresponds with the humanitarian imagery of passive and vulnerable victims in need of assistance. It locates the body, to come back to the quote from the beginning, in “a region where suffering is expected, even tolerated” (The Pulitzer Prizes 2015a). The stereotypical depiction of the body in pain, which is familiar from images of famine and HIV/AIDS, locates and fixes the threat of infection in an African context. Seeing the body in pain through a “prism of misery” (Kean 1998: 2) rooted in colonial thought is associated with the emotional register of pity enabling the viewer to feel sorry for the depicted body whilst at the same time being reassured of their own safety. The securitization move, thus, happens exclusively within the image, the distant viewer is not involved.

The threatening body, on the other hand, resonates within the emotional register of fear turning the body into the existential threat. The body in pain not only constitutes a threat to the bodies close to it but becomes dislocated from the West African context. This connection of health and security builds on what Wald (2008) calls “outbreak narrative” and on a “microbial anxiety” (Elbe, Voelkner 2015: 73) that focusses on the potential global spread of pathogens enabled by the assumed shrinking of space and time due to the expansion of civilian air travel. “Care” to come back to the initial quote, is hence no longer sensed for the depicted body but now concerns the body of the distant viewer that needs to be protected. The emotional distance between the suffering and the viewing body, which implied by the feeling of pity, is hence further enforced by the perceived danger of physical proximity.

The productive tension between the two emotional registers of pity and fear relates to conflicting understandings of the security. Pity, and this is the second claim deriving out of the analysis conducted in this chapter, is no emotional register that is situated somewhere outside the health-security nexus but plays an active part in it. The element of neglect, that is vivid in what I have referred to as *emotional distance* throughout this chapter, is a shared and connecting element of both registers. As Nunes (2016: 548) puts it:

The abject, then, lies at the margins of the self and emerges as its opposite. However, the abject is not completely separable because it permanently unsettles and threatens to disrupt the integrity of the self.

The emotional distance that comes with feeling pity and the associated turning of people into objectified victims without agency and individual stories (Hutchison 2014: 8) can be seen as a prerequisite of understanding them as a threat to a distant audience whilst ignoring the threat they face themselves. The distance created by the “politics of pity” (Hutchison 2014), hence, facilitates the call for containment measures that strive to ensure this distance is not only emotional but (remains) physical as well. Examples of these containment measures are quarantines, airport screenings, cancellation of flights, and the deployment of the military.

These findings deepen and add nuance to the different layers of health security proposed in the conclusion of *Chapter 6*. They specify the threat of contagion visualized by the protection suit by depicting the cruel and devastating symptoms of an infection with pain and death being the seemingly unpreventable consequences. On a normative level, I hold these findings to be a reminder that health security is an equally fluid and constantly contested concept that begs the normative necessity to ask whose body is held to be under threat and given priority and what consequences arise from this. Given that both emotional registers exclude the empathic engagement with the body in pain, it is necessary to explore ways that acknowledge the pain in ways that create compassion and kindness instead of alienation, regardless of whether a crisis happens *at home* or in places that feel farther away.

II. Annex: the body in pain

- Figure II.1 Two health workers and patient in Hastings, Pete Muller – 23 November 2014; source: <https://www.worldpressphoto.org/collection/photo/2015/29557/1/2015-pete-muller-gns1-aj>
- Figure II.2 Omu and Ibrahim Fahnbulleh in Monrovia, John Moore – 5 August 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>
- Figure II.3 Health worker and dead body in Monrovia, Daniel Berehulak – 18 September 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure II.4 Sophia Doe and her grandchildren in Monrovia, John Moore – 10 October 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>
- Figure II.5 Woman and a health worker team in Monrovia, John Moore – 10 October 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>
- Figure II.6: Molai Kamara in Freetown, Pete Muller – 29 November 2014; source: <https://www.worldpressphoto.org/collection/photo/2015/29557/1/2015-pete-muller-gns1-aj>
- Figure II.7 Sweetie Sweetie in her room in Porto Loco, Daniel Berehulak – 6 December 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure II.8 Isatu Sesay at home in Freetown, Daniel Berehulak – 21 November 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure II.9 Poster Ebola signs and symptoms, CDC – n.d.; source: <https://www.cdc.gov/vhf/ebola/pdf/signs-symptoms-krio.pdf>
- Figure II.10 Poster Protection from Ebola, UNICEF – n.d.; source: <https://blogs.unicef.org/blog/ebola-in-liberia-bringing-the-prevention-message-to-communities/>
- Figure II.11 Residents and child in West Point, John Moore – 16 August 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>
- Figure II.12 Woman and soldier in West Point, John Moore – 20 August 2014; source: <https://www.worldphoto.org/es/sony-world-photography-awards/winners-galleries/2015/professional/shortlisted/current-affairs/ebola>

- Figure II.13 Residents of West Point and government official, Daniel Berehulak – 25 August 2014; source: <https://www.pulitzer.org/winners/daniel-berehulak-freelance-photographer-0>
- Figure II.14 Ebola is coming, Bloomberg Businessweek – 29 September 2014; source: https://www.bloomberg.com/magazine/businessweek/14_40
- Figure II.15 A backdoor for Ebola, Newsweek – 29 August 2014; source: <https://www.newsweek.com/archive/2014>
- Figure II.16 NYT Cover Page – 2 October 2014; source: NYT: Vol.CLXIV, No. 56,642

8 Visualizing the invisible virus: making, deepening, and widening the health-security nexus

In this chapter, I analyze different visual manifestations of the Ebola virus by zooming in to and zooming out from different viral (meant metaphorical and literal) images. After introducing the importance ascribed to the microscopic image in the world of science and the scholarly debates surrounding this attribution, the chapter zooms in into the first microscopic image of the Ebola virus which was taken in 1976 by CDC scientist Frederic Murphy and into a *TIME* cover of 2017 featuring a modern adaptation of Murphy's image. The zooming-out then first follows Murphy's *beauty shot* and microscopic images of infected cells and subsequently looks at different visual interpretations of the virus in the fields of science education, stock images, and as plush toys. The lens through which I undertake this zooming and following is an amalgamation of STS work on the performative power of scientific images and of works in visual security studies that highlight how images make security.

This chapter differs from the two previous chapters in two regards. Firstly, for this chapter, I abandon the award-winning series as a point of departure. I do so, because I deem the focus on the microscopic image to be a valuable addition to the images of the protection suit and of the body in pain. Instead of exploring what it means to see the protective measures taken to prevent an infection and the cruel symptoms caused by the absence or failure of these measures, I here focus on visual manifestations of the viral *agent* that is held to sit at the core of all this. Moving beyond the image series of Berehulak, Moore, and Muller also means to move from traditional news media photography to micrography as a very specific field originally rooted in science. This chapter, hence, implies a shift from body to petri dish. Secondly, this shift implies that not news media, like in the two previous chapters, but the health sector is the initial point of departure for this chapter. The shift from camera to microscope undertaken in this chapter introduces the laboratory as a key site of where health security is made adding yet another perspective on the visual making of health security. A list of links for the visual material discussed in this chapter is compiled in the Annex (pp.173-174) of this chapter.

8.1 Vignette

When I started writing this chapter, the COVID-19 pandemic was approaching its first anniversary. Already in April 2020 I had read news articles that expressed fascination about “The Spiky Blob Seen Around the World” (Giaimo 2020) and celebrated “Researchers Succeed in Taking First 3D Photo of Coronavirus” (Freund 2020). I was struck by the general interest in the visuality of the virus that soon became the *face* of the pandemic.

More than two years into the pandemic, the CDC model is probably the pandemic’s most famous image. The creators of the image, Alissa Eckert and Dan Higgins, remember that their task was to produce “an identity” and to create “[s]omething to grab the public’s attention” (Giaimo 2020). What is the identity of a virus, I wonder? And how did it grab the public’s attention? Soon after the model was published, I saw it and its various interpretations everywhere: on hastily designed info sheets on shop windows, on magazine covers, on television, and in kids’ drawings on the sidewalk in front of our house. Like the actual virus, its different visual manifestations seemed to circulate everywhere.

This made me wonder whether the Ebola virus had received a comparable visual attention during the epidemic of 2013–2016. The first memory that came to my mind was the photo the then ISA global health section chair Jeremy Youde posted on Twitter during the annual conference of 2017. The photo showed him wearing a bowtie full of tiny Ebola viruses. I did not manage to find this photo again but whilst searching for it, I fell into a rabbit hole of all kinds of clothes with viruses and microbes on them.¹³ Wearing a “Hepatitis B Red Tie” or a “Swine Flu Blue Silk Scarf” does not only speak about a rather peculiar sort of fashion sense, but also clearly demonstrates that the visualization of viruses is not restricted to a scientific discourse. Clothes with pathogens printed on them seem like a reference to the myriads of invisible microbes inside and around the body. There appears to be some sort of desire to make the invisible virus visible – be it in the science or fashion.

The protection suit (*Chapter 6*) refers to the risk of contagion and connects this risk to the body of the health worker; the body in pain (*Chapter 7*) shows us what happens if the protection fails and what the disease does to the body. But what do I see when looking at the virus? Other than in the case of the protection suit and the body in pain, no initial answer

¹³ For instance, see: <https://www.iawareables.com/ties>

comes to mind, still everyone in my social environment knows how SARS-CoV-2 looks like, and almost everyone remembers the shape of the Ebola virus.

Why is this the case? What does it do to our understanding of diseases if they are visually summarized by a microscopic perspective? In this chapter, I want to explore these questions and follow the different visual manifestations of the Ebola virus to different corners of the epidemic's visual network to explore what understandings of health security are made, stabilized, or challenged by it.

8.2 Introduction: situating the microscopic image

The photographic image of an object may be more important than the object itself. (Koch 1881: 11, own translation)

Departing from Robert Koch's now famous quote and recognizing that, even more so than photography in general, microscopic photography comes with the aura of depicting reality, this chapter asks what exactly is *done* by the visual manifestations of the virus and what this *doing* does to our understanding of the health-security nexus. In asking these questions, I show throughout the chapter that the visualization of the virus is not restricted to the field of virology, or the natural sciences more generally, but that visualizations of the virus constitute and shape our entire understanding of epidemics or pandemics (Weingart 2004: 101). The chapter follows the image of the virus from the laboratory to the broader public and unfolds the argument that visual manifestations of the virus matter for the health-security nexus in three ways: 1) the making of the virus and its introduction as an actor to the health-security nexus, where it contributes to the 2) deepening and to the 3) widening of this nexus.¹⁴

To understand the full meaning of the quote and the importance the physician and microbiologist Koch ascribes to the photographic image, one must consider its historical context. When Koch made this now famous quote in the late 19th century, the discoveries made by Louis Pasteur and him just had identified bacteria as the cause of numerous infectious diseases. Germ theory, which builds the basis of our modern understanding of infectious disease, had replaced the theory of bad air or miasma as the site of infection.

Detecting and thus proofing the presence of bacteria builds the essence of Koch's now famous postulates.¹⁵ Whereas Pasteur demonstrated the presence of a pathogen via its functions (like processes of fermentation), Koch based his work and argument on the visual representation of the pathogen (Schlich 1995: 150). Seeing the pathogen through the microscope, a delicate and complex procedure, was only the first step in this regard. More important for the credibility of germ theory was the microscopic photograph making the discovery of a pathogen available for the assessment by a broader scientific audience (Schlich 1995: 154ff). Koch found the microscopic image to deliver "an objective account of the objects

¹⁴ For a thorough discussion of widening and deepening security, see Buzan and Hansen (2009).

¹⁵ The postulates build the basis of germ theory and state that there is a specific microorganism for each disease that 1) can be seen through the microscope, 2) can be cultivated in a petri dish, and 3) can be retained by filters (Dimmock et al. 2016).

in place” (Engelmann 2018: 174). Other than drawings, which Koch considered mere illustrations and artistic expressions, the microscopic image became a center piece of his scientific publications. Through microscopic photography, nature, in Koch’s view, was “imprinting itself onto the passive surface of the photographic plates” (Engelmann 2018: 175). The connection of object and microscopic photograph was so immediate that the image became a scientific object itself inspiring Koch to the quote at the beginning of the introduction (Bredekamp, Brons 2005: 373).

Visualizing the invisible was also the constitutive challenge of early virology. In 1939, the tobacco virus was successfully visualized with the help of an electron microscope.¹⁶ Similar to the history of Koch’s bacteriology, it was only with their visualization that viruses became acknowledged as distinctive pathogenic entities and as “agents at the origin of a chain of causalities leading to the appearance of disease” (van Loon 2002; Engelmann 2018: 182).

Scholars in the field of art history, media studies, and STS highlight the constitutive power and fundamentally question the objectivity of the microscopic image. Rather, object and representation are hardly separable but enact each other (Woolgar 1988). Daston (2014: 319), for this reason, makes a call for going beyond the idea of representation and shift from epistemological to ontological treatments of images to counter “the specter of the perfect copy [that] still haunts the history of science” and to understand the accomplishment of the objective status of the virus (van Loon 2002: 118). I find these debates to resonate with the approach of this thesis that considers images as actors and not as mere tools of illustration (*Chapter 3*), and they inform the research for this chapter by building the theoretical lens through which I approach the visual manifestations of viruses.

8.3 Zooming in: the making of Ebola

This zooming-in section discusses two rather different images in detail. The first image is an electron microscopic image taken by Frederick Murphy at the CDC in 1976. This image made history as the first visualization of the virus. In this sense, the zooming-in in this chapter is also a sort of *zooming-back-in-time* to the beginning of the visual journey of the Ebola virus. The second image, a cover of the *TIME* magazine from 2017, then brings us back to the present. The analysis of the two images and their comparison shows how visualizing the virus

¹⁶ Viruses are much smaller than bacteria, which is why it is impossible to see them with a light microscope. For an overview of the discovery of the tobacco virus see van Loon (2002).

contributes to its very making as a dangerous and evil foreign agent. Moving from micrograph to magazine cover, furthermore, traces how this network initially was rooted within the laboratory but gradually moved beyond this site.

8.3.1 Figure III.1: seeing Ebola for the first time

The visual journey of the Ebola virus begins in 1976 at the CDC in Atlanta where the virologist Frederick Murphy produced the first electron micrograph of the Ebola virus. Before that, a laboratory at the *Institute of Tropical Medicine* in Antwerp in Belgium had received blood samples from a patient who had died in Yambuko, Zaire of an unknown illness that had caught the attention of the international health community due to its lethality and fast spread. In the sample, the team discovered a virus resembling the deadly Marburg virus. As the Antwerp laboratory was not equipped for working with this kind of viruses, the WHO ordered the shipment of the blood samples to the CDC in the US where Murphy eventually took the now famous shot of the virus that played a vital part in the discovery and identification of the hitherto unknown virus (Johnson et al. 1977). The electron micrograph is published in the CDC Public Health Image Library in the original black and white version and a colorized edition (fig. III.1). Especially the latter version was widely published and referenced during the 2013-2016 Ebola epidemic in West Africa.

But what exactly does the micrograph show? From the perspective of a lay person, this question is quite difficult to answer. In front of a purple backdrop, we see some sort of yellow thread connecting the upper left and lower right corner of the image. The left end of the thread is curled up in a knot. In comparison to other roundish viruses (HIV, SARS-CoV-2, measles, Hepatitis C), the thread-like shape gives the virus a distinctive look that makes it easily recognizable. A first association might be that the thread resembles a snake or worm making the virus seem alive in a, given that neither worms nor snakes are typical pet animals, rather unpleasant way. It is easy to imagine the thread to start winding and crawling. The purple background is stained suggesting the yellow thread to be in some sort of fluid. The caption on the CDC website specifies this plain description by adding virological knowledge and vocabulary explaining that we see a “[c]olorized transmission electron microscopic image showing the filamentous and curved morphology of an Ebola virus particle” (CDC n.d.b).

Two elements seem important and in need of further reflections about what the micrograph of the virus does to the health-security nexus: the use of colors and the visibility

of the virus itself. Drawing on these two aspects, I show how the bright colors and the significance of the micrograph as the *first* image of Ebola introduce the virus as a dangerous and foreign agent.

The role of colors

Originally, electron micrographs are black and white. As the name suggests, electron microscopy works with electron beam not involving any light, and thus does not generate any color information (Buiani 2014: 549). The coloring, hence, only happens after the image is taken and is the result of creative decisions. Whereas Koch dismissed the coloring of microscopic images as an affront to the authenticity of the microscopic image (Bredenkamp, Brons 2005: 373ff), a quick google image search reveals a wild firework of colorful pathogens. The coloring, apparently, happens without an explicit or even implicit code or standardized procedure. What all these images share and have in common with Murphy's microscopic image, is the usage of bright and complementary colors. They visually set the virus apart from the surface.

So, where is security in all this? The yellow color and the purple contrast in Murphy's micrograph turn the Ebola virus in a glowing, otherworldly entity. The "display [of] viruses in bold and fluorescent colors, as opposed to pale and light colors, communicates potential aggressiveness to viewers of these images" (Buiani 2014: 549). I find this to be especially true in the case of yellow – the color of barrels containing radioactive waste and of the sign that signals explosion hazards. Yellow, hence, is associated with danger and catastrophes. In addition, the yellow coloring of the virus builds a visual bridge to the yellow protection suit featuring in many of the award-winning images (*Chapter 6*).

In the microscopic image, the danger and aggressiveness of the virus, however, remains somewhat sober and detached from bodily experiences. What *seeing* the virus does to our understanding of health security, is not clear when looking at the image in isolation. Instead of associating it with blood, pain, and devastation, seeing Murphy's image makes me think about sterile laboratories where scientists in white coats work with bright fluids in conical flasks. Ostherr (2020: 709) in this regard finds that

microscopic imagery establishes a technoscientific perspective on the crisis, asserting knowledge, mastery, and control. The virus cannot be detected without the assistance of

sophisticated, expensive machinery (electron microscopes and laboratory-based diagnostic media).

For a lay person at least, it is hard to draw a causal relationship between this ethereal image and the image of suffering bodies. Whereas the images of the body in pain (*Chapter 7*) or of the health worker in protective clothing (*Chapter 6*) firmly connect Ebola with the human body by showing the severe symptoms of infection and the protective measures deemed necessary to prevent contagion, the microscopic image detaches the virus from the human experience of infection. The somewhat sterile images of the virus and the modern laboratory associated with them pose a contrast to the misery and poverty that is a decisive part in many of the images taken in West Africa.

While the yellow color certainly establishes a notion of urgency and danger, the target and specificity of that danger remains opaque. To get more clarity, it is important to understand that Murphy's micrograph is not simply one image out of many of the Ebola virus, but that it has a specific significance as the *first* image.

Visualizing the invisible virus

Many stories about pandemics or epidemics, be it in real life or in pop culture receptions, begin with the emergence of a mysterious, unknown disease in some remote area in the Global South (Wald 2008). The moment of discovery, of making the virus visible, and of identifying it, is oftentimes presented as historic and as a game changer in the *fight* against the outbreak. The introduction of this chapter already points out how object and image enact each other and that the existence of the virus is not simply shown but actually *accomplished* by the microscopic image (Woolgar 1988; van Loon 2002: 118). It is thus not surprising that, when the Ebola epidemic took up speed in the autumn of 2014, the story of its discovery was frequently re-told (DelViscio 2014; Sifferlin 2014).

In an interview with *TIME*, for instance, Murphy vividly recalls his first reaction to seeing the virus as being "flabbergasted", that "the hairs stood up on the back of my neck", and that "is the weirdest virus we have ever seen" (Sifferlin 2014). Stories of the astonishment and alarm caused by seeing the virus with an experienced eye turns the yellow thread into something extraordinary and concerning. The thrill Murphy recounts is an emotional reaction he most likely shares only (if at all) with persons in his field. Lay persons, on the other hand, depend on this kind of expert translation to make sense of what they are seeing. Health

security, here, importantly is made through the interaction between image and scientist that is, through news media, made accessible for persons outside the laboratory. The act of making the invisible virus visible is narrated as an act of demasking and thus appears as some sort of triumph of science over nature. The virus, to paraphrase Mol, “is *done* and *enacted* rather than observed” (Mol 1999: 77).

Furthermore, visualizing and thus identifying the virus came with the privilege of choosing its name (Johnson et al. 1977: 571). In May 2015 the WHO (2015c) launched a guideline titled “Best Practices for the Naming of New Human Infectious Disease” aiming to

minimize unnecessary negative impact of disease names on trade, travel, tourism or animal welfare, and avoid causing offence to any cultural, social, national, regional, professional or ethnic groups. (WHO 2015c: 1)

In these guidelines, the WHO advises not to make geographical references, not to include people’s names or cultural references, or to use terms that might induce fear (WHO 2015c). In contradiction to these guidelines, the name *Ebola* stems from the Ebola River in the DRC. Oddly enough, the village Yambuku, where the blood sample leading to the viruses’ discovery was taken, is located more than 100 kilometers away from the river. Peter Piot, who was a team member from the laboratory in Antwerp, recalls that the decision against naming the virus after the village was taken in order to protect its inhabitants from stigmatization (Nature Genetics 2020). Nevertheless, the name links the virus to a geographical place and thus assigns an ethnicity to the virus. Ostherr (2020: 710) in this regard points out with reference to SARS-CoV-2, which is frequently referred to as the “Wuhan Virus”, that “the sinister pathogen is associated with racist imagery of primitive settings and primordial threats”.

Looking at the first microscopic image of the Ebola virus through the lens proposed for this chapter one can conclude that the laboratory is introduced as a site of health security where the status of the virus is accomplished (van Loon 2002: 118) through the notion of unmasking. The sense of urgency and danger that is associated with the colors of the micrograph together with the interpretation of the scientists enact the virus in a very specific way: as dangerous and as foreign. This enactment, the zooming-in in Murphy’s image suggests, commences in the laboratory. However, through the attention news media paid to the image, especially in the context of the 2013-2016 epidemic, the laboratory is no confined space but a part of Ebola’s visual network. This becomes especially clear if we consider the next image.

8.3.2 Figure III.2: viruses as cover shots

The second image I want to discuss in detail is the cover of the *TIME* magazine from 15 May 2017 (fig. III.2). The cover image resembles a microscopic image and shows the characteristic thread-like organisms of Ebola viruses. It can be considered a visual continuation of Murphy's image. The viruses appear to be floating in some sort of fluid, four of them are in sharp focus but there are more floating blurrily in the background making the image to appear three dimensional and crowded. The bright shades of red of the viruses as well as of the frame is the dominant feature of the cover. In the center of the cover, overlapping the image of the viruses, is a white text box with a bold black frame. It contains the words "WARNING: WE ARE NOT READY FOR THE NEXT PANDEMIC" written in black capital letters. This alert, together with the red color, creates the immediate sense of urgency and imminent danger. The lower left corner contains two short teasers of articles in the issue written in white color. The first article's headline is "Science knows how to fight an outbreak – but policy still gets in the way", the second one is titled "How to keep the world safe" and is written by Bill Gates. The image of the viruses, the warning sign in the center, and the two teasers, all held together by the red frame, built their own health security network. The viruses as threatening agents are presented as the potential source of the *next big one* and the teasers suggest *science* and science bolstering philanthropy as a solution.

The mere fact that the microscopic image of a virus makes it on the cover of a prestigious magazine is one example of how they leave the confined world of science whilst still carrying the distinct aesthetics of the laboratory. Seeing viruses is, hence, not restricted to the laboratory and the scientific community. Furthermore, I find it noteworthy that, even though Ebola is not mentioned anywhere on the cover, the virus is easily recognizable without any verbal clues. This highlights the iconic status of the virus. In relation to that, the context of the cover is important. The cover appeared in 2017, so years after the Ebola epidemic. The fact that the Ebola virus is used to illustrate the unspecific threat of the *next big one* is indicative of the virus becoming a visual summary not only for a specific disease but for a general pandemic threat.

What does this zooming-in tell us about the health-security nexus? Apparently, 140 years later, Koch's famous quote on the importance of the scientific image still holds some truth. Murphy's image is not merely representing the virus, it is presenting it. Put differently, the

micrograph simultaneously makes visible and makes the virus (Daston 2014: 321) and partakes in the “constitution of truths” (Andersen et al. 2015b: 112). This truth is not neutral nor value-free (Engelmann 2018: 162). The virus is constituted in a specific way. By its naming and by being anthropomorphized and securitized through Murphy’s recounted memories, the virus is constructed as a dangerous and foreign agent. The health security assemblage the viral image builds with the warning sign on the *TIME* cover (fig. III.2) furthermore suggests that the visibility of the Ebola virus became a visual summary for a general pandemic threat.

The zooming-in furthermore highlights the importance of how the image of the virus is referenced, both, by scientists like Murphy and by news media outlets like the *TIME* magazine. Engelmann (2018: 177) accordingly points out that

[o]nly if the photograph was embedded within this circular chain of references between a disease and its cause, was it turned into a visualization of an agent and not just a neutral biological specimen.

Hence, it is not the image that acts in isolation, but rather the network of human and non-human actors that take part in making the virus. This network is not restricted to the laboratory. Rather, the micrograph leaves the laboratory developing its own dynamic and significance for the health-security nexus. This becomes clear if we take a closer look at the *TIME* cover (fig. III.2). At first sight, one might think that this image was, similar to Murphy’s famous micrograph, created with an electron microscope. However, if we look up the source of this image, we learn that we are looking at a stock image that was not created in a laboratory but designed by visual 3-D artist Henrik5000 who is selling his work on image banks like *iStock*. This suggests that the image of the virus not only leaves the laboratory in terms of its circulation but also regarding its creation. The following zooming-out section seeks to make sense of this circulation showing how the making of the virus simultaneously enables a deepening and widening of the health-security nexus. Guiding questions that arise from this zooming in, hence, are how images of the virus circulate beyond the laboratory, what human and non-human actors play a role in this circulation, and, ultimately, how this circulation affects our understanding of the health-security nexus.

8.4 Zooming out: viruses outside the laboratory

While the STS research, which builds the lens for this chapter, originally was mostly occupied with scientific images and questions of how they manufacture scientific knowledge

and are used to stabilize research findings within their respective scientific community (Knorr-Cetina 1981; Latour, Woolgar 1986; Latour 1993; Lynch 2006a, 2006b), more recent approaches make the case for thinking beyond the laboratory and to also investigating the entanglement of images through their reception and circulation (Coopmans et al. 2014a: 5).

In this section, I follow this trend and explore how images of the Ebola virus travel outside the laboratories “intersect[ing] with different forms of knowledge about ourselves and our world” (Burri, Dumit 2008: 300). I broaden the view from microscopic images to models, paintings, and stock photos and move beyond the laboratory, both, in terms of production and circulation of the viral image. I deem this step necessary, as, although it is impossible to trace every bit of the viruses’ visual circulation, it still indicates the vast network visual manifestations of the virus build and enables me to gain insights into their significance for the different layers of the health-security nexus. These layers range from damage within the individual cell of the body, to the fear of an uncontrolled global spread of the virus.

Following the image of the virus beyond the laboratory and tracing these different layers, I put forward the argument of a simultaneous deepening and widening of the health-security nexus. On the one hand, the microscopic image of the virus and its reception locate the threat of the epidemic deeply within the individual body focusing on the microbiological processes initiated by the virus. For this reason, I find a *deepening* of the health-security nexus. I develop this argument by, firstly, following Murphy’s image and by then adding results from following a more recent micrograph of an Ebola infected cell. From there, I move beyond the microscope, considering models, paintings, plush toys, and stock images. Here, I find that the different visual adaptations of the microscopic image suggest a *widening* of the health-security nexus. This widening offers multisensory and practical engagement with the virus that goes beyond seeing and turns the virus into a visual summary of the entire epidemic or even the threat of infectious diseases in general.

8.4.1 Following the beauty shot: the virus as evil, yet fascinating agent

I begin the zooming-out with following Murphy’s beauty shot of the Ebola virus to explore the network in which it acts and is enacted and to, thus, further move beyond the laboratory. I show that microscopic images and their reception in the sphere of news media contribute to a deepening of the health-security nexus by, on the one hand, focusing on the doings of the

virus within the individual body and, on the other hand, focusing on the virus as a fascinating agent detached from its social embeddedness.

To get an idea about where and when Murphy's image appeared in news media outlets, I conduct a TinEye image search that makes me identify two different storylines into which the micrograph is embedded. The first one is concerned with a biomedical focus specifying the threat of the virus for the body. The second one is not so much concerned with what the virus does but rather with how it looks like.

The virus within the body

The first storyline uncovered by TinEye contains stories with a specific biomedical focus. These stories discuss the inner workings of the virus and the question of what the virus is doing inside the body and/or what can and needs to be done to either stop the spread of the virus or to heal the body. Together, these stories contribute to the making of the virus as an evil and dangerous agent. One example is the article in *TIME* published on 3 November 2016. The very short piece begins with Murphy's image and explores "How Ebola Got So Deadly" (Sifferlin 2016) by referencing a study that suggests it was a mutation that made the virus "so brutal". In June 2015, the *Washington Post* ran an article about the possibility that the Ebola virus could have been "the culprit in the ancient Plague of Athens" (Choi 2015) that also commenced with Murphy's image. A few weeks later the *Washington Post* (Bever, Moyer 2015) used the image again in a story about the virus persisting in the eye of an Ebola survivor.

In addition, the search also showed results where Murphy's image was part of texts discussing strategies and solutions to cure the virus. For instance, the *New Yorker* ran a text emphasizing the need to strengthen scientific research on the virus. Under the headline "What We Don't Know about Ebola" (Groopman 2014) and Murphy's image the text outlines the need to learn more about "the biology of Ebola to bring the outbreak under full control, or to neutralize the virus once the outbreak is contained". Already in 2011, *National Geographic* (Dell'Amore 2011) discussed a study introducing a new drug to cure viruses in human cells with Murphy's micrograph as a visual headline. On 18 February 2021, *NBC News* (The Associated Press 2021) used the image in a short text about the WHO sending Ebola vaccines to Guinea to combat a new outbreak of the virus.

All these stories are not only connected through the same image but also through their biomedical focus on what the virus does. It is mutating, targeting the human cell, persisting in the eye, and might even been responsible for an ancient Plague outbreak. The microscopic image itself does not carry any information that is relevant for these statements, but due to its scientific aura works as some sort of authorization (Weingart 2004: 115).

Beautiful and deadly

The second storyline offers a different layer that is not so much focused on Ebola and what the virus does but rather highlights the alleged tension between the beauty of the virus and its deadliness. Part of this category are rather short news media pieces that compile a series of microscopic images under headlines like “A Very Close Look At Some Of The World's Most Feared Viruses” (Bubacz 2020), “Deadly Infections Up Close” (abc News n.d.), “Tiny & Nasty: Images of Things that Make Us Sick” (Parry 2012)¹⁷ and “These are the Killers Stored in Universities’ Laboratories” (Der Spiegel 2014b, own translation). In three of these examples (abc News n.d.; Der Spiegel 2014b; Bubacz 2020) Murphy’s image is part of the image series alongside images of plague, smallpox, influenza, etc. In one case (Parry 2012), Ebola is represented by a rather similar microscopic image taken also at the CDC by Cynthia Goldsmith in 2007 (fig. III.3). In each case, the series of microscopic images constitute the central element and are not mere illustrations but rather the subject of the articles.

This suggests the virus to be not only an object of scientific research but that both, the virus and its visual manifestations in microscopic images, constitute a “Faszinosum” (Mayer, Weingart 2004: 11). The interest in the microscopic image, here, clearly exceeds the laboratory. Importantly, the microscopic image is not only a passive representation of something but constitutes a thing in itself and has agency in terms of identifying and defining the virus and in embodying the beauty of nature (Weingart 2003: 285). Furthermore, following Murphy’s image shows that it appeared not only frequently during Ebola epidemics but also has a certain timelessness serving as a visual summary for viruses or more broadly as an image “of things that make us sick” (Parry 2012). Apparently, Murphy’s image, as the first

¹⁷ This piece does not only feature viruses but also images of mosquitos and fleas. The mixing up of pathogens and their vectors is visually straightened by the microscopic perspective of each image.

microscopic image of the Ebola virus, achieved a timeless status and circulated widely before, during, and after the epidemic.

Together, the two storylines attached to Murphy's image foster the notion of the virus as an evil agent posing threats to the human body on a microbiological level. Health security, in this regard, is *deepened* into the individual human body. This, however, should not make us overlook that the epidemic itself led to a creation of manifold micrographs of the Ebola virus. The next section takes a closer look at these more recent micrographs.

8.4.2 Seeing viruses in action

Looking at the CDC Public Health Image Library, I noticed another type of virus image that is listed alongside Murphy's famous micrograph: the microscopic image of a cell infected with the Ebola virus produced by the *National Institute of Allergy and Infectious Diseases* (NIAID) (fig. III.4). The caption specifies that we see "numerous filamentous Ebola virus particles (blue) budding from a chronically-infected VERO E6 cell (yellow-green)".

This micrograph builds a visual supplement to Murphy's image because, instead of offering a *beauty shot* of a single virus particle, the image of the infected cell shows the virus *in action*. This further pushes the focus on the virus as a dangerous entity and the fascination of what it does to and within the body. Following this image adds an additional perspective to the visualization of Ebola as a virus. Even though the usage of the complementary colors – blue and yellow-green – build a visual link to Murphy's image and its scientific aura, it also exemplifies the scientific achievements in the field of electron micrography. The NIAID image is much cleaner than Murphy's micrograph, there is no fluid in the background, the cell appears to be floating in a weightless space. The micrograph's 3D-optic resembles more a computational model than a microscopic image. Similar to Murphy's image, as a lay person one does not know what the image exactly shows, but the string-like viruses sticking at the cell can easily be associated with parasitic worms. Despite a lack of virological literacy, the notion of *this is not good* is immanent to the viewer.

Following the NIAID image via image reverse search echoes the results of the following of Murphy's image. The image is embedded in texts referencing a study on how a mutation increased the viruses' ability to infect human cells (Yong 2016; Fox 2016). Headlines like "How Ebola Adapted to Us" (Yong 2016) equate Ebola with the virus, equip the virus with agency

and suggest an us-versus-the-virus dichotomy. While the NBC piece (Fox 2016) and the *Atlantic* article (Yong 2016) discuss the mutation in retrospect, a *National Geographic* (Quammen 2014) article with the headline “Tracking a Serial Killer: Could Ebola Mutate to Become More Deadly?” already in October 2014 discussed the threat of future mutations. Posing the questions “Where did the virus come from? Where is it going? What's next?”, Quammen (2014) explores the geographical spread of the virus concluding: “One way or another, it has been on the move” and urges that “[w]e need to terminate Ebola 2014 before the virus learns too much about us” (Quammen 2014). Contextualizing the Ebola virus with other viruses “lurking”, Quammen (2014) concludes that “[v]iruses are simple organisms but well-adapted to the modern world. This year it's Ebola, devastating and scary. Next year it will be something else”. This text is an ideal typical example of how agency and evil intent are ascribed to the virus that is visually topping the article.

Considering Murphy's (fig III.1) and the NIAID's image (fig III.4) I argue that the focus on who the virus is (an evil agent, even a killer, yet beautiful) and what it does inside the human body (mutating, infecting cells, etc.) incorporates a narrow perspective on the health-security nexus that has already been discussed in the zooming-in section. This narrow focus

erases the individual experience as well as the social realms to enfold a logic of its own onto our perception of the disease. It shifts attention from epidemic to chronicity, from cultural excess to scientific rigor, from external conditions onto inherent structures. (Engelmann 2018: 170)

The bright colors and the overall aesthetic of the laboratory support a narrow definition of health security in techno-scientific terms (Elbe 2010: 171) that locate the identification of the threat and its solution to the laboratory. Seeing Ebola through the microscope, hence, puts the health-security nexus deeply within the body, without visualizing its social embeddedness. The health-security nexus, put differently, is taken to the microbial level. The solution here, importantly, is not the investment in sustainable health infrastructure, but the advancement of science.

Furthermore, even though the scientific meaning of these images is unclear from a lay person's perspective, the seeing of the invisible and the paradox of an extremely small agent being incredibly dangerous leads to the double status of the virus image as object of scientific research and as “Faszinosum” (Mayer, Weingart 2004: 11). Following the microscopic image into the field of news media, hence, unfolds a network where images of the Ebola virus

contribute to the making of health security through the aura of the laboratory emphasizing a biomedical gaze. The referenced works demonstrate how text and image enact each other. This enactment is of especially high importance, as – different to the images discussed in the previous two chapters – for a lay person, an isolated micrograph is hard to understand.

So far, this chapter has mostly focused on microscopic images and on how they act and are enacted in a network connecting scientists, viruses, electron microscopes, and laboratories. This focus suggests a deepening of the health-security nexus through making (visible) the virus. In the next two sections, I seek to broaden this perspective by moving from electron micrographs to models, paintings, plush toys, and stock images.

8.4.3 Beyond the microscope I: from seeing to understanding to taming?

My move from micrograph to model is prompted by the example of a virus model that arguably became the most famous one of its genre: the model of SARS-CoV-2 created by Alissa Eckert and Dan Higgins for the CDC. Already in the vignette for this chapter I convey how expressions of “creating an identity” (Giaimo 2020) and of the image “doing its job” (Giaimo 2020) sparked my curiosity. The model of SARS-CoV-2 is the last in line after models of, for instance, HIV, Zika, H1N1, Human papillomavirus (HPV), and, of course, Ebola. The more I researched and read about different techniques of visualizing viruses for this chapter, the more I became aware of the ontological and epistemological differences between electron micrographs, like the one by Murphy, and models, such as the one by Eckert and Higgins.

Importantly, models are not snapshots of *actual* viruses, but a three-dimensional visualization created based on scientific information. In comparison to the electron micrograph, there is a significant gap between representation and representamen (Peirce 1986), as there is no causal link between one *real* virus particle and the model. It is primarily the work of illustrators, designers, and medical artists (Lozano 2020). The microscope, so to speak, is replaced by the computer. What we see, as Engelmann (2018: 166) has eloquently traced in the case of HIV, is the collapse of seeing and knowing the virus in one image.

To understand what that means in the context of health security, I explore two rather different but yet similar examples of viral models: the first one is an educational poster from the biomedical visualization studio *Visual Science* (fig. III.5). The second one is a painting from the biologist and artist David Goodsell (fig. III.6). With reference to these two examples, I show

how the interest and work put into creating most accurate models of viruses – and of their inner workings – not only constitutes another form of deepening of health security but at the same time reveals another facet of the making of the virus: Different to the previously analyzed case of Murphy’s micrograph, visualizing the virus is not so much about making visible but about making known and manageable. Visualizing the virus, here, has a de-securitizing dynamic.

The virus as poster child: the Ebola poster by Visual Science

The first example is an educational poster with a 3D model of the Ebola virus created by the US-based biomedical visualization studio *Visual Science* (fig. III.5). The poster shows a three-dimensional virus particle floating in front of a black background. The upper right corner explains that what we see is “the causative agent of a severe form of hemorrhagic fever in human with a 50-90% fatality rate”. The model is very detailed. The grey membrane of the virus is covered with tiny red flecks. From the descriptions in the lower left corner, we learn that these are proteins mediating the attachment of the virus to the cell. A transverse section at the front end enables a glimpse into the inside of the virus particle and its different layers which are again named and explained by descriptions in the lower left corner of the poster. The creation of the model (and of the poster at large) as well as the actors involved are very different from the creational process of Murphy’s micrograph. There are no blood samples, laboratories, or virologists involved – at least not directly. Instead, a group of designers and illustrators (some of them with a background in science, though) analyze the published scientific information about the virus and create the model based on that information using computational biology software (Pool 2020).

The poster received an honorable mention in the category “informational posters & graphics” at the 2011 *International Science & Engineering Visualization Challenge* hosted by the *National Science Foundation* (NSF) along with the journal *Science* (NSF 2012). In the announcement of the winners of the competition, *Science* (2012: 530) praises the poster finding that it

provides a good look at how Ebola turns dangerous. Proteins coded by the virus’s own genome are shown here in maroon. They’re the pathogen’s Velcro, clinging to the surface of target cells and giving the virus access to their interior. Anyone perusing this poster “can clearly understand that the Ebola virion is a very complex supra-molecular structure, with various polypeptides, lipids, and RNA genome included,” Konstantinov [CEO of *Visual Science*] says.

The model of the Ebola virus resurfaced during the epidemic as, for instance, the backdrop of a full page infographic about the “the anatomy of a killer” as part of an interview with Piot in *Der Spiegel* (2014a, own translation) (fig. III.7). This example is particularly interesting as Piot, like Murphy (Sifferlin 2014), remembers his excitement (“what the hell is this?” (*Der Spiegel* 2014a, own translation)) when seeing the virus for the first time and because of the alteration of the graphic. In *Der Spiegel*’s version, the virus is supplemented with a model of a male human and of a (scientifically inaccurate and simplistic) circle of infection between bat and monkey to human. Three circles on the body specify (albeit only vaguely) where the virus is causing the most harm. Here, the threat of the virus to the body is coming from wildlife. The transmission from human to human, which caused the epidemic, is left out in this graphic. Instead, the stereotype laden reference between the consumption of bushmeat is implied.

One year before the Ebola poster, *Visual Science* won the first place for illustrations in the 2010 *International Science & Engineering Visualization Challenge* for a model of the HI-Virus (Dillow 2011). From a lay person’s perspective, the style and set up of the HI and Ebola virus models is rather similar. The dominating colors are black (background), grey (virus membrane), and orange (proteins) for the HI-Virus, or red (proteins) in the case of the Ebola virus. However, the Ebola model is praised for being “10 times more accurate” (*Sci Tech Daily* 2012) than the HIV-model. *Visual Science* has also created a model of the SARS-CoV-2 (fig. III.8; fig. III.9) that, even though no award is won yet¹⁸, is praised as “The World’s most scientifically accurate 3D model revealed” (Pool 2020). The apparent drive for accuracy and the existence of competitions like the *International Science & Engineering Visualization Challenge* put emphasis not only on the significance ascribed to scientific images in general, and specifically outside the realm of science and medicine, but also reveals that visualizing viruses is not only about making visible but about making visible *as accurate as possible*, including all available information and details. Understanding the virus by making its details and features visible is one way to address the dangers associated with the virus. What we see in the poster, hence, is another deepening of the health-security nexus, not through what the virus does inside the body but what the inside of the virus contains and looks like. At the same time and closely tied to this point, I take the fame and appreciation the models received as an indication of how the

¹⁸ As of April 2022.

making visible and the associated creation of knowledge about the virus is an attempt to turn it into a manageable threat. This point is further explored in the next section.

The virus as painting: the Ebola model of David Goodsell

The second example is a painting of a cross section through the Ebola virus (fig. III.6) by the biologist David Goodsell. Goodsell, who is based at the Scripps Research Institute at La Jolla, has established watercolor painting as his signature style for scientific drawings. I first came across Goodsell's work in the context of the COVID-19 pandemic when I was intrigued by his painting of the SARS-CoV-2 (fig. III.10) virus and its accompanying headline in the *Washington Post* stating: "Coronavirus is a Killer but this Scientist Won't Reduce it to a Comic Villain" (Kennicott 2020). The article compares the "death star"-like CDC model of SARS-CoV-2 with the "strikingly beautiful, whimsical and orderly" painting of Goodsell that "isn't hard to imagine it as a record cover for a hippie rock band of the 1960s" (Kennicott 2020). Goodsell's painting of SARS-CoV-2 is just one out of many pieces he created of individual proteins and cellular panoramas, among which is also the cross section through the Ebola virus published in 2014 (fig. III.6).

On first sight, the watercolor paintings appear fundamentally different from all the other visualizations of viruses so far discussed. There is, firstly, the style. Painting – other than microscopy and computer based biomedical modeling – seems to be very detached from the *hard sciences*. Even though drawing was the key visualization technique before micrography, the paintings of Goodsell may seem somewhat unscientific – the psychedelic, hippy-like aesthetics and the cheerful colors appear far away from the aesthetics of the laboratory as the host of scientific truth and objectivity.

Yet, despite these striking differences, on further investigation, one finds many similarities between Goodsell's work and the work of *Visual Science*: Both are firmly based on scientific information. Existing publications built the basis of both images and detailed information on the different elements of the depicted viruses and their context and mechanisms is provided alongside the images. Like the *Visual Science's* HIV-model, Goodsell's work is also frequently published on the covers of scientific journals – his painting of SARS-CoV-2 on the cover of *Nature* (2020) being the most recent example. Furthermore, Goodsell's work also received a prestigious award in the field of science: in 2016 the painting of the Ebola virus was named

the overall winner of the *Wellcome Image Awards* (2016). The reference to Goodsell's work as "[d]eadly viruses never looked so beautiful as they do under Goodsell's brush" (Fessenden 2016) echoes the already highlighted double status of the virus image as object of scientific research on the one hand and as "Faszinosum" (Mayer, Weingart 2004: 11) on the other. This fascination, in a sense, also bridges the world of science – think of Murphy's thrill and enthusiasm – with the broader public.

Visualizing viruses, this becomes clear in this section, does not happen in closed medical circles but is also done with the aim of educating and providing information for the broader public. This has implications for the health-security nexus. Firstly, the works of Goodsell and *Visual Science* step out of the laboratory. Goodsell et al. (2020: 1), for the painting of SARS-CoV-2, explain:

Our hope is that these illustrations will help to put a face on the virus, to help us see that it is something that may be understood and fought, and that they will help present the viral and cellular context of topics being discussed in professional and popular media.

The aim behind giving the virus "a face" (Goodsell et al. 2020: 1) is, hence, not primarily to constitute its agency but to help the broader public to understand and to actually imagine the invisible virus as a target that can be fought. Importantly, health security again is happening at the micro-level, albeit outside the laboratory. This can be seen as a simultaneous deepening and widening the health-security nexus.

Secondly, and Goodsell's work is a fitting example, visual manifestations of the virus offer a way of engaging with epidemic or pandemic outbreaks that go beyond seeing. Goodsell published a coloring book version (fig. III.11) of his painting. In a paper together with colleagues he reflects about the effects the model and the coloring book version had in terms of outreach and education. The paper lists a few comments Goodsell and his team received, which, I find, highlight important aspects. Examples (Goodsell et al. 2020: 6) are: "the kids and I were talking today about how it is NOT an invisible enemy, just requires the right tools to see", "Art is the work of transforming fear and pain into beauty", and "Things seem a bit less scary when they're colourful". Even though these quotes are just glimpses into how the coloring book version of the virus was received, the connection made between seeing, knowing, and ultimately taming the virus seems striking to me. Similar to the MSF infographic (fig. I.10) and to the Halloween costume (fig. I.12) discussed in *Chapter 6*, the coloring book

version of the virus offers a way to go beyond showing and seeing (Heck, Schlag 2012) and to engage, this time through creativity, with the health-security nexus.

Another example in this vein, that also goes beyond seeing and includes tactile engagement, are the popular plush toys in the shape of viruses. *Giant Microbes*, for instance, sells a wild mix of plushy viruses, bacteria, cells, and organs anthropomorphized with big, round eyes. One could simply brush this aside as a capitalistic marketing trick, but I would hold that the existence and the success of businesses like *Giant Microbes* and the products they sell, tell us something about the role of viruses' visibility outside of the laboratory. Take the Ebola virus (fig. III.12) as an example. *Giant Microbes* (n.d.) advertises Ebola as "the T. Rex of microbes". The leaflet that comes with the toy contains, alongside with some facts about the virus, a black and white image of Murphy's micrograph. This multisensory artefact (Callahan 2020) enables a tactile and playful engagement and connection with the pandemic. The threat of Ebola as "the T. Rex of microbes" is tamed. The interplay of the leaflet with the micrograph and the plush virus builds a visual bridge to the very beginning of the seeing and making of Ebola. It is, I find, symptomatic for the vast network and manifold interconnections visualizations of the Ebola virus build and enact.

To sum up, this section provides three findings. Firstly, it uncovers another layer of the deepening of the health-security nexus. This deepening not primarily happens within the individual human body but within the virus as visualized through the cross-section perspective. The models offer a new, more accurate, and literally deeper perspective at the virus. Secondly, this perspective is, in a sense, not only about seeing the virus but about understanding its mechanisms and structure. This, I suggest, implies a specific form of making the virus that is not so much concerned with *making visible* but with *making known*. Visualizing the virus, hence, entails a de-securitizing dynamic. Thirdly, the material discussed in this section and the traced transformation from model to coloring book template and from micrograph to plush toy are yet another example of how health security is not only made in terms of showing and seeing but also through creative and tactile engagement. This engagement gives lay persons the space to not only make sense of health security but to locate themselves in the health-security nexus as well. What connects these two elements together is the notion of taming the virus. They furthermore entail an element of widening as the creators of the models as well as the expected audience are not restricted to medical field.

This widening is further discussed in the next section, which, by tending to the role of viral stock images, undertakes yet another step away from the laboratory.

8.4.4 Beyond the microscope II: locating the threat

The example of the stock image used on the cover of the *TIME* already suggests that images of viruses are not exclusively generated by scientists with microscopes. The importance of ready-to-use stock images is constantly increasing, not only for advertising and branding but also for journalism (Aiello 2016). The *TIME* cover appears to be a case in point in this regard. Even though stock images are held to be “central to the ambient image environment that defines our visual world” (Aiello 2016), this type of images and the role of image banks remains largely overlooked. In media studies, there is only a small group of scholars who analyze stock images and their societal effects (Frosh 2001; Machin 2004; Aiello 2016; Thurlow et al. 2020). These scholars not only point out the “systematic industrialization” (Frosh 2001: 626) of the stock image business, but also emphasize their distinct nature of being pre-produced for sale in the hope to meet the interest of costumers:

They do not represent actual places or events and they do not document or bear witness, but they symbolically represent marketable concepts and moods. (Machin 2004: 316)

But what are “the moods” evoked by stock images of viruses, what are the assumed marketable concepts behind them? To answer these questions and to explore what this trend means for the health-security nexus, this section explores stock images of the Ebola virus and thus follows the image on its way out of the laboratory.

I commence this zooming-out with coming back to the stock image that was published on the cover of *TIME* magazine and is described in detail above. The first result when searching for “Ebola” in iStock is the stock image of Henrik5000 that made it on the *TIME* cover. What we are seeing here is not the “pencil of nature” (Talbot 1844), but an image whose creation is not causally linked to a real virus but only inspired by its visuality. Nevertheless, due to the resemblance with the microscopic image, the stock image still carries the aesthetic of the laboratory and with it the aura of objective truth. Clicking on Henrik5000’s image leads us to a list of “visually similar images”, which, besides a multitude of creations mimicking the microscopic image, also contains several images where the notion of the microscopic image is kept but simultaneously altered. One example is the image created by Nixxphotography (fig.

III.13). While the style and coloring of the microscopic image is kept, the viruses are not randomly spread but together form the word “ebola”.

I find the image created by Nixxphotography is symptomatic for a trend that Engelmann (2018: 162) has already shown in the case of AIDS where the image of the HI-Virus has lost its indexical and symbolic status and became a visual summary for the epidemic at large. Similar to HIV/AIDS, I argue that by detaching Ebola from the health worker (*Chapter 6*) and the body in pain (*Chapter 7*), the image of the virus appears “cleansed of social, cultural and political signifiers” (Engelmann 2018: 162) of the epidemic. This makes this kind of image an attractive option for media outlets, as it seemingly comes without the ethical questions, which are, for instance, detached to the depiction of children or dead bodies. This attractiveness further increases given that many microscopic images, Murphy’s image of the Ebola virus is likely the most popular example, are published under the creative common license and thus free to use. By, in a somewhat sober way, visualizing the “latent danger” of a respective diseases, images of viruses have the potential to become a “collective symbol” (Weingart 2004: 124, own translation) that promises to offer a “neutral, value-free and emphatically scientific way of seeing” (Engelmann 2018: 162).

This promise, however, is hardly ever kept. This starts with the name that is assigned to the virus and continues in the realm of stock images. The virus as a visual summary for the epidemic that communicates a latent, unspecific notion of danger can easily be added not only to a variety of texts but also to a variety of images. One in my view striking example is the stock image “African hands with Ebola Virus” by Giovannicancemi (fig. III.14) that shows two black hands holding two virus particles, which, due to their distinctive threadlike shape, can be easily identified as Ebola viruses. This stock image is just one example where the “seemingly objective microscopic images of viruses become racialized pathogens in global health’s pandemic imagery” (Ostherr 2020: 710). iStock, for instance, offers various diagrams of maps of Africa with the virus overlaid (fig. III.15). In each of the examples, the virus has the exact similar shape like the one in Murphy’s microscopic image. The virus in these cases is the visual synonym for the epidemic in general marking the entire continent as diseased. This is not only widely inaccurate, it also refers to Africa as the “epidemiological ground zero” (Wald 2008: 32) and resonates with the work on HIV/AIDS of Bleiker and Kay (2007: 144) who, with reference to Watts and Boal (1995) and (Kean 1998: 2), find “the tendency to view Africa as a

homogenous continent”. One bitter example of the consequences of this narrative is the case of two children who moved from Rwanda to the US with their parents and had been banned from going to school, despite the fact that Rwanda is Ebola-free and more than 2,600 miles away from the Ebola affected countries in West Africa (Taylor 2014).

These examples show that the virus – as a synonym for the epidemic – is used to, oftentimes incorrectly and with racist connotation, visually locate the epidemic and the threat of infection. Interestingly enough, this does not only happen as a diagnosis of the presence but also as a prognosis for a possible future: A browse through stock image data bases quickly leads to a map of the US with the virus overlaid in the similar design as the map of Africa. A similar dynamic can be found in respect to the current COVID-19 pandemic where the virus serves as a visual metaphor to identify specific locations or the global scale of the pandemic. One example in this vein is the *TIME* cover showing the White House with smoke consisting of viruses coming out of the chimney (fig III.16). In these instances, different to previous examples discussed in this chapter, the focus is not on creating and visualizing the virus’ identity or its mechanisms but to visualize the presence of the invisible virus. In terms of health security, it means that these kinds of visualizations, rather than answering the question of *what* or *who* is a security threat, focus on the question of *where* this threat is located.

8.5 Conclusion: making Ebola

This chapter followed different visualizations of the Ebola virus asking how they contribute to the health-security nexus. I commenced this chapter with a quote from Koch (1881), who suggests the photographic image of an object being more important than the object itself. To make sense of this alleged importance and its relevance for the health-security nexus, I analyzed different visual manifestations of the virus ranging from microscopic image to coloring book exploring how they act and enact each other.

Already in the zooming-in section, the basic and at first sight trivial question of *what I see* when looking at a microscopic image of the Ebola virus turns out to present not only a major puzzle but also to lead to the first significant finding of this chapter: while I immediately recognize the Ebola virus, I still do not know what exactly I see and what information the image is presenting to me. This paradox of knowing and at the same time not really *understanding* the image is important. On the one hand, this points to the iconic status of the virus whose visibility has achieved a high degree of recognition value. On the other hand, my lack of

scientific knowledge as a lay person made it necessary to look up a lot of terms and expressions from the field of virology before I was able to describe the micrograph's content. While lay persons like me can immediately link the image of the virus to the respective disease, to go beyond this linkage we depend on the textual (and visual) interpretation that comes with the image. Hence, the theoretical framework of the thesis is of particular importance and value in this regard. It enabled me to explicitly consider visual manifestations of the virus and how they act and are enacted in a network connecting texts, images, scientists, journalists, viruses, electron microscopes, and laboratories with the broader public. This led me to three interlinked findings suggesting that the visual manifestations of the virus enable: 1) the making of the virus and its introduction as an actor to the health-security nexus; where it, both, contributes to the 2) deepening and to the 3) widening of this nexus. In the following, I unpack each aspect.

Firstly, through the lens based on the STS literature (Latour, Woolgar 1986; Daston, Galison 1992; Latour 1993; Dinges, Schlich 1995; Daston 2014) and academic debates in art history (Bredekamp, Brons 2005), the analysis in this chapter traced how the first microscopic image of an Ebola virus particle contributes to the "accomplishment" (van Loon 2002: 118) of the virus. Following the microscopic image during the Ebola epidemic indicated how the network of images, texts, and scientists constitutes the virus as a foreign agent with evil intent that is, both, identified and defeated in the laboratory. At the same time, however, the paradox of an extremely small agent being incredibly dangerous results in a double status of the virus and its microscopic image not only as objects of scientific research but also as "Faszinosum[s]" (Mayer, Weingart 2004: 11) that exceeds the laboratory.

In the zooming-out section, I showed that visual manifestations of the virus aiming at educating the broader public (like educational posters, coloring book templates, and plush toys) add another facet to this notion of *making the virus*. This facet is not so much concerned with the viruses' evil intentions and foreign descent but with the provision of knowledge about the virus ultimately leading to its taming. This resonates with the notion of unmasking that is associated with visualizing the invisible virus. Making the virus visible, hence, offers a securitizing *and* a de-securitizing dynamic.

Secondly, following Murphy's micrograph of the Ebola virus and the more recent NIAID image showed a deepening of the health-security nexus. The focus on the microbiological

processes initiated by the virus locates Ebola's threat inside the individual human body. This happens in a network built by the virus itself, its visual manifestations (for instance, a cell *invaded* by virus particles), and texts ascribing attributes like "killer" (Der Spiegel 2014b) or "tiny & nasty" (Parry 2012) to them. The focus is on *who* the virus is (an evil agent, even a killer) and *what* it does inside the human body (mutating, infecting cells, etc.). The colors, which are a distinctive feature, not only of the actual micrographs (fig. III.1) but also an element that is imitated by the stock images (fig. III.13, fig. III.14), evoke what Weingart (2003: 283, own translation) calls "laboratory aesthetics" that characterize the microscopic view of the virus. Burri and Dumit (2008: 305) argue that "scientific images' persuasiveness depends on their being regarded as the simultaneous voice of technoscientific authority and as expressions of nature". This aesthetics locate the virus inside the laboratory. The deepening of the health-security nexus, hence, entails a narrow focus on microbiological processes which introduces the laboratory as a provider of technoscientific control and, thus, an important site of the health-security nexus where the virus is both identified *and* defeated.

Importantly, the deepening not only happens inside the human body but also inside the virus itself through models of viruses (fig. III.5, fig. III.6) that visualize the inner workings of virus particles. These two interrelated modes of deepening align with the techno-scientific conception of health security that puts emphasis on medical intervention while underlying cultural, economic, social, or geographical elements are largely ignored (Elbe 2010: 171). The health-security nexus, to put differently, is taken to the microbial level.

Thirdly, I commenced this chapter with the observation that in pandemic or epidemic times not only viruses themselves, but also images of them, spread at high speed and at various places. The invisible circulation of the virus becomes visible in its different visual manifestations. Coming back to the research vignette at the beginning of this chapter, the relevance of the act of *making visible* beyond the laboratory becomes strikingly apparent in the case of the COVID-19 pandemic: Everywhere we go, we see the virus. Not SARS-CoV-2 itself, of course, but its visual interpretation in the form of magazine covers, newspaper front pages, posters on shop windows and restaurants, info signs guiding the way to test stations or vaccination centers, even in the symbol of the tracing-app when unlocking our phones. Different visual manifestations of the virus build a visual network and serve as a constant

visual reminder of the invisible threat of infection and of the measures (keeping distance, wearing a mask, etc.) that are necessary to mitigate that threat.

This implies a widening of the health-security nexus in terms of two interrelated aspects. Firstly, both, the zooming-in and the zooming-out sections demonstrated that visualizations of viruses become representations of their respective diseases or even a general pandemic threat. The popularity of Murphy's image and the appropriation of the microscopic image either as plush toy or on clothes, to come back to the vignette at the beginning of this chapter, underscore this point. In the case of stock images, I showed that the focus here is not so much on what the virus does inside the body but more on its general existence and possible location. The security dimension is tightly linked to the invisibility of the virus and the thus hidden risk of infection that is made visible and unveiled via the images. This form of widening also encompasses an increasing range of genres. I showed how the motive of the virus moves from micrographs (of the virus itself and of infected cells) to computer or paint-based models to coloring book template and, finally, to plush toys. The leaflet of Murphy's micrograph that comes with the Ebola plush toy demonstrates how all these elements are entangled.

Furthermore, the widening also happens in terms of how people (inside and outside the laboratory) can engage with the virus. Tracing how the virus visually manifests not only in two-dimensional images but also in toys and coloring book templates suggest the possibility for a tactile and playful engagement and connection with the pandemic similar to the Halloween costume introduced and discussed in *Chapter 6*. The fascination (Mayer, Weingart 2004) the virus sparks exceeds the laboratory and widens the circle of persons engaging (albeit very differently) with it.

Taken together, the findings presented in this chapter add another layer to the ones discussed in *Chapters 6 and 7*. The deepening of the health-security nexus traced in this chapter focusses not so much on the tension of the threat Ebola poses *to or through* the body, but on the damage the virus causes *within* the human body, even *within* the human cell. Different from *Chapters 6 and 7*, the body is individualized, the element of contagion through physical contact with other bodies is mostly missing. However, the *widening* of the health-security nexus links the microbiological damage threatening the individual body to the fear of the invisible virus being everywhere. This spread is visualized by different attempts to visualize the invisible virus and to, thus, determine its (potential) location.

III. Annex: the invisible virus

- Figure III.1 Colorized micrograph of Ebola virus particle, Frederick Murphy – n.d.; source: <https://phil.cdc.gov/details.aspx?pid=10815>
- Figure III.2 Colorized micrograph of Ebola virus particle, Frederick Murphy – n.d.; source: <https://phil.cdc.gov/details.aspx?pid=10815>
- Figure III.3 Colorized micrograph of Ebola virus particle, Cynthia Goldsmith – n.d.; source: <https://phil.cdc.gov/details.aspx?pid=10816>
- Figure III.4 Colorized electron microscopic of Ebola virus particles and infected cell, NIAID – n.d.; source: https://phil.cdc.gov/details_linked.aspx?pid=17768
- Figure III.5 The Ebola virus poster, Visual Science – n.d.; source: <https://visual-science.com/projects/ebola/poster>
- Figure III.6 Cross section through Ebola Virus, David Goodsell – n.d.; source: <https://pdb101.rcsb.org/sci-art/goodsell-gallery/ebola-virus>
- Figure III.7 Anatomie eines Killers Ebola Poster Collage, Der Spiegel – 21 September 2014; source: <https://www.spiegel.de/politik/was-zum-teufel-ist-das-a-53401834-0002-0001-0000-000129339546>
- Figure III.8 SARS-CoV-2 3D Model, Visual Science – 12 May 2020; source: <https://visual-science.com/projects/sars-cov-2/3d-model/>
- Figure III.9 SARS-CoV-2 3D Model, Visual Science – 12 May 2020; source: <https://visual-science.com/projects/sars-cov-2/3d-model/>
- Figure III.10 Painting of SARS-CoV-2 virus particle, David Goodsell – n.d.; source: <https://pdb101.rcsb.org/sci-art/goodsell-gallery/coronavirus>
- Figure III.11 Coloring book version of SARS-CoV-2, David Goodsell – n.d.; source: <https://pdb101.rcsb.org/learn/coloring-books/coloring-coronavirus>
- Figure III.12 Ebola plush toy, Giant Microbes – n.d.; source: <https://www.giantmicrobes.com/us/products/ebola.html>
- Figure III.13 Ebola letters, Nixxphotography – 23 August 2014; source: <https://www.istockphoto.com/photo/ebola-virus-gm508442475-45505660>
- Figure III.14 Hands with Ebola virus, Giovannicancemi – n.d.; source: <https://www.crushpixel.com/stock-photo/african-hands-with-ebola-virus-84381.html>
- Figure III.15 Africa map and Ebola virus, bortonia – 3 October 2014; source: <https://www.istockphoto.com/vector/africa-map-with-ebola-virus-overlay-gm516287161-48712396>

- Figure III.16 White House and SARS-CoV-2, TIME Magazine – 19 October 2020;
source: <https://time.com/magazine/us/5897865/october-19th-2020-vol-196-no-15-u-s/>

9 Conclusion: connecting the dots

In this thesis, I have asked the question *How do images shape our understandings of the link of health and security?* and sought to shed light on the role images play in the ever-growing connection of health and security. The underlying assumption and motivation behind this research interest, which is emphasized in the thesis' title, is that the way health crises are *imaged* impacts on how they are *imagined*, perceived, and ultimately dealt with (Bleiker 2018a; Schlag, Heck 2020a). The fundament of the thesis, thus, is the interconnectedness of our comprehension of health crises and the images surrounding them. I have explored this interconnectedness with an empirical focus on the Ebola epidemic in West Africa. To acknowledge Ebola's embeddedness and to situate the images taken in the context of the epidemic, I have also moved back and forth in time. Back as far as to medieval plague outbreaks and forth up to the COVID-19 pandemic.

To illustrate the interplay of images, health, and security, I have opened the introduction of this thesis (*Chapter 1*) with the quote "The doctors say, 'Don't worry,' but the pictures say, 'Oh, yes, you should.'" (CNN News quoted in Moeller 1999: 60) from a CNN news episode on A streptococcus in the United Kingdom in 1994. The analysis leads me to the conclusion that images' doing is more complex than saying "Oh, yes, you should [worry]". Images enable us to see different layers of health security, ranging from the threat of infection to the individual body to the threat of a potential global spread of the virus. My study shows and traces how these layers unfold within the image, between in front and behind the camera, between depicted and viewing person, and, ultimately between Global North and Global South. Together, I argue, they define Ebola as a threat *to* the body, *through* the body, and *within* the body. As images are linking, connecting, and separating bodies, they are not only representing the health-security nexus but are partaking in its making; they make (in)visible and make problems, such as biases and injustices.

The analysis that led to this argument focused on three visual nodal points: I have commenced the analysis with the image of the protection suit (*Chapter 6*) exploring how the suit became an icon of the epidemic that visually and sensually links the bodies of patients, health workers, and distant viewers in different, at times competing makings of health security. I then have analyzed images of the infected, dead, or grieving body (*Chapter 7*)

showing how, through the emotional registers of pity and fear, the body can be both: referent object and existential threat and do both: create distance and proximity with the viewer. *Chapter 8*, finally, has analyzed visualizations of the Ebola virus suggesting that they matter in three ways: 1) the making of the virus and its introduction as an actor to the health-security nexus; where it, both, contributes to 2) the deepening and 3) the widening of this nexus.

In this concluding chapter, I, firstly, undertake a final zooming-out and connect the three nodal points by mapping their interdependencies and relations. Secondly, I reflect on the theoretical and methodological decisions which have shaped this thesis and the potential and value they carry. Thirdly, I discuss the ethical implications that arise from the findings derived of the three nodal points. I close the thesis with an outlook on what avenues for future research this work opens and why more research on the visibility of health crises is needed.

9.1 Ebola's visual nodal points

In the empirical chapters (*Chapters 6-8*) I have analyzed each visual nodal point through a different theoretical lens. Understanding the nodal points in the context of ANT's concept of the network, I hold that these nodes do not exist in isolation but enact each other. What I want to achieve in this section is to briefly summarize the findings of each nodal point and then, in a second step, explore how the nodes and their respective findings intersect and relate to each other.

9.1.1 The iconic protection suit

In the first analytical chapter (*Chapter 6*), I have shown that, due to its circulation and appropriation, the protection suit can be considered an icon of disease outbreaks condensing their meaning to the threat of contagion. The protection suit, as shown in the analysis of images, infographics, and costumes, can be understood as a generic icon manifesting not only, as Perlmutter (2006: 54) holds, in "many images across time and space and events" but also in multisensory artefacts (Callahan 2020). It becomes part of our collective visual memory as a "visual cliché" (Perlmutter 2006: 54) of the Ebola epidemic and of infectious diseases in general.

I have traced how visual materializations of the protection suit enable different interactions between suit, health worker, and viewer that challenge the notion of the distant and passive spectator. This finding also urges us to think visibility beyond the two-dimensional images and

to consider multisensory artefacts (Callahan 2020) as well. The chapter adds nuance to the making of health security by making the case that it is not exclusively made between a viewer and image in an act of “showing and seeing” (Heck, Schlag 2012) but that the protection suit as multisensory artefact offers various different forms of *engaging* (as in wearing the suit as a costume, learning about it with an infographic, donating for it, etc.) that need to be considered as well.

Overall, I suggest that the analysis of the protection suit and its different visual manifestations demonstrates that, whilst protective clothing physically separates bodies from each other, its materializations as artefacts and images build and constitute a network that visually and sensually links the bodies of patients, health workers, and distant viewers in different makings of health security. These different makings manifest in different layers of health security. They discuss the threat of contagion either as a threat *to* the body or *through* the body. Security, importantly, is made not only within the image, but also in the space before and behind the camera, and ultimately, between Global South and Global North.

9.1.2 Feeling pity and fear: the body in pain

Throughout the second analytical chapter (*Chapter 7*) I have develop and brought forward the argument that the body in pain shapes the health-security nexus in two ways: as the body that is *threatened* by an atrocious “killer virus” (Cullinane, Park 2015) and as the *threatening* body that, as a vector, is carrying and spreading the virus. I have pointed out different visual dimensions of health security that are embedded in the different, yet interdependent, emotional registers of pity and fear. Depending on these dimensions, the body in pain can be both: referent object and existential threat and do both: create distance or proximity with the viewer. The fluidity of the meanings and doings of the body in pain is the first finding of this chapter suggesting that the emotions raised by seeing the body in pain may both separate and connect bodies. This ambiguity is carved out in this chapter by exploring the two emotional registers of pity and fear and how the body in pain relates to them.

The emotional register of pity corresponds with the humanitarian imagery of passive and vulnerable victims in need of assistance. Seeing the body in pain through a “prism of misery” (Kean 1998: 2) rooted in colonial thought is associated with the emotional register of pity. It enables the viewer to feel sorry for the depicted body whilst at the same time being reassured of their own safety. The securitization move, thus, happens exclusively within the image, the

distant viewer is not involved. The threatening body, on the other hand, resonates within the emotional register of fear turning the body into the existential threat. The body in pain not only constitutes a threat to the bodies close to it but becomes dislocated from the West African context. The emotional distance between the suffering and the viewing body, which is implied by the feeling of pity, is hence further enforced by the perceived danger of physical proximity. Pity, I suggest, is no emotional register that is situated somewhere outside the health-security nexus but plays an active part in it. The emotional distance that comes with feeling pity and the associated turning of people into objectified victims without agency and individual stories (Hutchison 2014: 8) can be seen as a prerequisite of understanding them as a threat to a distant audience whilst ignoring the threat they face themselves.

With these findings *Chapter 7* adds depth and nuance to the different layers of health security identified through the analysis of the protection suit (*Chapter 6*). Not only is the threat of contagion specified by graphical depictions of the bodily symptoms of an infection almost inevitably leading to death, the tension between the threatened and the threatening body is also further unpacked. The interplay of the emotional registers of pity and fear demonstrates how the viewer may alternate between a detached feeling of pity for the threatened body, and the feeling of fear of the threatening body and the possibility of becoming infected.

Importantly, both emotional registers exclude the empathic engagement with the body in pain. It is thus necessary to explore approaches that acknowledge the pain in ways that create compassion and kindness instead of alienation, regardless of whether a crisis happens *at home* or in places that feel farther away.

9.1.3 The invisible virus

In the final chapter (*Chapter 8*) I have followed different visualizations of the Ebola virus and explored the interplay between the virus and its visual manifestations asking how they act and enact each other and in doing so contribute to the health-security nexus. The findings of this chapter suggest that the visual manifestations of the virus matter in three ways: 1) the making of the virus and its introduction as an actor to the health-security nexus; where it, both, contributes to the 2) deepening and to the 3) widening of this nexus. The theoretical framework of the thesis, which enables me to explicitly consider visual manifestations of the virus and how they act and are enacted in a network connecting texts, images, scientists,

journalists, viruses, electron microscopes and laboratories with the broader public, is of particular importance and value in this regard.

I have shown how the first microscopic image of a virus particle contributed to the “accomplishment” (van Loon 2002: 118) of the virus as a beautiful and fascinating but simultaneously lethal agent with evil intent. Images of the virus support a deepening of the health-security nexus by locating the threat posed by the epidemic *within* the individual human body and the microbiological processes initiated by the virus, hence, adding a third layer to the findings of the thesis. At the same time, however, both the zooming-in and the zooming-out sections demonstrate that visualizations of viruses become iconic and serve as representations for their respective disease or even a general pandemic threat. In these cases, the focus is not so much on what the virus does inside the body but more on its general existence and possible location.

9.1.4 Zooming out one last time

The three nodal points offer three different perspectives on the epidemic: they show Ebola as a protective measure, as a symptom, and as a viral agent. I have zoomed in on a limited number of images for each node and subsequently zoomed out to trace how they constitute their respective node and in doing so shape the health-security nexus. In this section, I do a final zooming-out that does not focus on one of the nodes but considers them alongside each other. Much in line with Nicolini (2009: 1407), I here, once more, build on ANT and its conceptualization of the network. In this vein, the final zooming-out looks at the network the three nodes build together considering their interconnectedness and enactment. Like in a real net, I understand the visual nodes and their relevance for the health-security nexus as firmly connected to one another.

It is through this final zooming-out that we can fully see and appreciate how the nodes together (dis)locate the body within the health-security nexus. Importantly, the three nodal points do not exist in isolation. Images of the symptoms of an Ebola infection (*Chapter 7*) visualize what the wearing of the protection suit (*Chapter 6*) seeks to prevent. The microscopic image of the virus (*Chapter 8*), eventually, visualizes a *cause* of the suffering and pain discussed in *Chapter 6* and *7*. Images that combine visual nodes, for instance, by showing health workers in protective clothing taking care of patients are another indication of the interconnectedness

of the nodal points. Considering this enactment, we see three different layers of health security.

The *first layer* concerns the threat the epidemic poses *within* and *to* the individual body and manifests through, for instance, micrographs of infected cells and virus, images showing the cruel and deadly symptoms of infection, like the one of Isatu Sesay and the nameless patient who tried to escape a treatment center in Monrovia, and magazine covers rendering the health workers heroes in a fight against an evil agent. This layer mostly manifests within the image and, as, for instance, in the case of Murphy's micrograph¹⁹, in the space before and behind the microscope. This layer focuses on the individual body and on how this individual body is threatened by an infection. In this layer, the body of the depicted person and the body of the viewer are separate and distant.

The *second layer* addresses the risk of contagion *through* the body and shifts the focus from the *threatened* to the *threatening* body. Examples of this layer are health workers in protective clothing visually set apart from (potentially) infected persons and infectious dead bodies as well as images of people keeping their distance from sick persons. One example is the image of Saah Exco. The existential threat in this layer is not the virus causing utmost devastation within the body, but the infected human body who can transmit the virus to bodies in its physical proximity. This layer manifests, again, within images of health workers and patients but also, if we remember the photographers' stories of wearing protective clothing while shooting (Cole 2014; Laurent 2014; Medhora 2015), in the space between in front and behind the camera. Here, the threat of contagion connects different bodies.

The *third layer*, finally, addresses the possibility of a global spread through the "outbreak narrative" (Wald 2008) with a focus on the threat this would pose to the Global North. Examples are magazine covers that pick up external bleeding as a visible symptom of infection as a graffiti saying "Ebola is Coming!" (Bloomberg Businessweek 2014), graphics about the increased protective measures taken in US hospitals (NYT 2014), the protection suit as a Halloween costume enabling the role playing of an outbreak *at home*, and stock images assigning the virus to maps of Africa and the US. Here, bodies in the Global South and the

¹⁹ Remember Murphy recalling his first reaction to seeing the virus as being "flabbergasted", that "the hairs stood up on the back of my neck", and that "is the weirdest virus we have ever seen" (Sifferlin 2014).

Global North are connected through the threat of infection. This layer rests on the connection of the depicted persons with the distant viewers of the image through the threat of contagion.

Considering these three layers, I find, makes us see (meant quite literal) how the nodes together (dis)locate bodies within the health-security nexus. More than saying “Oh, yes, you should [worry]” (CNN News quoted in Moeller 1999: 60), images can locate the body both as referent object and existential threat, thus specifying about *what* or *whom* one should (not) worry. By connecting *and* separating health workers, patients, photographers, scientists, and viewers, they can create distance and proximity and, thus, shape the health-security nexus and our understanding of it.

9.2 Theoretical and methodological reflections

In *Chapters 3* and *4*, I introduced ANT as a theoretical and methodological “toolbox” (Schouten 2014: 25). Conceptualizing images as *actors* and (parts of) *networks*, this framework enables me to trace and understand how bodies, materialities, and ideas of health security are connected, act, and are enacted through images. In the following, I reflect on the challenges and merits of my usage of this toolbox.

9.2.1 Why ANT?

The thesis builds on Bengtsson et al. (2019: 116) according to whom the health security assemblage is “a web of human and non-human relations producing priorities about threats [...] and how they are handled”. Based on this definition, in *Chapter 3*, I have proposed a theoretical framework inspired by ANT that conceptualized images as non-human actors that act and are enacted in networks consisting out of human and non-human relations. I have traced and shown how health security is not exclusively made within the image but also between images, between image and artefact, as well as between image and human actor.

This material semiotic entanglement underlines the value of the ANT inspired methodology that conceptualizes images as more than discourse (Aradau et al. 2015a). The tools offered by ANT proofed very suitable for addressing images’ complexity and answering the question of what they are and do for mainly three reasons. Firstly, ANT accounts for non-human actors and thus is a promising point of departure for exploring the agency of images in ways that go beyond a narrow focus on their content alone. Secondly, the emphasis ANT approaches put on relationalities and entanglement allows me to trace the connections between human and

non-human actors and to understand the image and its interplay with, for instance, other images, texts, photographers, patients, and viewers. Finally, the framework enables me to trace the connections between bodies, visual materials, and ideas and is thus especially well-suited for the health context that is characterized by a constant interplay of human and non-human actors.

This conceptualization of the image and of the health-security nexus has influenced the methodological framework of the thesis (*Chapter 4*). The most fundamental implication and challenge was the need to shift the focus away from the image as a single and isolated entity to the complex entanglements images are situated in. ANT's famous call to "follow the actors" (Latour 2005: 12) provided useful guidance. I have transferred Latour's (2005: 237) encouragement to "[j]ust follow the flow. Yes, follow the actors themselves or rather that which makes them act, namely the circulating entities" to my work using the phrase *I follow the image* as the guiding principle for my analysis. With the "I" in *I follow the image* I put emphasis on my own presence in the analysis (Barry et al. 1999: 31) and located my work in the interpretivist tradition (Schwartz-Shea, Yanow 2012) that takes reflections about and sensibility for the relation between researcher and research as a way to reach "strong objectivity" (Harding 1995; Leander 2016).

My first idea to achieve this objectivity had been to divide the analytical chapters into text and subtext. The main text was supposed to narrate my seeing of the images, the subtext ought to provide the theoretical flesh to this seeing. By visually dividing the pages and by writing two separate texts, I thought, my own positionality could be made accessible in the utmost visible sense. After two attempts, I dumped this approach (with some frustration). Not only did the writing of two separate texts seem artificial to me, bringing the two texts back together to discuss how my seeing intersected with the literature turned out to be almost impossible once the division was made and left readers of the draft unsatisfied and confused. The added value of this main text/sub text divide seemed minimal to say the least.

Eventually, I developed a tripartite structure that proved very valuable as it not only guided my writing but also the analysis itself: I commenced the analysis – as well as the respective chapters – with a vignette to situate myself, and the curiosity that drives my following of the images, into the chapter. By zooming in and zooming out I then moved

between the detailed focus on few selected images and the broader circulation and meaning making that takes place in Ebola's visual network.

9.2.2 (Dis)entangling nodes and lenses

Having made the case for images' agency, the question of how *exactly* they act still needed to be addressed. Regarding the manifold approaches on the *performativity*, *power*, or *impact* offered by the visual IR literature (*Chapter 2*), it seemed clear from the beginning that there would not be one universal answer to this question. To acknowledge this complexity, I found Nicolini's (2009) concept of the "switching of theoretical lenses" most helpful. He suggests to make use of different theoretical lenses in order to "bring to the fore certain aspects while pushing others into the background" (Nicolini 2009: 1402). Importantly, this switching of theoretical lenses is an aspect of zooming in and zooming out and, hence, further interlinks my theoretical and methodological framework.

In the theory chapter (*Chapter 3*), I have introduced three theoretical lenses to account for the images' multiple kinds of agency. These lenses are derived from the visual IR literature and have not only provided a valuable structure in approaching the doings and interactions of images, which are far too opaque and too fuzzy to grasp in their entirety, but they also tie back the ANT inspired framework to the existing visual IR literature enabling me to build on and add to existing debates. The three lenses root the images' agency respectively in

- 1) their status as icons
- 2) their ability to evoke emotions within the viewer
- 3) their ability to constitute (truths about) security

I have matched each lens with one of the visual nodes in the three empirical chapters: I have explored the visual manifestation of the protection suit under consideration of the alleged iconic status of the protection suit in the context of infectious disease. The motive of the body in pain has been analyzed departing from the literature that argues for images to be especially powerful when depicting bodily suffering. The microscopic image of the virus, finally, has been explored under the pretense that the image not only proofed the existence of the virus but took active part in its constitution as a viral agent. I have found the lenses to provide helpful guidance. Understanding them rather as ideal types and not as completely

independent glasses to look through they helped me to make sense of the images' agency and to conduct the analysis in a structured way that tied my findings back to the visual IR literature.

It is important to note that Nicolini (2009), on whom I draw when introducing the lenses, does not advocate for an exclusive and static application of the lenses. He rather suggests a dynamic of foregrounding and backgrounding of certain aspects. In this light, I find my application of the lenses to have worked quite well. Matching the visual node of the protection suit with the theoretical lens of the icon, for instance, is not to say that images of the protection suit only have agency through their iconic status. What this lens enables me to understand and trace, however, is how the protection suit as an icon summarized the threat of Ebola to the threat of contagion and how the visual circulation and appropriation of the protection suit shaped and made health security. This lens, hence, broadened my analytical view beyond the two-dimensional image by demonstrating how images *and* artefacts are entangled in connecting and separating different actors of the Ebola's network. The same is true when we recognize the dynamic of appropriation again in the case of the Ebola virus becoming a plush toy (*Chapter 8*). The finding that emotions (*Chapter 7*) – like the fear of infection – also played an important part in the constitution an icon is, in my opinion, no disadvantage but adds substance to the lens.

In addition, and related to this point, reflections on the entanglement of the visual nodal points and lenses seems worthwhile. I find the value of the lenses to reside in their ability to locate the visual nodes within the visual IR literature. The visual nodal points, vice versa, add empirical flesh to the theoretical lenses. Again, this is not to say that one visual node can and should be discussed through one lens exclusively. The partial overlap of the lenses is, in a sense, mirrored in some images where, for instance, by showing the protection suit and the body in pain, the visual nodes overlap as well. This resonates with the claim of the interconnectedness and co-dependence of the visual nodes (*Chapter 1*). Like the visual nodes, the theoretical lenses are enacting each other. My ANT-based theoretical framework holds these lenses together and enables me to make sense of their interconnectedness and co-constitution. Zooming out and considering the lenses not as separate but as potentially overlapping echoes Nicolini's (2009: 1402) observation that the value of the lenses is that they "bring to the fore" certain elements. The lenses, hence, do not exist in competition but rather are complementing each other.

9.3 Where to go from here? Ethical implications and avenues for future research

In *Chapter 2* I have mapped the academic debate on the ethical implications of the interplay of health and security and its associated costs and conceptualized the analysis of images as a way to “understand how health security “is made”” (Nunes 2015: 61). In this section I want to revisit this debate to summarize the ethical implications of my findings and, based on them, suggest two avenues for future research.

To, once more, come back to the quote from the very beginning, this thesis demonstrates that images do more than saying “Oh, yes, you should” (CNN News quoted in Moeller 1999: 60). In *Chapter 6*, I traced how the protection suit works as a *visual barrier* dividing health workers and patients along the dichotomies of sick and healthy, weak and strong, and active and passive. While the suit – as image and artefact – connects the body of the health worker and the viewer with the body of the (potential) patient through the threat of contagion, it also enacts the gap between who is in need of assistance and who has the means, power, and knowledge to handle the epidemic. Ultimately, I showed that this gap (re)enforces a stereotypical divide between a strong Global North and a weak Global South.

This argument is further sharpened in *Chapter 7* where I demonstrated how the body in pain can be both: referent object and existential threat and do both: create distance or proximity with the viewer. Through the emotional register of pity, the stereotypical depiction of the body in pain links the Ebola epidemic to images of famine and HIV/AIDS and thus locates and fixes the threat of infection in an African context. Even though the emotional register of fear challenges this fixation, care and compassion is not sensed for the body in pain but only for the body of the distant viewer. *Chapter 7*, thus, clearly shows how the emotional distance between the suffering and the viewing body that is implied by the feeling of pity is hence further enforced by the perceived danger of physical proximity. The findings presented in *Chapter 8* add another dimension to this interplay of separating and connecting bodies. I have shown that images of the virus contribute to a deepening of the health-security nexus that supports a techno-scientific conception of health security putting emphasis on medical interventions instead of economic, social or cultural contexts (Elbe 2010: 171). Bodies, here, are not seen in relation to another but become individualized.

Taken together, I find that the ethical issues unveiled in the analysis of this thesis beg the overarching normative question of *how* the separating and connecting of bodies takes place

and what hierarchies and power dynamics are involved. Differently put, I claim the findings of the thesis to emphasize the need to ask the question “Security for whom?” (Rushton 2011) again and again to be sensible to whose body is under threat, whose body is safe, and whose body is ignored. They are a reminder that health security is an equally fluid and constantly contested concept.

Importantly, these ethical issues cannot be solved by simply not taking images. The dilemma between generating attention and ultimately funding by securitizing an issue (Buzan et al. 1998: 29; Elbe 2006) and the diverse costs of putting it on “the agenda of panic politics” (Buzan et al. 1998: 34), which I outlined in *Chapter 2*, cannot be resolved by simply refraining from taking images in the first place. Rather, it seems key to me to be sensitive to the outlined dynamics of images and to, instead of engaging in debates about showing versus not showing, ask *how* images may not be separating bodies but connect them through empathy and compassion. Again, I find the ANT perspective to be very valuable in this regard as it enables me to not only consider images’ contents but also their production, circulation, embeddedness, and entanglement with human and non-human actors. In this vein, the question of *how?* manifests in, at least, three regards.

Firstly, it concerns the persons within image and the question of how images can depict health crises without (re)producing stereotypes and hierarchies. The theoretical lens of emotions applied in *Chapter 7* indicates that the emotional registers of pity and fear both do not support an empathic engagement with the body in pain. Hence, it is key to explore ways to acknowledge the pain caused by a health crisis in ways that enable compassion and kindness. There is no easy answer to how this can be achieved, but this thesis offers some starting points by problematizing the motive of the weak and passive body and tracing how this motive serves as a visual bridge between humanitarian crises. The discrepancy between the very graphic suffering in images taken during the Ebola epidemic and the relative visual absence of the body in pain in the COVID-19 pandemic (see the vignette for *Chapter 7*, pp.111ff) highlights that the (re)production of stereotypes also manifests in the practices of taking images. It suggests a double standard concerning the issue of informed consent. Being aware and critical of this double standard and to seek ways to escape the “prism of misery” (Kean 1998: 2) without glossing over the pain inflicted by a crisis seems an important first step towards a different kind of image.

Secondly, and much in relation to the first point, the findings of the thesis point to the importance of the question of *who* is taking the image. All analytical chapters indicate the entanglement of the person taking the image and the image itself. *Chapter 6* and *7* especially highlight the power relation between the persons in front and behind the camera. We can see this in the fact that the photographers had access to protective clothing while West Africans outside the health sector had to take care of infected friends and relatives without protection. Another example are the interpretations of the photographers, which – remember, for instance, the story of Isatu Sesay – reinforce the passivity and dependency of the affected persons. *Chapter 8*, finally, by discussing the role of the scientist Murphy and the relevance of his expression of horror and excitement when seeing the Ebola virus for the first time, emphasizes once more how much distant viewers depend on the interpretation of the persons who took the image. Again, I find that awareness of this dependency is a crucial first steps. The visual IR literature already offers and discusses methods to circumvent or lessen such dependency. One example is the concept of pluralist photography exemplarily explored through a project in Addis Ababa where children affected by HIV/AIDS documented their life with cameras (Bleiker, Kay 2007). The second example is the work of Harman (2019) who uses film as a method for people living with HIV/AIDS in Tanzania to tell their stories. Both projects use visual methods to challenge the persisting power relations involved in the creation of images. Building on these works, more research is necessary on how such practices may complicate, diversify, deepen and maybe even change our understanding of health security.

The third dimension refers to the embeddedness and contextualization of the image. The results of my analysis highlight how the entanglement of an image with other images, texts, and other human and non-human actors determines its agency. It matters what headlines and stories (textual and visual) are attached to an image. The “war on Ebola” headline (The Economist 2014) and the appearance of one of Moore’s images in a news piece on the Ebola outbreak in the DRC (Sky News 2019) are only two examples in this regard. The ANT concept of the network helpful to understand the entanglement of these facets.

These three aspects indicate that the ethical visualization of crisis is a complex and challenging topic that not only involves the content of the image but also how it is produced, embedded, and engaged with. Images need to be taken and handled with care. Ultimately,

this thesis shows that further research in this area is gravely needed, not only in the case of health crises but on the visualization of humanitarian crises at large.

To close this thesis, I want to suggest two avenues for future research that seem of particular relevance to me. Firstly, while the three visual nodal points made sense in the case of Ebola, a focus on other health crises might highlight the relevance of other visual nodal points besides the protection suit, the body in pain, and the virus. For instance, it appears striking to me how calls to *flatten the curve* during the COVID-19 pandemic and a focus on global and national incidences led to the creation and circulation of charts and graphs illustrating the daily development of case numbers. Due to their omnipresence, it appears promising to investigate this genre as one of the visual nodal points of the pandemic. Engelman (2020) already reflects on the promises of digital epidemiology's real time surveillance in the case of COVID-19. Aue (2021), in a similar vein, takes a historical perspective on the shift from analogue to digital measurement regimes in international health politics. In front of this backdrop, one could explore how the visual nodal point of graphs and charts relates to the body in pain and what this shift from visualizing suffering to visualizing numbers entails for our understanding of the pandemic.

Furthermore, the visual nodes explored in this thesis focus on what is *visible*. When thinking about further research, asking what is *invisible* appears equally important to me. While I eventually touch at the topic of invisibility in each visual nodal point – for instance by asking who is *not* wearing a protection suit (*Chapter 6*), whose suffering is *not* depicted (*Chapter 7*), and how *invisible* pathogens are made visible (*Chapter 8*) – more thorough engagement with the topic of invisibility (Van Veen 2018) appears promising. In this vein, it is striking that the element of healing is rather absent in the award-winning image series. We hardly see any survivors. This is not to imply that these images do not exist. Berehulak (2014), for instance, has published one image series titled “Braving Ebola” in the NYT in October 2014 featuring photographs of and interviews with people who had either survived an infection or were working in a treatment center in Monrovia. These images are very different from his award-winning series. They are black and white and taken in a makeshift studio in front of a white background. These aesthetic choices set the images apart from the dominant visual stream of images taken in treatment centers and cities in West Africa at that time, detaching them from the reality of the epidemic. A second example is a colorful mural in an MSF treatment center

in Monrovia where each survivor left a handprint before being discharged from the treatment unit. MSF circulated this image via Twitter as a signal of hope (MSF 2014b). On a theoretical level, this example emphasizes the point made in this thesis about the entanglement of multisensory artefacts and two-dimensional image. I hold that the action of leaving a handprint can be understood as a form of agency of the survivors enabling them to escape the passive notion of being a patient in need of treatment and assistance. Secondly, the mural itself as well as the images of it contradict the common belief that there is no cure for the virus. The mural serves as a colorful testimony that people can recover from an infection.

Both examples, I find, underline the importance of asking where and how we see healing and, even more importantly, where do we *not* see it and what does this (in)visibility of healing mean for our understanding of the health-security nexus. How, for instance, may images of healing challenge the techno-scientific view (*Chapter 8*) of the epidemic that focuses on the infection and medical countermeasures but ignores systemic causes of the infection (like weak health systems) and is blind to the need of survivors?

Secondly, another aspect entangled with the aspect of healing, refers to the (in)visibility of care. Schulz and Krystalli (2022) point at the importance of Lederach's (2019: 389) question of "what is seen—and made possible—when we widen the frame and focus the lens on life and love, rather than limit the field of vision to death and suffering?". This question has relevance for the research that may follow this thesis. One could make the case that many of the images I discuss in *Chapter 6* and *7* do in fact show care. They show health workers caring for patients and they show relatives caring for their infected family members. However, I would hold, care, in these images, remains somewhat hidden: either through the protection suit that conceals the faces of the health workers and limits their ability to interact with the patients (Park, Umlauf 2014) or through a layer of helplessness and desperation of the relatives and friends who cannot save their loved ones. This poses, in my opinion, the question of how care is and, more importantly, how it *could* and *should* be made visible. Exploring the role of care holds the potential to make "visible multiple practices, relations, dilemmas and tensions that are attentive to the complex, intertwined, and often unruly dimensions of violence and its wake" (Krystalli, Schulz 2022: 21). This, I find, is not only true for the context of war and conflict. If we conceptualize care as "every-thing that we do to maintain, continue and repair 'our world'

so that we can live in it as well as possible” (Tronto 1993: 103) it has high relevance for our study of the entanglement of images, health, and security.

This work, I suggest, should not only take place within the circles of IR. While IR debates certainly sit at the core of this thesis, I have frequently drawn on works from media and communication studies (Zelizer 2005, 2010; Buiani 2014; Gerlach 2019), STS (van Loon 2002; Woolgar, Lezaun 2013; Daston 2014), and medical history (Lynteris 2018; Engelmann 2018, 2020). This already indicates the value of interdisciplinary engagement in this field of research. IR, to come back to my theoretical framework, in this sense can be seen as but one nodal point that acts and is enacted upon through other disciplines that, if understood as entangled, can enrich our understanding of the health-security nexus.

Acknowledgements

It takes a village to start and finish a thesis. I am very lucky to say that I truly had a wonderful village that supported me throughout this journey.

First of all, there are my supervisors Thomas Diez and Roland Bleiker. Thomas, I am beyond grateful for all the advice and support I have received from you since I started my Master studies at the Institute of Political Science in Tübingen in October 2013. I would not have started (and finished) this project without your constant encouragement. Thank you for the many supervision sessions, for patiently reading and commenting draft after draft, and for your advice on publishing, conferencing, and teaching. I truly appreciate the countless letters of recommendation you have written for me. Without them, I would not have received the scholarship from the Heinrich-Böll-Foundation. I will never forget your letter confirming that I was a non-smoking reliable person that helped me to find a place to live in Washington DC during my semester abroad.

Roland, I am so fortunate that we met in Groningen during EWIS 2018 and that you agreed to be my supervisor. Your generous feedback and enthusiasm for everything visual is invaluable. Your advice to work with 'one page plans' provided vital structure for my writings, especially in the last six months. Joining your Visual Politics Program interviews online and participating in the *Visual Politics Work-in-Progress Forum* in 2021 made me feel part of the visual studies community and provided so much motivation especially at times when writing a thesis about an epidemic during a pandemic felt overwhelming. Together, Thomas and you made me find my voice in the thesis and made sure that I did not get lost on the way.

The scholarship from the Heinrich-Böll-Foundation enabled the space and financial security to write the thesis. Their support and flexibility made sure that neither having a baby nor living through the COVID-19 pandemic made me stop this project. The many seminars and workshops offered by the foundation provided valuable intellectual input throughout the years. I am feeling very privileged about all the intellectual and financial support I received, and I am eager to pay it forward in the time to come.

For the last four years (and during my master studies before the thesis), the Institute of Political Science of the University of Tübingen was my academic home. Thank you, Petra Nickisch for organizing an office space for Miriam and I and for always making the two of us

feel at home at the institute. I am indebted to the IR colloquium of the institute for the many comments on (early and messy) drafts and for many stimulating discussions. Thank you especially to Natalie Pawlowski, Maike Messerschmidt, Hendrik Quest, Andreas Hasenclever, and Gabi Schlag for your helpful and constructive engagement with my work.

Next to the Institute of Political Science, the International Center for Ethics in the Sciences became my second academic home from the summer of 2019 onwards. I am beyond grateful to Friedrich Gabel for asking me back then if I had time for a side project on disaster ethics. What started as a “Hiwi-Job” became a full position and led to a successful grant application. Thank you so much, Friedrich, Mara Mühleck, and Marco Krüger for not only teaching me a lot about disaster ethics but also for making sure I did not forget the thesis in the meantime. Katharina Wezel, our discussions about global health and academia and writing the BMBF grant together are some of my best academic experiences of the last two years – I am so excited that we will be working together again soon. I am indebted to Andreas Baur, who somewhere in 2016 first introduced me to Actor-Network Theory. This thesis would look very different without that input. I learned a lot from Regina Ammicht Quinn who made me feel so welcome at the IZEW and always made sure that I had enough space and resources to finish the thesis – thank you so much to all of you.

Many friendships made the last years and the work on the thesis worthwhile: Luis Aue, thank you for the many productive Skype and Zoom Calls, I really hope we write that paper on metrics and visuals together next year. Franz von Lucke, thank you for agreeing to read parts of the thesis on rather short notice and for providing valuable feedback so close to the finish line. Peter Forman, thank you so much for your advice on all things ANT and for reading several stages of the theory chapter – I truly learned a lot from you. Miriam Keppner, you are the best partner in crime I could have asked for during this journey. Sharing offices, desks at the library, lunch breaks, ideas for wedding planning, stories about beekeeping and much more made this journey so much better and fun. Thank you for reading and commenting on so many drafts, for being there to celebrate success and share frustrations and for being a wonderful friend. Christine Andrä, thank you for being the academic role model you are, for countless tips and encouragements, for comments on drafts and advice on how to survive academia and especially for the moral support during the months and weeks before the submission. I am beyond grateful that Miriam and you went to Beate Jahn’s writing workshop at the EISA’s Pan

European Conference in 2019 and that you invited me to join the “Schreibmotivationsgruppe” thereafter. This group has become so much more than a writing group since then. I know that this group will live on, even though all dissertations are handed in now.

Outside of academia, I am grateful beyond words to my parents, Brigitte and Rainer, who always and enthusiastically supported my decision to study political science and to stay at university for the thesis. I know that this journey must have seemed confusing, messy, and endless at times. Thank you for so many hours of taking care of Emma to make sure I had the time to think and write. I will never forget the trip with the two of you and Emma to London to the BISA conference in 2019 and how you made sure my first conference after being on parental leave was a success. Thank you so much to my sister Franziska for reading the full draft of the thesis and for the helpful comments. Many thanks are also due to my wonderful parents-in law, Conny and Axel, and my brother-in law Florian for their constant and wholehearted support.

Sebastian, I would neither have started nor finished the thesis without you. Your constant and unwavering support means the world to me. I am very sorry that by now you have a working knowledge of securitization theory and that I may have ruined the word ‘Copenhagen’ for you. Emma, thank you for always putting things into perspective. You have well-earned the promised Spaghetti-Eis on the submission day. I am truly proud of the three of us.

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