Becoming Biometric

Biometric technologies in refugee registration and assistance through the eyes of refugees in Amman, Jordan

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شكراً

Abstract

This thesis is concerned with the deployment of biometric technologies – iris scanning technologies – in refugee registration and cash assistance in Amman, Jordan. The goal is to understand biometric technologies from the perspective of the people who are biometrically enrolled and interact with the technology: refugees and asylum-seekers. In centralising the perspective and experiences of the people who are becoming biometrically enrolled, this thesis contributes to a growing body of ethnographic literature on lived experiences of biometric technologies. Moving beyond cost-benefits analysis that approach biometric technologies solely by their technological features, in this thesis biometric technologies are understood as mediators between humans and their world. That is, biometric technologies co-shape and co-determine how humans understand their world, and themselves and others in that world, mediating their engagement with the world and how they act upon the world. Through this analytical lens, the following research question is to be answered: *how do biometric technologies mediate relations in the everyday life of refugees and asylum-seekers in Jordan?* Taking a qualitative approach, I have conducted two months of fieldwork in Amman, Jordan and gained insights in everyday life of refugees through participant observation, conversations, and semi-structured interviews. In 'becoming biometric', I argue that the deployment of biometric technologies create simple truths in complex situations. I argue that biometric technologies mediate relations of the self where the body becomes a battle zone for truth-claims about *who you are.* Mediating relations between refugees and UNHCR, biometric technologies mark a shift where the story, the narratives, intentions and beliefs are silenced through a truth-making technology.

List of Abbreviations

AI	Artificial Intelligence
ATM	Automated Teller Machine
CAB	Cairo Amman Bank
CCF	Common Cash Facility
CBT	Cash Based Transfers
IND	Immigratie en Naturalisatie Dienst
JOD	Jordanian Dinar
NGO	Non-government Organisation
MENA	Middle East and North Africa
PoC	People of Concern
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
VAF	Vulnerability Assessment Framework
WFP	World Food Program

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Chapter 1 | Introduction

1.1 | In the blink of an eye

> "Look in the mirror". A calm female computer voice speaks to Zaid through the ATM machine. The voice sounds like an airport moving-walkway voice. The one that keeps telling passengers to "mind your step" every ten seconds. "Look in the mirror", the voice tells my friend Zaid, a Sudanese refugee, again. We are standing in front of the Cairo Amman Bank (CAB) ATM to collect Zaid's monthly UNHCR, the United Nations refugee agency, basic needs cash assistance. Instead of a debit card or vouchers, refugees in Jordan biometrically verify themselves through their iris in front of CAB ATMs to receive cash assistance. Zaid moves his head closer to the camera, to let the biometric company's (IrisGuard) 'EyeCash', as the machine is called, read his iris. His eyes are spread wide open like a hawk. It almost resembles a staring contest with the machine, where Zaid is trying not to blink. As his body is moving more and more towards the machine, he leans his hand against the top of the ATM to keep his balance. While Zaid holds his right eye in front of the camera, it appears digitally in black and white on a little Microsoft pop-up on the ATM screensaver. Red and green 'loading stripes' are displayed on the screen and measure his iris. Zaid holds his body still, keeps staring in the camera and I watch the stripes go greener and greener and then: "Click". Zaid relaxes his body again, takes a step back and looks at the screen. As we wait, the picture of Zaid's biometrics is being matched to a profile that is deemed eligible for cash assistance through EyeCloud[1]. We wait for perhaps ten seconds until a new screen pops-up. 'No profile found'. Zaid sighs and starts the dance all over again until his iris is matched to his biometric profile. Moving, staring, listening, freezing, waiting. Eight attempts later, Zaid can finally withdrawal his UNHCR assistance.[2]

The above vignette of Zaid describes the process of biometric verification for UNHCR's refugee cash assistance at one of Amman's Cairo Amman Bank ATMs. One of UNHCR's largest cash assistance operations operates in Jordan[3], a country hosting the second highest proportion of refugees per capita globally (UNHCR 2021). On a monthly basis, more than 32,000 refugees biometrically verify their identities at CAB ATMs for UNHCR cash assistance (UNHCR 2020). Biometric technologies, or biometrics, are technical systems that authenticate individuals based on unique, distinctive bodily

[1] 'The EyeCloud is a secure and encrypted network connection that can be used to authenticate refugees against biometric data stored in the UNHCR database' (UNHCR EyeCloud 2017).

[2] Vignette written in January 2020

[3] In 2021 Jordan was the third largest operation, after Greece (second) and Lebanon (first).

characteristics; most commonly the iris, fingerprints, or facial features (Maguire 2009; Ajana 2013). Assuming bodily characteristics are unique and immutable, biometric technologies are designed to both identify 'who you are' (identification) as well as to establish if you are who you claim to be (verification) (Ajana 2013).

More than 8.5 million refugees, 80 % of refugees registered by UNHCR, have been in the possession of a 'biometric identity' through biometric registration in 2020 (The Grand Bargain Update 2020). However, as the description of Zaid's biometric verification at the ATM machine already indicates, the deployment of biometric technologies stretches beyond registration, and the management and creation of (digital) identities (Madianou 2019a)[4]. Innovative technologies, like biometric technologies, are deployed to reduce aid delivery costs and make distribution more accurate, efficient, and effective (Madianou 2019a; The Grand Bargain Update 2020). In doing so, biometric technologies have become entwined with a shift from in-kind aid (i.e., clothes or food) to cash assistance or (e)-vouchers (Sandvik and Jacobsen 2018; Zambrano et. al 2018). These cash-based transfer (CBT) systems have increased in popularity, as its advocates are framing CBT to 'empower' beneficiaries, to support local economies and to realise a more cost-effective manner of humanitarian assistance (Betts and Bloom 2014). Technological innovations, such as biometrics, are perceived to generate even more favourable conditions for cash assistance programs, as they are assumingly distributing aid more accurately and effectively (The Engine Room and Oxfam 2018), as 'the body does not lie' (Aas 2006).

Especially in Jordan, this convergence of cash assistance with biometrics has been a reality for almost a decade now. Iris scanning technologies were introduced in 2012 in UNHCR's cash assistance programs to refugees (UNHCR 2016). Then, in 2016, the World Food Program (WFP) started to distribute food assistance to refugees through iris scanning payment systems in WFP supermarkets in Jordan's Azraq and Zaatari refugee camp (WFP 2016). Based on blockchain technology, encamped refugees can redeem biometric e-vouchers at WFP-contracted shops. With such deployment of biometric technologies, the distribution of assistance to refugees in Jordan is now often described to happen 'in the blink of an eye' (see, El Issa 2017).

1.2 | Problem statement and research question

'In the blink of an eye'. The description of Zaid's biometric verification in front of a CAB ATM shows rather the opposite. The act of biometric verification is a process of trial and error – of scanning and misrecognition. Claims such as: "*The system [iris scanning] has been widely recognized as cutting-edge and has not had a single fail in trillions of transactions across all accounts at Cairo Amman Bank*"

[4] Naturally, outside the scope of refugee registration and aid, biometric technologies are also increasingly used in other contexts, like voter registration. See for example the work of Dorpenyo (2019), or Hobbis and Hobbis (2017) for studies on biometric voter registration.

(Schimmel 2014), illustrate how a flawless reality of the everyday use of biometric technologies in the distribution of cash-assistance in Jordan is painted. On their website, IrisGuard, the company providing biometric technologies in Jordan, describes the process of iris authentication in the following two sentences: "*Refugees are able to walk up to an IrisGuard-enabled EyeCash ATM, present their eye and effortlessly withdraw their allocated cash subsidies instantaneously".* There is thus often a severe difference between what happens in practice, the daily workings and experiences of biometric technologies, and a flawless clear-cut presentation of biometric technologies (Whyte 2020).

As biometric technologies continue to be expanded in refugee registration and for an 'effective' and 'efficient' distribution of aid, it is important to zoom in on daily practices, workings, and experiences of biometric technologies. Moreover, the way biometric technologies are experienced by refugees remains a rather unexplored topic. How can biometric technologies be understood by looking through their eyes? And how can we understand biometrics' workings and practices when they become situated in everyday life? This thesis is concerned with these questions and aims to outline refugees' interactions and experiences with biometric technologies. This objective stems from an imbalance in current academic literature on said technologies, especially deployed in humanitarian assistance, where the focus often lies on cost-benefit analysis, private sector involvement or data security issues (see for example, Duffield 2019; Scott-Smith 2016; Jacobsen 2015). Significantly less attention is paid to the everyday workings, experiences, and practices of these technological systems, making questions concerning the role biometric technologies play in human experiences, practices, and relations ever more pressing.

The 'peopling' of biometric technologies (Whyte 2020) slowly starts to grow as more ethnographers begin to pay attention to everyday life experiences and workings of biometric technologies, and more broadly, digital identities (see for example, Latornero 2019; The Engine Room 2020; Schoemaker et. al 2019). This thesis aims to contribute to this growing body of ethnographic literature on lived experiences of biometric technologies (see, Whyte 2020; Grünberger et. al 2020; Olwig 2020; Dorpenyo 2019) by capturing daily life interactions and experiences with biometric technologies in the context of refugee registration and cash assistance in Amman.

With a lack of refugees' perspectives and representation, it is incredibly relevant, both academically and socially, to set out how biometrics work, are experienced, understood, but also how they exist in social structures and are rearticulated. Considering biometric technologies continue to be expanded in UNHCR operations and become a central part in distribution of cash-assistance or vouchers, this thesis allows for a more in-depth understanding on the workings, understandings, and experiences of biometric technologies as it focuses on the perspective of the people who *become biometric.* Furthermore, this study extends the research site of biometrics' deployment and experience in refugee assistance outside of the refugee camp, that is often the scope of studies on biometrics in refugee

registration and assistance (see, Jacobsen 2015 for example). I, henceforth, in this thesis study biometrics in an urban environment and within daily practices and workings in the everyday life.

> "*I stand with all those scholars in our field who have argued that since technology has become ubiquitous, it is necessary to study how it rearticulates existing structures that dominate or oppress vulnerable populations"* (Dorpenyo 2019, 364).

Dorpenyo (2019) manages to articulate nicely how important it is to study (biometric) technologies in the lives of vulnerable people. I stand there too and aim for this thesis to provide an insight in the way biometric technologies mediate relations in the context where people need humanitarian protection and assistance. In order to grasp such mediations and everyday workings and experiences of biometric technologies, situated in the context of refugee registration and cash assistance in Amman, the main research question in this thesis is:

> *How do biometric technologies mediate relations in the everyday life of refugees in Jordan?*

In the context of this research, I aim to understand the mediation of relations between refugees and asylum-seekers and the UNHCR; the institution that is responsible for the biometric enrolment of *peoples of concern (*PoC)[5]. However, looking at everyday life workings, I also look at the mediation of relations among refugees and asylum-seekers; among each other. The research question will be further elaborated in the next section, as it heavily draws on my analytical lens and approach to technologies.

1.3 | Analytical Lens

In a study that centralises around technological experiences, technologies mean more to me than machines, artefacts or passive or neutral instruments, making processes happen 'in the blink of an eye'. Instead, I look through an analytical lens that perceives technologies to be mediators that actively co-shape human-world relations (Verbeek 2005). For Verbeek "human contact with the world is always mediated and technologies offer one possible form of mediation" (ibid., 11). They play a role in our lives, by shaping our understanding of the world, and ourselves as humans in it. Technological mediation thus views technologies to co-shape and co-determine how we, as humans, perceive and experience the world, and ourselves, and others, in that world. Technologies co-shape how we act upon the world and thereby also how we feel engaged with the world (ibid).

Looking at technologies as mediators, means to also keep in mind that technologies and the people that use them "act upon the world they are situated in" (Twigt 2018, 18). Technologies thus do not interact in void, but rather within already existing socio-political structures (Madianou et al 2016). In their very

[5] Persons of concern are identified by UNHCR as refugees, returnees, stateless people, internally displaced and asylum-seekers. It is thus a term that captures the different situations and context in of people who have been forced to flee and need protection

design, technologies are inscribed with, and reflecting, political-ethical projects and ideas (Von Schnitzler 2013) or hold normative conceptualisations about social identities (Pugliese 2010). As a result, in order to understand what role biometric technologies can play in human experience and practices, I look through an analytical lens that understands technologies as mediators that co-shape and co-determine the very relations between people and 'their world'. Situating technologies within the world it interacts with, this thesis is therefore concerned with 'the world' of refugee registration and cash assistance. Looking through the eyes of refugees, who are becoming biometric through biometric enrolment, this thesis looks how biometric technologies mediate relations that co-shape an understanding of the self and the world.

1.4 | Thesis outline

In this first chapter, I have introduced and problematised biometric technologies in the realm of refugee registration and cash assistance. In the next chapter I describe my methods and methodological approach, ethical reflections, and limitations to this research. In chapter 3 I outline theoretical debates concerning biometric technologies, as technologies of truth where the body does not lie. And in the same chapter I address debates concerning the deployment of biometric technologies in a humanitarian context. Chapter 4, then, provides a context to this research, outlining the use of biometric technologies in Jordan's refugee response. In chapters 5, 6 and 7 I present my findings. Chapter 5 addresses the story of Bilal, introducing the notion of a biometric self and embeds experiences with biometric technologies in migration and mobility. Chapter 6 discusses issues of a 'meaningful' informed consent, power imbalances, understanding and awareness of biometric technologies. The last empirical chapter, chapter 7, tells the story of Zaid and zooms in on biometric technologies at the ATM where feelings of belonging and vulnerability become lived through biometric technologies. Finally, chapter 8 discusses my main findings, places them in a wider context and there I will conclude by answering the research question.

Chapter 2 | Methods and Methodology

In this chapter I will describe my methodological approach, methods, ethical considerations, and limitations to my research.

2.1 | Methodological approach

The purpose of this thesis is to understand biometric technologies from the perspectives of refugees and asylum seekers in Amman. With a focus on understanding and grasping refugees' experiences I took a qualitative research approach, that enabled me to conduct a focussed description and analysis of a phenomena in a social world, from the perspectives of informants and participants (Boeije 2010, 32). I have specifically taken an ethnographic research approach. Reeves, Kuper and Hodges (2008) explain the aim of an ethnography to be providing 'rich holistic insights into people's views and actions […] through the collection of detailed observations and interviews' (Reeves, Kuper and Hodges 2008, 337). As its own 'tools' for data collection ethnographers prioritise reflexivity and a constant reflection on the relationships with participants and the field, owing up to their own handling, positions, relationships and the ethical issues that come from such relationships (ibid.). I will continue on this notion in paragraph 2.4.

Ethnographic research often works with unstructured data – data that has not yet been coded as a closed set of analytical categories. Furthermore, the focus is often a small sample set, sometimes just one individual case (Reeves, Kuper and Hodges 2008). Although I build my data strongly on interactions and informal conversations, in this thesis I too draw from a small sample set, also due to the COVID-19 pandemic, through which this thesis tells the story of two explicit cases. Yet, these cases are embedded in a wide context in which I have spoken to, and conducted interviews with, a diverse group of people, from UNHCR, WFP, an immigration and naturalisation service (IND) officer, refugees and asylum-seekers, and a variety of researchers based in Amman and at the Yarmouk University in Irbid, Jordan.

2.2 | Methods and data collection

Key to ethnographic fieldwork are participant observations. Through participant observation, I have aimed to understand biometric technologies, embedded in the everyday life, from the perspectives of refugees by participating in a variety of activities. I gained access to a network of refugees and asylum-seekers from mainly Sudanese, Somali and Yemini nationalities by participating in playing basketball twice a week. From there, I became involved with a dance group, where refugees danced together at a centre in Amman once a week. From this same centre, I became part of a choir where I sang once a

week with refugees originating mainly from Iraq and Syria. I also worked twice a week as a volunteer English teacher at a local NGO in Amman, working primarily with Syrian and Iraqi refugees.

I decided to partake in these activities because I wanted to establish rapport and relations with the people I aimed to understand. I did not want to approach my 'research subjects' as *refugees or asylum-seekers*, but as humans. Rather than merely gathering data and information by organising interviews and asking an interview guide to several people that I did not know, I wanted to get to know the people and for them to get to know me. If I wanted to understand daily life, I had to become part of that, in order to try to show refugees' perspectives. This approach, for example, led me to see deeply rooted issues of racism and discrimination based on nationality that groups of refugees from African countries experience daily. Through participant observation I therefore aimed to gain an understanding of daily life experiences, as well as to build up rapport and conduct research with respect to the people I aimed to understand. That is, to invest time in getting to know them and putting myself out there to do justice to their stories.

My participant observation and access to refugees and asylum seekers in Jordan has been shaped by my friend Zaid, who I consider to be my key informant in my time in Amman. Zaid introduced me to his network, helped set up and translate interviews, and took me with him on his activities, like the ATM when he would withdrawal cash-assistance. During activities and participations, I would take notes in a notebook and typed these out the same day with descriptions. In taking part in social activities, like discussion groups, singing performances, movie nights, or informational events, I was also able to observe social dynamics, inner-group tensions, and underlying relations within communities. For example, during an information event for a Canadian University Program, unrest in the group revealed underlying issues within distribution of assistance and privileging certain groups of refugees. With regards to biometric technologies, I observed the Cairo Amman Jordan Bank in Jabal Amman and Jabal Al Weibdeh and I also had the opportunity to observe the UNHCR Khalda registration centre, (biometric) registration rooms and registration renewal booths during an interview I conducted there.

Hanging out

In taking part in activities, I have had the opportunity to hang-out with different groups of refugees and asylum-seekers, like the choir, dance group or basketball group, and talk about mundane topics, but also issues relating to biometric technologies and *being* a refugee in Amman. After the activities I sometimes stayed longer which resulted in interesting conversations. Amman, a city built on hills, allowed for a good place to walk with people and talk about our lives, sharing experiences that gave me insights about people's worldviews and perspectives. DeWalt and DeWalt (2011) describe how in conversations, there is no control for the interviewer, who should follow the natural flow of the conversation, but will always direct questions (un)consciously towards a topic of interest. For example, walking with a Somali friend in a poorer area of a neighbourhood in Amman, I directed questions

concerning vulnerability assessments in distribution of aid and our conversation shifted to vulnerability and practices around this topic. I also met with fellow researchers working on digital identities, cash-assistance or biometric technologies, and had informal conversations and meet ups about these topics.

Interviews

In the middle of the interview continuum, a list of questions and prompts, with a certain amount of control for the interviewer makes up a semi-structured interview (DeWalt and DeWalt 2011). I have opted for semi-structured interviews to complement the many informal conversations, where I had little control over the topic. Through semi-structured interviews, I could ask more directed questions with control over topics I wanted discus. In total, I have conducted seven semi-structured interviews. Five interviews with refugees from Sudanese and Somali descent, one of which was a family of three adults. That interview has been the only interview I needed a translator. Zaid, who introduced me to the family, acted as the translator. All of the interviews were recorded except for one. That particular interviewee did not want to be recorded, and I wrote along with the interview without recording it.

One interview has been conducted online through Skype, as it took place after I left Jordan. I have also conducted two interviews with UN-agencies (UNHCR and WFP), in order to grasp the perspective of the two organisations with the largest cash assistance programs in Jordan. In addition to the informal conversations and semi-structured interviews, I have also conducted an unstructured interview with a local NGO and with a university in Jordan. In this type of interview, I had a small interview guide with questions I wanted to ask, but topics and questions were open (DeWalt and DeWalt 2011).

2.3 | Data analysis

As I already indicated above, I followed an inductive approach where my results and focus of analysis slowly developed and emerged during the research process, not necessarily beforehand (Boeije 2010). I analysed my data in the field by writing daily reports with observations, thoughts and vignettes. I kept a journal during my fieldwork where I would reflect on my research, myself as a researcher and my encounters in the field. I transcribed interviews directly after conducting them and marked statements and highlighted passages as I wrote and read through them. I mainly analysed my data in the field through field reports in which I summarised my findings and discussed them with my supervisor. I translated observations, conversations, notes, quotes, and passages from transcribed interviews in my field reports. In total, I wrote five field reports, that identified themes and topics such as: embodied experienced of being a refugee, normalisation of biometric technologies, privilege and power, and informed consent.

An important part of the data analysis has been the experience that taking a step back from my data, and revisiting it again, allowed me to look differently at some findings. For example, I assumed Zaid's avoidance of the queue to be related to inconvenience but taking a step back and reassessing my data gave me the opportunity to understand his actions with regards to biometrics differently. Not uncommon to ethnographic studies, I heavily draw on two stories in my data presentation and analysis. In going back to my analytical lens of technological mediation, I was able to draw a conclusion that captured the two main stories of Bilal and Zaid in this thesis.

2.4 | Reflections and ethics

> *I am writing this as I just finished updating my informed consent before I meet with Zaid. I had to think about his rights, my precautionary measures, the benefits and the costs. It struck me that what I am about to ask, what I am about to witness, dive into, want to know, is so personal. Personal in the sense that I will ask refugees about bodily experiences, moving myself in a very personal space. […] I still struggle a lot in my research. Mostly I struggle with my position as a 'researcher'. I feel as if I always have a double agenda when I meet people and I don't like that. I feel like I use people for my own benefit without being able to do anything in return. I struggle with the question whether I have the right to ask people personal questions about aid or iris scanning, and I am afraid to do more harm than good*[6].

My research reports involved many reflections on my positions as a researcher, struggling with what I felt to be a double 'agenda' (my research purpose) in establishing relations in the field. Even though people knew why I was in Jordan, engaging myself in social activities made my role very blurred –not only to myself, but perhaps also to others. I struggled a lot with this role, as I did not manage to feel comfortable with it. Specifically, the issue of reciprocity, giving back, has been and still is a major dilemma I experience in doing research. Even though I can very well articulate the relevance of this research, I find the imbalance between 'the gain' extremely difficult. The context in which I conduct my research, graduating for my master's degree, felt so selfish to me as it is purely for my own gain. Even though I struggled with my subjectivity and 'double role', I also view this to be the answer to my struggle. That is, I approached people as people, not as 'refugees' or a research subject, and actively tried to participate in their world, share our stories and establish rapport. Furthermore, whenever I would have an interview, I would bring coffee, cookies, or food. Further, trying my best to make this research succeed is another effort I undertake to address issues of reciprocity.

What made me very cautious in doing research, were the stories that Zaid and Aziz told me about peoples' experiences with other researchers in the past. For example, Zaid talked about researchers

[6] Field diary January 2020

conducting interviews with refugees about very sensitive topics, sometimes giving people hope to help them, but then nobody would see or hear anything back from the research. I therefore took the time to explain to Bilal, a Sudanese asylum-seeker status holder in Amman, that I am not in the position to help him with his refugee registration, trying to make clear the purpose of my study. When I conducted an interview with the family Zaid introduced me to, I asked Zaid to explain my research, my presence, and the purpose of my questions, as I did not want the family to think I was there to represent an organisation. This stems from an experience I had with Aziz, where I was once not allowed in a house where he had to pick something up, because the people did not trust me. Aziz told me they were afraid I was working for an organisation and would take notes of their living situation. Thus, I approached the field with caution, trying to invest in establishing rapport, and being aware of the importance to explain my research purpose.

> *The day before my first experience as a volunteer English teacher to refugees in East-Amman, I had an orientation day at the NGO where I was going to teach. Prior to the orientation I had to complete a couple of online modules about the organisation, its programs, and refugees. The last module dealt with the issue of trauma. How to recognise it and how to work with traumatised people. 'How am I supposed to deal with such issues if I am anything but a professional?', I thought. It is no surprise that during orientation the next day, I was very overwhelmed by the instructions we, all young adults under 25, received for our English classes. We need to avoid certain topics like family, money, resettlement, the past or a past life in general. The most mundane topic to me, like sport, might have been a life changing traumatic experience for another – as the instructor gives an example of a student that had lost his/her whole family during a sports event. I left the orientation with a heavy heart, not sure if I am ready or even qualified to work with people that have gone through such traumatic experiences. The instructions made me very aware of the issue of trauma and traumatised bodies and minds. It made me think about all the vulnerability assessments some of the refugees must go through. The number of times they might have had to bring up their traumatic experiences in order to convince someone else they have a right to refuge.*[7]

My experience as an English teacher at an NGO made me even more aware about consequences of my actions, questions, or interest in certain topics with people who might have undergone traumatic experiences. At the same time, I tried not to view refugees as 'victims', but I wanted to prevent causing any harm. Doing no harm in my research meant that I did not ask questions about the past unless people started talking about it themselves. I would, for example, not ask why, when or how people fled their countries. Neither did I ask about their families unless people initiated that talk – all to avoid painful memories. I tried to avoid talking about open wounds or painful memories, being very aware of rough conditions some must have gone through. Furthermore, painful situations in Jordan, for example where black men experience sexual harassment, was a topic that would occur, yet I thought it very difficult to

[7] Reflection written in January 2020

ask questions about it as it is so sensitive. In doing research with a vulnerable population, I therefore tried to do no (further) harm by choosing not to ask personal questions about the past or painful memories in Jordan, unless people talked about it themselves.

2.5 | Limitations

This thesis is based on two months of fieldwork in Amman. I do not argue that this thesis gives a complete overview of how refugees and asylum-seekers experience biometric technologies in refugee assistance and registrations. The experiences I portray throughout this thesis are not the same for every individual, and they might be difficult to generalise. Nevertheless, it is important to tell and highlight these experiences and perspectives, as they contribute an understanding of biometric technologies, and identities, in the lives of refugees and asylum-seekers. Through participant observation, hanging-out and informal conversations, I have managed to present stories and experiences of biometric technologies in this thesis. Stories I might not have captured without spending time with people and *being there.*

In conducting research, I have also encountered several limitations. The first limitation is time. Inevitably, the COVID-19 pandemic has limited my research and fieldwork. I planned to be in Amman for four months, but the pandemic interrupted my data collection and fieldwork halfway through as Jordan was placed in a complete lockdown under martial law. My fieldwork was therefore abruptly broken off, just as I established connections, built up relations with people and started to navigate my way through the city. Leaving the field in this manner has also impacted the way I was firstly able to look at my data, viewing it as unfinished. Only through time, I was able to look at my work more positively and let go of 'what could have been'.

Language is another factor to limit my research data collection. I did take Arabic classes once a week whilst being in Amman, yet I did not speak the language. This means that I was not able to pick-up, or make, everyday conversations with people who did not speak English. This language barrier has also influenced who is part of this research, as I could only have conversations with English-speaking people, apart from one translated interview. At the same time, participating in activities like singing, dancing, or playing basketball made me overcome the language and enabled me to connect and interact with people who did not speak English (well). I therefore see my participant observation as an added value to this limitation.

Chapter 3 | Literature Background

In this chapter I highlight debates and themes within research on biometric technologies. The first section focusses on theoretical debates concerning the body, information, and truths. The second section highlights thoughts and discussions concerning the deployment of biometrics in a humanitarian context.

3.1 | Biometrics, bodies, and truths

3.1.1 | Technologies of truth

Biometrics, consisting of the words bios (life) and metron (measurement), literally translates to the measurement of life (Maguire 2009). The object of measurement are human bodies, either bodily characteristics (face, fingerprints, iris) or sometimes even behavioural characteristics like walking patterns or voice detection. By measuring and reading human bodies, biometric technologies are designed to answer two foundational questions: 'Who are you?' and 'Are you who you say you are?' (Pugliese 2010).

Biometric technologies mark a shift from identification and verification of individuals through documents, to identification and verification through the body itself. Not your documents, but your very own body now verifies and establishes who you are (Epstein 2007; Van der Ploeg 2004). For Pugliese, biometric technologies are therefore technologies of truth, as they translate body data to 'evidentiary text' to establish truth about a person's 'identity', authenticity or even intent. A new body ontology emerges in a new regime of truth (Fassin 2005), that perceives the body to hold truths about identities by translating bodies and bodily characteristics into digital codes. This new body ontology redefines and reduces bodies to information (Van der Ploeg 2004). Genetic sciences generated a body ontology that sees the body as building blocks of information, like DNA codes that allow us to read 'life' (ibid). In such body ontology, people and individuals do not embody a social identity, but with the convergence of bodies and technologies, they are now rather viewed as a source of information holding truths (Aas 2006). Here, there is a belief in the body that does not lie (Aas 2006). Yet, the truth it tells is still only the truth about the body' and the body data (ibid, 153).

When the body is perceived as the truthful source of information, the actual talking individual becomes redundant and insufficient for identification (ibid.). It is a truth that excludes 'the tale of the body, its narrative and biographical dimension, without which a person can hardly maintain a sense of *whoness*' (Ajana 2013, 89). For Ajana this shift to the body for identification is based on a biometric philosophy that is ever suspicious of 'the story'. The body does not lie, but the mind or the person might do. This leaves an author like Epstein (2007) to cleverly note that even though it is often stated that biometric

technologies try to verify who you say you are, there is hardly any speaking involved in the process. Biometric technologies thus let the body speak and silence the narrative, biographical stories, founded in a biometric philosophy that is ever suspicious of the human narrative.

3.1.2 | Detached identities

With an understanding of the story (the mind) becoming separated from the body, one can open debates analysing mechanisms of disconnection. In a new body ontology where bodies are codified and perceived as a source of information, bodies become disconnected from the actual persons. Drawing from Agamben's notion of biological data being an identity without a person, Grünberger et. al (2020) state that biometric technologies create ID-entities (Møhl 2019), that is an entity without a person, i.e. an ID-entity without a (social) identity (Grünberger et. al 2020).

The concept of ID-entity is used to tackle the blurring of different conceptions of identities and thereby addresses fundamental understandings and interpretations of identities underlying biometric technologies. Ajana (2013) asserts that biometric technologies simplify the meaning and function of identity. According to her, they eliminate the profound and flexible notion of identity and adapt a static sense of identity that is either true or false, positive, or negative. In the same vein, Grünberger et. al (2020) see fundamental differences between, on the one hand, static, ascribed, and one-dimensional biometric identities and, on the other, anthropological conceptualisation of identity, that views identity to be rich, flexible, negotiable, multiple and challenged – resulting from social life. ID-entities can therefore be understood as the biometric identity; an identity that is based on data sets established and registered through biometric technologies tied to the body (ibid.). Also called 'virtual selves' or 'data doubles' Grünberger et. al (2020) once again stress that biometric technologies only tell a body-truth. Therefore, ID-entities are not a virtual copy of a person nor representing them as an identity, as there is clear disconnection between a body and person, an identity, and an ID-entity. A biometric identity is therefore better to be understood as an ID-entity, body data and information about said body, rather than an actual lived identity.

Yet the concept of ID-entities originates from Møhl's (2019) work on border guards where ID-entities do not have a stable form but are a 'synthetically crafted figure' that is woven of 'past, present, future, knowns, unknowns, data, hunched and guesswork' (Møhl 2019, 15). In Møhl's work, ID-entities refer to a certain imaginary of 'bodies' that border guards hold, and in which Møhl tries to stress the importance of humans (in the form of border security staff) in biometric technologies – reading the technology, using their own senses and tacit knowledge about *who people are*. This second notion of ID-entities relates to an important message an autor like Pugliese (2010) tries to convey. That is, the foundational question "Who are you?", is always followed by, and lives in co-existence with, the question "What are you, or what kind of person are you?". Bias and interpretations are therefore

projected upon biometric technologies by the people who use and interpret the data, as Møhl (2019) shows, while at the same time, bias can also be identified in the very design of biometric technologies.

3.1.3 | Normative conceptualisations

In the measuring of life, the reading of bodies, specific conceptions about the body are evidently underlying biometric technologies. For Van der Ploeg (2004), these conceptions are rather paradoxical: one that assumes uniqueness but also similarity. Biometric technologies built on a biological notion that every individual's physical characteristics are unique and immutable. Yet this assumption of uniqueness stems from a notion that every individual has readable unique bodily characteristics. It thus assumes absolute uniqueness of bodies as well as similarity between human bodies – revealing an underlying notion of normativity of human bodies (Van der Ploeg 2004). That is, all bodies have unique characteristics that are present to be read.

For Pugliese (2010) biometric technologies are inscribed with 'infrastructural relations of disciplinary power underpinned by normative categories of race, (dis)ability, sexuality, class, and age' (Pugliese 2010, 2). In other words, a priori normative conceptualisations about bodies and identities are *built in* biometric technologies. Especially when non-normative bodies engage with biometric technologies, these normativities reveal themselves, as it is exactly the non-normative bodies that will fail to be recognised by biometric technologies (ibid.). Pugliese points towards whiteness that dominates in biometric technologies, but normative conceptions in categories as gender, age, or disability also draw-up the biometric design.

Normative conceptualisations underlying biometric technologies, or verified through biometric technologies, go beyond social constructions like race or gender. Olwig (2020) shows how normative conceptualisations of 'family', play a vital part in the deployment of biometric technologies in family reunification of Somali refugees in Denmark. Here, biometric technologies (DNA) are being used to determine family relations between the people who want to be reunified, based on a biometrically defined nuclear family. However, the notion of family, and family life, in Denmark differs from Somalian notions. Somalian conceptions of family go beyond bloodlines (mother, father etc.), as it is a kin system rooted in nomadism, clans, and 'fostering' children, through which a genetic similarity might not be found. Through these differences in conceptualisations of a family, Olwig (2020) brings to the fore how biometric technologies verify a Danish or Western norm, or conceptualisation, of 'family', which labels applicants who do not adhere to this notion as 'false'. Where Somalian refugees initially applied their own conceptualisation of a family and tried to negotiate through a biometric system, they eventually appropriated the biometrically defined nuclear family and used this to renegotiate and re-establish family life in Denmark.

In this first section I have outlined approaches to biometric technologies. Biometric technologies must be understood as technologies that are concerned with the authentication and verification of truth about identity, where the body is perceived to tell the truth about who people really are. Rather than authenticating and verifying truth, critical scholars have outlined how biometric technologies authenticate and verify norms and normative conceptualisations. Norms related to normative social identities and conceptualisations of bodies. But also, norms related to social constructions like 'family', as an author like Olwig outlines. The next section will address the deployment of biometric technologies in the context of this research; refugee registration and assistance.

3.2 | Deploying biometric technologies in a humanitarian context

3.2.1 | From truth to fraud and audit

Analysis of biometric technologies and identification systems often start by describing a primary problem biometric identification addresses and aims to counter: a lack of official documentation by millions in the world (Gelb and Clark 2013). Termed as an 'identity gap', people who lack official identification become excluded from interaction and engagement with the state, like the ability to vote, or interact with non-state institutions, like banks, hospitals or humanitarian agencies (ibid). Furthermore, more than 25 million refugees have fled their homes without official identification, and many have their official documentation stolen or destroyed in mobility (Latonero 2019). The provision of a legal identity is therefore prioritised, framed in the UN Sustainable Development Goal 16.1 "to provide legal identity for all, including birth registrations by 2030". Biometric identification technologies are often posed as a solution to achieve this goal and to close this identification gap, by creating biometric identities.

In framing biometric technologies to provide legal biometric identities, a parallel conception about illegal identities and fraudulent claims occurs. The deployment of biometric technologies in a refugee context must be understood in relation to fraud reduction, as UNHCR's first deployment of iris scanning technologies in 2002 in Pakistan served to biometrically enrol Afghan refugees to prevent the "recycling of individuals" (UNHCR 2002). An unfortunate way to describe preventing refugees from registering under multiple names to receive extra resources. Clearly understanding biometric technologies as technologies of truth, by biometrically enrolling beneficiaries upon registration, fraudulent, fake, or double registrations are perceived to be easier to detect (The Engine Room and Oxfam 2018).

In an article, The New Humanitarian (2019) outlined two contrasting perspectives on the deployment of biometrics in humanitarian assistance: one focussing on ethical considerations of technologies and the other a consultant responsible for UNHCR's biometric registration. Whereas the former held a critical stance to the deployment of biometric technologies, mainly due to the lack of adequate

protection of refugees' biometric data, the latter ought it unjustifiable to leave biometrics aside in aid programmes, as false or double enrolment of refugees cause an uneven distribution of aid to beneficiaries (The New Humanitarian 2019). Unjustifiable, as humanitarian organisations would bear the consequences of wasting donor funds and distributing aid unevenly, leaving some to receive more than others due to the "cracks in the system" (ibid.). Drawing from such reasoning, deploying biometrics to reduce fraud serves two purposes: to secure funding and to evenly distribute aid. A certain combination of meeting needs: the need of aid-givers and aid-recipients.

Indeed, humanitarian agencies increasingly compete for funding in a sector that becomes more market driven, with nation-states withdrawing and outsourcing service-provision to humanitarian agencies (Madianou 2019b). Demanding evidence of impact in return for funding, biometrics serve as 'impact data' to provide agencies' evidence of impact to donors (ibid, 5). In this logic of audit, as termed by Madianou, where biometric technologies provide evidence of impact and proving effectiveness and efficiency, "populations in need, through their data, legitimise humanitarian projects and justify agencies' funding applications to national governments and other donors" (ibid., 5). Beneficiaries, then, equal data, impact data equals legitimacy, legitimacy equals funding and funding equals continuation. One can however question whether this equation is 'fair'. What is being measured and who carries the burden?

When beneficiaries embody an agency's evidence of impact data, they become the focus of analysis, especially in relation to fraud reduction. Yet, biometric identification is used to combat "downstream fraud", fraud at the level of beneficiaries and recipients, rather than "upstream fraud", on a wider level of the aid supply chain (The Engine Room and Oxfam 2018). According to The Engine Room and Oxfam report upstream fraud, at the level of the wider supply chain, is in fact identified the biggest problem area of fraud. Yet, biometric systems are designed around refugees' and beneficiaries' identification and verification. This leaves accountability checks among the rest of the supply chain unaddressed and the burden of checks, the blame of fraud, and thus, the weight of impact, with beneficiaries (The Engine Room and Oxfam 2018). Furthermore, the report states that, to their knowledge, no organisation is moving towards the deployment of biometrics to combat "upstream fraud" or at its own staff. Whereas Steinacker (in the New Humanitarian 2019) sees biometrics at the level of beneficiaries to make upstream fraud more difficult, there appears to be a fundamental disagreement with the approach to fraud and the application of biometrics.

The use of digital technologies and innovations, like biometrics, is stimulated and seen as a matter of survival within a sector that resonates with a logic of business, to adapt or to die, rather than with its humanitarian principles (Scott-Smith 2016, 2232). By means of biometric technologies, agencies aim to secure funding opportunities and justify their presence in the field (Madianou 2019b). Accounts of 'fraud', donor waste or corruption will not strengthen an agency's case of effectiveness or accuracy and

perhaps weaken its justification in the field (ibid). Rather than being assessed based on 'humanitarian principles', impact evidence and business metrics now serve as criteria (The New Humanitarian 2019).

3.2.2 | The problem with accuracy

Biometrics are often posed to make humanitarian assistance more effective and efficient (The Engine Room and Oxfam 2018). For example, they are understood to speed up registration processes, leaving queues for registration in the past. Projects like the Common Cash Facility (CCF) in Jordan make use of UNHCR biometric database, that is exported to the financial service provider – Cairo Amman Bank – that authenticates beneficiaries through biometric technologies at ATMs (Gilert and Austin 2017). Biometrics are believed to simplify enrolment and bank registration, reduce overhead costs, authenticate cash-withdraws with "100% accuracy"; therefore, "providing support to refugees in the shortest possible time and at the lowest possible overheads" (UNHCR 2019b).

Claims of 100% accuracy and reduction of fraud reveal assumptions to biometric technologies' reliability. However, not only is the focus on beneficiaries' biometric data for impact contested, but biometrics' reliability is also highly contested too (Madianou 2019b; The Engine Room and Oxfam 2018). False positives or negatives occur due to age changes to the iris or because of imitated and replicated iris or fingerprints (ibid). Whereas flaws in the registration process – the actual measurement of the iris or fingerprint – can lead to false matches, Madianou (2019b) further problematises the issue, by addressing research on gendered and racial body discrimination in technologies. Madianou not only problematises the uniqueness and immutability of biometrics, but also its impartiality and racial and gendered bias (ibid). Referring to studies that argue African and female faces are systematically failed to be recognised by facial recognition artificial intelligence (AI) (Buolamwini and Gebru 2018, in Madianou 2019), Madianou addresses the issue of 'institutionalised racism' in biometric technologies. These notions clearly resonate with normative conceptualisations that underly biometric technologies as I outlined in the previous chapter.

Although biometrics' ability to accurately establish who people are is questionable, the use of biometrics for identification is often problematised exactly for its uniqueness and immutability. That is, the data is highly personal. This makes issues of privacy and surveillance one of the most discussed concerns (Rahman 2017). As outlined in the Engine Room and Oxfam report, sharing biometric data with partner organisations or other actors might enhance the sector's effectiveness and efficiency, but this makes its deployment also very questionable. For Rahman (2017) data minimisation, designing a biometric identification system that needs only the minimal amount of data to function, would be key in countering large amount of personal, and vulnerable, data sets. Identification systems that hold huge amounts of data to authenticate identities create more vulnerability for agencies, are more vulnerable for misuse of data and are therefore more vulnerable for the people whose biometrics are being used

(The Engine Room and Oxfam 2018; Rahman 2017). Data can furthermore be misused from within the system, from outside the system through hackers, or could fall into the hands of authoritarian regimes (Rahman 2017). How biometric data is stored, shared and obtained, and by who, is therefore critical with regards to privacy and surveillance issues.

Misuse of biometric data is also discussed around 'function creeps', where data is collected for one purpose but ends up being used for a completely different purpose (Madianou 2019b). Several practices in the use of biometric technologies within a humanitarian context can lead to such function creeps. Firstly, as biometrics have grown out of US-prisons and expanded after the post 9/11 war on terror (Madianou 2019b; Duffield 2019; Currion 2015), biometrics are more often used as tools to make borders 'smart' and for the surveillance of population (Maguire 2009; Madianou 2019b). Concerns around biometric identity registrations, then, occur as UNHCR, as well as states can register populations and therefore access their data. Moreover, governments of countries, be it the host or donors, can, and do, make claims on the biometric data (The Engine Room and Oxfam 2018; Madianou 2019b). Consequences of refusal of data sharing are exemplified in Yemen in the summer of 2019, when WFP suspended its operations in Houthi-held territory as it did not allow Houthi rebels to access biometric data (Parker and Slemrod 2019).

Function creeps also occur in the private-public collaborations that establish biometric identification systems. Concerns occur over private-public partnerships develop critical accounts on 'humanitarian experimentation' where refugee camps and refugees are treated as a laboratory for tech companies (Jacobsen 2015). Biometric technologies are being implemented in countries where regulation is less strict, as opposed to countries where biometrics have been outlawed, leaving Currion (2015) to point to the lack of accountability in the use of biometrics for humanitarian assistance. Issues around informed consent in biometrically registering refugees are raised by various authors (see, Rahman 2017; The Engine Room 2020; Latenero 2020) pointing out that the lack of understanding and awareness in relation to biometric registration among refugees or asylum-seekers is very concerning and problematic. Furthermore, the ability to refuse is equally questionable, as biometric enrolment often happens through the very institutions that are distributing assistance and services. This lack of generating meaningful informed consent seems to be a reality that humanitarian organisations are very aware of. ICRC writes that consent cannot always be regarded as valid or meaningful in emergency situations, because individuals often do not have a *real* choice (Hayes and Marelli 2019). The lack of real choice is created because of a dependency on aid, or the lack of options given by humanitarian organisations. Particularly with biometric technologies, the ICRC questions whether awareness and understanding can be achieved due to the complexities of the technology, its risks and benefits (ibid.).

3.3 | Conclusion chapter 3

As demonstrated in this chapter, in relation to identification and verification of identities, biometric technologies have to be understood as technologies of truth (Pugliese 2010). Theoretical debates concerning biometric technologies problematise the static one-dimensional biometric identity that is perceived as telling the truth to 'who you are', as the body does not lie. In doing so, biometric technologies silence the narrative and biographical stories of people and let the biometric body speak. Critical approaches to biometric technologies show how normative conceptualisations underlying biometric technologies, with regards to bodies and abilities, as well as gender, race and social constructions like families, are rather more grey than mere 'truths'.

Placed in a humanitarian context, biometric enrolment stetches beyond identity creation and registration to fill an identity-gap. On the one hand, biometric technologies serve to make the distribution of (cash) assistance more effective, accurate and efficient and are framed to reduce fraud. On the other hand, biometrics are heavily critiqued for data and privacy concerns, its use of refugee bodies for impact data and merely combatting 'downstream fraud' rather than upstream fraud.

In its cost-benefit analysis of biometrics, The Engine Room and Oxfam report conclude that the potential risks "far-outweigh" the potential benefits. They urge humanitarian agencies to contribute to the "evidence gap" on the effects of biometrics. This leaves one to wonder why agencies across the sector experiment and embrace a technology that has not been analysed thoroughly enough and appears to be so controversial? In this thesis, refugees' experiences will contribute to further understand the use of biometric technologies in a humanitarian, refugee, context.

Chapter 4 | Refugees, Biometrics and Cash Assistance in Jordan

4.1 | Refugees and asylum seekers in Jordan

Together with neighbouring Lebanon, Jordan has been heavily impacted by the refugee crisis caused by the Syrian civil war (Chehade et. al 2020). As previously mentioned, Jordan hosts the second largest number of refugees and asylum seekers, or persons of concerns (PoC), per capita in the world. Jordan is however not a party to the 1951 Refugee Convention, established to guarantee the right to refuge and refugee rights. Yet it is committed to operate in accordance with principles of international law, including non-refoulement (Hayden 2017).

It In total, 753,282 PoC are registered with UNHCR in Jordan, of which Syrians make up 88% (UNHCR 2021). However, more than 1,3 million Syrian refugees are estimated to live in Jordan, which means only half of them (664.414) are registered with UNHCR (Chehade et. al 2020). Even though the largest refugee population in Jordan comes from Syria, Jordan hosts PoC with 57 different nationalities, of which Iraqi (66,760), Yemini (13,902), Sudanese (6,024) and Somali (718) refugees make up the largest groups (UNHCR 2021). Of all registered PoC residing in Jordan, 83% live in urban areas, of which almost 200,000 in the Amman governate (UNHCR 2021). Only 17% of Syrian refugees live in three Syrian refugee camps in Jordan, of which Zaatari Refugee Camp is almost as populous as the fourth largest city in Jordan (Chehade et. al 2020).

As most refugees (almost 90%) in Jordan come from Syria, refugees with nationalities *other* than Syrian are often referred to as either non-Syrian or just *other* refugees. This has shaped the humanitarian framework in Jordan to almost respond to Syrian refugees exclusively (Johnston, Baslan and Kvittingen 2019). In the Jordan Response Plan, a partnership between the Jordanian government and international organisations, almost all funding in Jordan has been directed to Syrian refugees or vulnerable Jordanian citizens, overlooking refugees and asylum seekers from other countries (ibid.). Furthermore, only Syrian refugees have access to work permits through the Jordan Compact, leaving refugees from other countries to work informally (ibid.)

Calls for a 'One Refugee Approach', that disregards nationalities, have started to grow ever since 2015. In 2015 Sudanese refugees and asylum seekers camped out in front of UNHCR in Amman for a month, protesting discrimination in the provision of humanitarian assistance and resettlement services (Human Rights Watch 2015). Around 800 Sudanese asylum seekers, men, women, and children, were arrested and deported back to Sudan regardless of their refugee or asylum-seeker status, making Jordan break

agreements regarding non-refoulment (ibid.). Now, a 'One Refugee' approach is being advocated for by large organisations such as UN-agencies and partners, addressing discrimination based on nationalities in access to rights and services (UNHCR 2021). This has resulted in WFP's extension of their cash and voucher response beyond Syrian refugees in 2018.

4.2 | Biometrics in refugee registration

UNHCR Jordan has been one of first UNHCR operations to use iris-scanning biometrics as an 'integrated systematic part' of the process of refugee registration (UNHCR 2019). Ever since 2013, almost all Syrian refugees (93%) above the age of three, have been biometrically registered, as biometric enrolment has become obligatory in order to receive access to assistance, documents, or government services (UNHCR 2017). The remaining 7% are either too young to be biometrically enrolled or are awaiting registration (ibid).

UNHCR's Anmar Hmoud Registration Centre in Amman is the largest urban registration centre in the Middle East and North Africa (MENA). Up to 4,000 refugees a day *can* be processed for (re)registration. In 2018, UNHCR Jordan was among one of the first operations to implement self-renewal biometric registration booths for biometrically enrolled refugees in Jordan (UNHCR 2019 b, UNHCR 2019c). Piloting with twenty reregistration booths in Amman's registration centre, UNHCR's short-term goal –to empower refugees by making them owners of their own data – is aimed to be achieved by allowing refugees to personally validate and update their data, like addresses, phone numbers, family members (i.e.), at the renewal booths. The long-term objective of self-renewal registration booths aims "to enable refugees to update their data remotely, and to have access to a unique, portable, authenticated digital identity, inter-operable with State population registries and Civil Registration and Vital Statistics systems" (UNHCR 2020b). More self-renewal booths are planned to be established in twenty-five UNHCR community support centres across Jordan.

4.3 | Biometrics in cash and voucher assistance

Cash assistance has been estimated to comprise of around 28% of humanitarian assistance in Jordan in 2018. Most of these cash transfers are stemming from large cash-based programs of international organisations and non-governmental organisations (NGOs) (CaLP 2021). International organisations are required to include 30% of vulnerable Jordanian beneficiaries by the Ministry of Planning and International Cooperation (ibid.). The largest cash assistance programmes in Jordan include two monthly assistance programs: the UNHCR Basic Needs Assistance and the WFP cash and voucher response (ibid., 8). There are also seasonal cash transfers, like UNHCR's winterisation cash, or one-off cash assistances for emergencies (see CaLP 2021, 8 for a detailed overview). UNHCR reaches approximately 126,000 individuals (33,000 households) monthly, and WFP reaches a further 500,000.

Following biometric registration upon arrival, home visits serve to determine refugees' vulnerability based on a Vulnerability Assessment Framework (VAF). Those deemed most vulnerable, based on their vulnerability score, are selected for cash assistance. Cash can then be biometrically accessed, unconditionally, at Cairo Bank Amman ATMs after receiving a SMS. The VAF will be elaborated on the next section.

As 83% of refugees reside in urban areas, cash assistance is provided to refugees residing in cities as opposed to refugees residing in camps whom mainly receive (e)vouchers (Majewski et. al 2018). Rather than receiving bank cards, 2012 saw the introduction of iris scanning cash assistance when UNHCR, in collaboration with Cairo Amman Bank, deployed biometrics for its cash-assistance projects (UNHCR 2016). This collaboration between UNHCR and Cairo Amman Bank developed into The Common Cash Facility (CCF) launched in 2016 (UNHCR 2017). CCF is a platform where UN-agencies, multiple NGOs, and Jordanian municipalities (in total 40 members) deliver cash assistance to registered refugees outside of camps via a single financial service provider (FSP) – currently the Cairo Amman Bank in Jordan (Gilert and Austin 2017). The biometrics company IrisGuard provides its iris scanning technology called 'Eyecloud' to the CCF, to authenticate refugees to make withdrawals 'in the blink of an eye' by linking ATMs to UNHCR's biometric registration database (Chehade et. al 2020; CaLP 2021). The benefits of CCF are believed to be in the realm of efficacy, as agencies have the same terms, conditions and (lower) transaction costs with the FSP (UNHCR 2017). By using iris scanning there is no need to open separate bank accounts for beneficiaries, and it is perceived to limit the risks of beneficiaries losing their bank card, PIN or giving the card to relatives, but also allowing a traceability of funds (ibid).

Cash-based interventions in Jordan do not all make use of biometric technologies at ATM machines. Organisations like the World Food Program (WFP) moved to cash assistance in 2017 with 'Choice'. WFP allows people to withdraw cash at Jordan Ali Bank ATMs or purchase products at WFP supermarkets or local partner shops through debit cards in collaboration with MasterCard (WFP 2018). A quarterly biometric validation is required by WFP, where refugees must biometrically verify their identity every three months through a post office network throughout Jordan (WFP 2019). [8] However, in WFP supermarkets in Zaatari and Azraq refugee camp biometric technologies are deployed instead of debit cards. WFP launched the Building Blocks project in 2017, that combines the use of a private blockchain[9] and biometric technology in targeting food distribution, eliminating FSPs. In the partner

[8] https://docs.wfp.org/api/documents/WFP-0000113829/download/

[9] Blockchain is a technology that can mostly be characterized by decentralized and trustless ledgers that record transactions across a peer-to-peer network, see Zwitter and Boisse-Despiaux (2018) for the use of blockchain technologies in humanitarian action and development aid.

shops or WFP supermarkets in the camps, iris scanning technologies biometrics are used to authenticate beneficiaries' allowance at the counters of supermarkets.

4.4 | Vulnerability Assessment Framework

Cash assistance is targeted at the most vulnerable refugees through a "Vulnerability Assessment Framework" (VAF). In January 2014, the VAF Steering Committee came into being to develop the VAF as a tool to facilitate a better analysis and targeting of humanitarian assistance to non-encamped urban Syrian refugees, based on 'vulnerability' (VAF Baseline Survey 2015). Through indicators, the VAF is designed to support international and humanitarian organisations to create a profile of vulnerability of (Syrian) households and allow for monitoring of that vulnerability, based on a vulnerability score (ibid.). It therefore aims to harmonise the measurement and definition of vulnerability across UN bodies, donors and (I)NGOs to strengthen the coordination and decision-making of humanitarian assistance (Khogali et. al 2014; VAF Baseline Survey 2015).

What defines vulnerability, however, is not static, and vulnerability is to be understood in relation to 'what it is a population is vulnerable to' (VAF Baseline Survey 2015). The VAF defines vulnerability as:

> '*The risk of exposure of Syrian refugee households to harm, primarily in relation to protection threats, inability to meet Basic Needs, limited access basic services, and food insecurity, and the ability of the population to cope with the consequences of this harm'. (VAF Baseline Survey 2015, 65).*

The VAF score of vulnerability is based on several indicators and criteria of vulnerability conducted during home visits. There are three sections to the framework. Firstly, economic vulnerability, based on a welfare model that predicts the approximate level of expenditure, with a poverty line of 28 JOD (39.40 USD) per capita per month. Secondly 'universal' indicators, meaning applicable cross-sectoral, address vulnerability indicators like documentation status (the type of document and validity document), dependency ratio (number of adults and children) or 'coping strategies' (mechanisms to meet basic needs). These indicators are perceived to be applicable, and thus taken into the VAF, regardless of institutions or organisations' mandates, goals or aims. Thirdly, sector models are used to provide indicators for sector-specific-targeting. Indicators, like basic needs, should inform family (non) financial needs to maintain 'welfare' and 'dignity'. Other vulnerability indicators relate to education (for school aged children), food security, health, shelter, and WASH (water and sewage networks). Across these sectors, the VAF ultimately determines the level of vulnerability, and based on that, the eligibility for (cash) assistance (see VAF Baseline Survey 2015 for an overview).

The VAF is articulated around Syrian refugees, yet *non-Syrian* refugees also receive cash assistance based on the VAF. Whether the VAF is adjusted to what makes this 'other' group vulnerable to, remains

unclear. Even though the use of VAF should homogenise the determination of vulnerability in humanitarian assistance in Jordan, Jacobsen and Sandvik (2018) show that many of the UN partners used different 'scoreboard' approaches. The framework with indicators already signals a rather reductionist approach to vulnerability, and Jacobsen and Sandvik quote a commentary in Lebanon that articulates the VAF to reduce families and individuals to data and numbers – to scores. Being shifted between categories of vulnerability, families can lose cash assistance not because their living conditions had improved per se, but because a data set decides their fate for them (ibid., 1515). Like biometric technologies themselves, who needs assistance and who is perceived vulnerable enough to receive cash assistance is determined by numbers and scores, rather than an understanding of stories and narratives.

4.5 | Conclusion chapter 4

In Jordan, biometric technologies have been deployed in refugee registration, and cash and voucher assistance, for almost a decade by numerous of institutions and (I)NGOs of which UNHCR and WFP run the largest programs. Jordan's refugee response has been shaped by the Syrian refugee crisis, through which the majority of assistance is targeted at Syrian refugees. Therefore, a One Refugee Approach, that does not look at nationalities, is more and more advocated for. Outside of the refugee camps, where the majority of PoC live, cash assistance is distributed through the Cairo Amman Bank ATMs equipped with IrisGuard's biometric technology. Based on a VAF, eligibility for cash assistance is based on a VAF score, aimed to homogenise determination of vulnerability, the VAF is also critiqued to, once again, reduce refugees to numbers, data, and scores.

Empirical Chapters

Chapter 5 | To be or not to be

This first empirical chapter starts by highlighting different perspectives on the process of *becoming biometric*. Two narratives, one of a Dutch immigration officer and one of a Sudanese refugee, serve to outline how biometric enrolment can be understood from a process from claiming and constructing to extracting and reclaiming who you are. Both stories reveal how biometric technologies, creating biometric identities, shape understandings of the self and others, and people's claim to who they are.

5.1 | Claiming an identity

I found myself sitting in an uncomfortable airport waiting chair. The ones where they place arm support at both sides, eliminating the possibility to lie yourself down and transform the seats into something that could resemble a bed. Some distant chatter in Italian filled the empty and silent airport halls of Amman's Queen Alia International Airport. The airport was closed, the country in lockdown and my thesis research abruptly ended. In these last moments of my fieldwork, I encountered a Dutch IND (immigration and naturalisation service) officer. He walked around the airport to make sure the handful of Dutch citizens were able to leave Jordanian soil without any problems. He came to check on me and my friend, sat down in one of the uncomfortable chairs, and soon our conversation shifted to my thesis topic: biometric technologies.

I caught myself on my prejudice. As an immigration officer he was familiar with biometric technologies and I expected the officer to applaud the use of biometrics in identity management and refugee assistance. Partially because the modern use of biometrics is inevitably linked to practices in border control and migration management (see, for example Lyon 2003). And partially because I just returned from a field where I found many optimistic, or not-so-critical-as-expected-beforehand, views on biometric technologies – something I will outline throughout this thesis. Yet the officer surprised me. Instead of applauding, he challenged the use of biometrics as a tool in identity management. However, he did not express any concerns about data security or privacy, like many critics articulate (see, for example Rahman 2017). It was not the technology itself that he disliked per se, but rather the belief and trust in its presumed ability to verify *who people are.* Again, he did not question the accuracy and the potential of false positives (when a match is wrongly being made) or negatives (when there should be a match, but it does not occur). Neither did he address issues of bias in AI. No, he rather questioned out loud:

> *"What does an iris's match to an identity exactly say about the person in question? What if the matched profile is based on false documents?".*[10]

If your biometric identity is based on a false claim to who you are, what does an identity as such mean? For the officer your biometric identity is therefore solely based on the person you claimed to be upon biometric enrolment. Biometrics do not 'accurately' establish who people are but rather who people have claimed to be. And this claim could be anything, from a *meaningful* truth to a *meaningless* 'fraudulent' claim to who you supposedly are. In questioning the meaning of an authentic biometric identity, the officer critiqued biometrics' very ability to answer their foundational question of truth: *Who are you?* (Pugliese 2010). If biometric technologies are to be understood as technologies of truth that are fundamentally concerned with authentication and verification of individuals' identities (ibid.), the officer rather perceives biometrics to verify a constructed truth. A constructed truth about an identity of which the foundational grounds can be either true or false, legal or illegal.

Talking to the officer, the authenticity of biometric identities, and the knowledge they produce about an individual, became the central topic of discussion. This notion is not new in the sense that authors like Aas (2006) or Van der Ploeg (2004) already provide a narrative that perceives biometric technologies to merely verify 'truths' about bodies and their body data, rather than the actual identity or 'the tale' (Ajana 2013). I have outlined in the literature background that biometric technologies might run on the perception that 'the body does not lie', the technology is solely capable of telling body truths – not truths about who you are. Whereas this narrative is often used by authors to criticise the use of biometric technologies and to counter a new body ontology that views the body as information (Van der Ploeg 2004), I view the officer to come from a different place. When the officer asked what an iris's match to an identity exactly says about the person in question, he reasoned this from his experience of people falsifying their documents in migration. He reasoned it from fraud. His questioning of biometric identities' authenticity, the truth-claims made through biometrics, stems from a continuous suspicion towards 'the tale'; towards the narratives behind biometric identities (Ajana 2013). An innate suspicion towards people, presuming intent of conning. His problematisation concerning biometric technologies is therefore resonated from a suspicion towards the people who make a claim to an identity as they *become biometric*.

It is exactly this idea of *claiming to be*, of constructing an identity, that is critical in the officer's understanding of biometric enrolment and identities. That is, the process of biometric enrolment is one where a meaningless claim can, intentionally, be translated into fundamental truths about who you are. You can choose to be anyone and create a truth about yourself upon biometric enrolment. The officer is ever more suspicious of biometric identities due to people's constructability – ability to create 'a

[10] Fieldnotes April 2020

truth' that is based on 'a lie'. For the officer, the problem with biometric technologies is therefore not a lack of accuracy, but rather the opposite: the accuracy itself is the problem. That is, claims to identities are becoming 'the truth', which is then continuously verified to be so. Foundational grounds to this very truth can be constructed and based on documents that are not officially belonging to an individual. This makes biometric technologies only accurate within their own logic, verifying repeatedly a 'truth' that stems, potentially, from false claims. Merely verifying who you claimed to be upon biometric enrolment. *Becoming biometric,* therefore opens the possibility to *become someone else.*

The officer thus critically questioned what it exactly means when an iris matches an identity. By understanding biometrics' accuracy to only exist within their own logic, the officer perceived biometric identities to be rather meaningless – telling a constructed truth about an individual that could mean anything. In the next section I will counter this notion of claiming and constructing by outlining Bilal's experience with biometric enrolment.

5.2 | Extracting who you are

"*They took my eyes in Egypt and discovered me in Jordan*". [11]

When it comes to biometric enrolment and registration, the IND officer is sceptical about biometrics as he understands enrolment in terms of constructing and creating, often based on false claims. Bilal, however, offers a different story that counters this narrative. Rather than speaking of *creation* and *claiming,* his experience is one of *extraction.* UNHCR took his eyes. They extracted something from him. Without him knowing. Biometric enrolment is as much about creation, as about extraction. This is Bilal's story.

Bilal registered with UNHCR twice, in two different countries, with two different passports, but only one pair of eyes. His experience places the creation of biometric identities in the context of forced migration – or "travelling" as participants often described. I met Bilal as an asylum-seeker status holder from Sudan in Amman, but before he resided in Jordan, he had already undergone several attempts to *travel* to Europe. When it comes to *travelling* to Europe, people are taking many risks, actions, and often several attempts to cross the sea from Turkey or North-African countries to Southern Europe. In failing to make the crossing, one such risk is being arrested by local police, ending up in detention centres, and sometimes being deported[12]. Bilal too had to experience this, but in the detention centre he also experienced something else:

[11] Interview April 2020

[12] See for example Hans Lucht (2011) for an ethnography on the mobility of Ghanese fishermen to Southern Europe.

"*When we were in jail, some people had a card, but I didn't. They didn't deport them to their countries".*

This 'card' Bilal refers to is a UNHCR's asylum-seeker card. It offers a protected status for asylum-seekers, which means that it protects them from deportation in their attempts to make a crossing to Europe. Rather than registering as an asylum seeker to start a process for refugee status, UNHCR registrations also must be understood in relation to protection in *forced migration* – in mobility. A protection that cardholders carry with them as they will try to travel to Europe. A registration that must be understood in its temporality – in movement between places. Exactly for this reason of getting 'a card' that will provide protection and prevent deportation, Bilal's first registration at UNHCR was suggested by his smuggler. It is important to understand that in this first UNHCR registration, UNHCR did not mean a UN refugee agency for Bilal at that time. It was an organisation that provided 'a card' that would protect him from deportation – from a form of imposed mobility. It was yet another strategy in navigating his access into Europe. Bilal's first registration with UNHCR was therefore one without him realising where he was, what he had to do for the card, and what the repercussion would be. In Bilal's own words:

"I went to the UNHCR. I didn't even read. I went with him [smuggler], because all I wanted was to just travel to Europe. [laughs] I don't care what I do. So, he gave me a passport that didn't belong to me. It belonged to someone else. Because I didn't even have a passport at that time. […] I went there, I said everything that he [the smuggler] told me, and they took the eye scan".[13]

By registering with a fake passport that was provided by the smuggler, Bilal unconsciously created a biometric identity that was founded on documents that did not belong to him. As he said, he did not even have a passport at that time. When he was told to just "*look in the mirror*"[14], he unknowingly attached his body to an identity that was not officially his. He created a static, one-dimensional biometric identity and created 'a truth' about himself without being aware of this. It was only later that Bilal became aware of this new identity, this new truth, that he created about himself.

When Bilal failed to reach Europe again, he travelled to Jordan with another fake passport. Instead of making an *illegal crossing,* Bilal wanted to apply for a refugee status in Jordan, unknowing what his previous registration with UNHCR meant. When UNHCR wanted to biometrically enrol Bilal as an asylum seeker in Jordan, they found a biometric match; the already existing biometric identity belonging to Bilal's eyes. There was a biometric match, but the passports did not match, which gave Bilal the label: fraud. Bilal's body was now attached to a biometric identity, that he could not match.

[13] Interview April 2020

[14] Interview April 2020

Without knowing, a biometric identity was extracted from Bilal by UNHCR. In a different context this biometric identity has caused him to experience a great delay in receiving refugee status and has labelled him as a fraud. Bilal had spent three years proving his biometric identity is linked to the wrong identity; proving he is who he says he is. Without having access to official documents – lacking them in general – it was difficult for him to provide 'official evidence' of who he is. He still awaits his first refugee interview after more than three years. But he has managed to reclaim who he is, reclaim his identity. His eyes were taken, but he managed to get them back.

Whereas the officer views biometric technologies to be created, potentially, based on false claims to who you are, through the story of Bilal, a notion of claiming of fake identities can also be understood as extracting identities. Biometric enrolment is very complex and happening within a context of forced migration and travelling. A context in which static, one-dimensional biometric identities that can only tell one truth about a person cannot stand further away from the situation in which they are deployed. That is, a situation in which people move, are flexible and sometimes need an identity in mobility. Not only are biometric identities opposite to anthropological understandings of identities as fluid, multiple and ever changing, but they are also deployed in a context of mobility, change and flexibility.

5.3 | The biometric self

Drawing from Bilal's story, the moment of biometric enrolment should not only be understood as the moment a biometric identity is created, as UNHCR expresses, or an identity is claimed, as the officer sees. But also, as the moment a new self comes into being– a biometric self. The biometric self stands in contrast to Goffman's (1959) self, as the socialised version of the 'I' that one presents to the outside world and is anything but fixed. The biometric self is an extracted digitised version of the 'I', not presented by you, but projected upon you. Not fluid and multiple, but fixed and one dimensional; perceived as the 'truth' as it established a foundational claim of truth about 'who you are' (Pugliese 2010). Becoming biometric can therefore be understood as the moment of extraction of a biometric self. For Bilal, his biometric self exists in relation to his body, but is only projected upon him when he interacts with biometric technologies. A self that only comes into being purely by the technology. Yet it is a 'being' that from the moment of extraction becomes who Bilal is perceived to be. A self that tells a story of who Bilal is.

Looking back on the officer, biometric technologies are very accurate, but within their own logic. Within their own claims of truth. Operating within their own logic, biometric technologies require individuals to conform to this biometric self to not become defined as a fraud, like Bilal has experienced. In becoming biometric, your presentation of the *self*, yourself, is no longer required. Only one self counts and can be projected upon you: your biometric self. Bilal's story shows how a biometric identity is inextricably linked to a body without *the self* being conscious of this *biometric self*. As it is a self that

only lives by, and is experienced through, biometric technologies, Bilal's biometric self was projected upon him over time. Upon biometric enrolment in Jordan, Bilal was confronted with the fact that his own body projected a version of himself of which he was not at all aware. Therefore, Bilal's story and experience with biometric identities clearly exemplify how biometric technologies disconnect bodies from the person (Møhl 2019) and create an identity that only exists in relation to the body (Ajana 2013). His body, his eyes, were disconnected from him as a person, as they seemingly belonged to another identity that they were enrolled as and connected to. As they took his eyes in Egypt a new Bilal, detached from the person, came into being.

5.4 | Conclusion chapter 5

Understanding biometric technologies as technologies that mediate relations, co-shaping and co-determining how the world and the self are understood, this chapter has shown several insights. Both stories in this chapter provide examples of how biometric technologies mediate people, understand the world and the people in it, yet very much also shape experiences of *being* in the world, of understanding the self in the world.

As 'they took his eyes', biometric technologies mediate experiences of the body, as the body becomes the battle zone for truth claims about who you are. Biometric technologies make Bilal experience a biometric self that has been extracted from him and is projected upon him. It is a self that only exists in relation to his own body, yet he did not *know* and only experienced when he interreacted with biometric technologies again. It is only because of biometric technologies that Bilal's body, his eyes, were experienced as taken from him. His identity, who he *is*, also taken from him. As biometric technologies create what Ajana (2013) termed recombinant identities, identities that are designed from scratch and create a profile with a life of their own, these identities or what I termed *biometric selves* shape the perception of the self.

Chapter 6 | Consent, power and benefits

The previous chapter centred around the moment of biometric enrolment, the creation of truth, biometric identities, and biometric selves. Having hitherto signalled a lack of informed consent, this chapter addresses two pressing issues: the awareness and understanding of biometric enrolment and, with that, the apparent lack of informed consent. As it turns out, Bilal's lack of knowledge about his biometrics being taken is not unique at all.

6.1 | Dynamics of power

> I woke up early in the morning, so I would have time to walk to the printshop and get my interview guide printed. I figured it would be better to have a nice firm token of control to hold on to or look at during the interview; it is still relatively new to me. Interviewing the big UN refugee agency also made me more nervous and in need of good preparation. The nice man in the printshop had put my freshly printed guide, all warm and smooth, in a plastic cover so it would not fold. I kept it in my bag, between a book, pressing it together and keeping it nice and straight. This little piece of paper changed the whole interview.
>
> Before the interview, I was walked around the UNHCR Khalda registration centre. I was shown around the little white trailers – the interview rooms – and the waiting area. After showing me around, my 'tour guide' and I were joined by a small woman with short brown hair who was still on her phone when she entered the little white trailer where we sat down for the interview. Fresh, clean and without any folds I got the interview guide out of the plastic. But before I knew it, before I could even look at it, the woman who just joined us, reached over the table and grabbed my interview guide out of my hands. There it went, not one single look and no more control in my hands, nor in my head. I was flabbergasted, confused and just completely surprised about what had just happened. In a world without a VAR (video assistant referee) it is difficult to play that moment back or let someone else look at it and redo it. Perhaps the woman mistakenly thought I printed out the questions for her. Perhaps I made a movement that looked like I was about to hand it over to her. Perhaps I should have just said that the guide was for me and taken back the paper; taken back control. But I didn't do that. I thought about it throughout the whole interview, that she herself started, but something in me felt powerless. The act of reaching over the table and taking my little piece of paper out of my own hands without asking, felt like an act of power, regardless of her motives. It was an act of taking control over the interview, an act that made me feel small, insignificant, and insecure. I could only watch, hear her read out loud my interview questions, and process what just happened to

me. She left me in the dark, unfocussed, and unable to come up with good questions. And before I knew it, I was outside waiting for a taxi with no intention of returning to that place again[15].

For many of Amman's urban refugees, the story of biometric technologies starts at a little white trailer at the UNHCR compound. By no means can I compare my experience with UNHCR to refugees' or asylum seekers' experiences with the organisation. The vignette serves to indicate how dynamics of power exist within the little white trailers, interview rooms, at the UNCHR compound in Amman. The act of taking a piece of paper felt like an act of taking away control and power from me. I have beaten myself up with the question as to why I did not find the courage to take back my printed interview guide from that woman. I felt stupid for ruining the interview, not being able to continue some of her answers with sharp questions. But instead of beating myself up, I was also left with questions to what it means if I was already feeling so powerless and had not even the courage to ask for my printed interview guide back. A piece of paper not a piece of my body.

The question of informed consent is a question of power and dependencies (Rahman 2017). In researching lived experiences of digital identities through biometric technologies, The Engine Room (2020) already stressed that it is highly questionable whether refugees and asylum seekers are in the position to give a *meaningful* informed consent. What establishes a meaningful informed consent, according to the Engine Room depends on five tenets: 1) voluntariness, 2) disclosure 3) understanding, 4) capacity/competence, and 5) consent. These tenets set out that people should agree without being pressured or facing negative consequences, being capable to fully comprehend the process and understand what is happening and agreeing to the process or request (ibid., 40). Considering this notion of *meaningful* informed consent, it is impossible to ignore the fact that refugees very rarely find themselves in a position to worry about data privacy after many other rights violations. Furthermore, the issue of voluntariness, being a choice without facing any negative consequences, becomes rather complicated considering refugees often receive necessities from the very institutions that request their (biometric) data, like cash assistance (The Engine Room 2020, 91).

With this knowledge in mind, my friend Aziz, a Somali refugee, has told me on multiple occasions how boring my research topic is. Being biometrically enrolled himself, he simply could not understand why I would be interested in this topic. Asking me whether I really thought that refugees think about the use of iris scanning technologies in their application for refugee status, he pointed me towards my own privilege. A privilege to have the ability to consider privacy issues and rights, to be looking for a privilege that not everybody has. For Aziz, informed consent from UNHCR would be meaningless, as he considered it to be a rhetorical question. He posed me the following comparison: "*If you ask somebody who is starving whether they will donate their blood for food, they would do it. They have*

[15] Reflection, written January 2020

to."[16] He compared the situation of refugees like him as one where you do not have a choice and "*UNHCR knows it*"[17].

"*UNHCR knows it".* This short sentence reveals a lot about the way Aziz draws up the balance between UNHCR and himself as a refugee, with UNHCR very well understanding a situation in which his choices are limited. Aziz shines through a feeling of intent and conscious misuse of power by UNHCR. It therefore shows how Aziz views the way UNHCR operates within a context of power asymmetries that seem to limit people in their choices. Farid, another Somali refugee, once explained that UNHCR can ask it [biometrics] because you need it[18]. He compared his biometric enrolment with an online application form where you cannot press 'proceed' or 'submit' if any important data is missing. You need a biometric identity to proceed your case, to be resettled to another country or to receive assistance Farid said.[19] Biometrics might officially not be mandatory, but they don't even have to be – they are 'just' another step in the process of registration and the feeling of contesting it seems rather far away.

Such imbalances of power, where choice seemingly seems to lack, and dependencies on assistance and further registration plays an important part, is also articulated in many critiques on the use of biometric technologies (see, The Engine Room 2020 or Jacobson 2015). Biometric technologies and identities are laden with dynamics of power, choice and interdependencies that are at play in registration rooms. Opposing, or the mere ability to consider so, is something people are not always in a position for. Or, as the previous chapter has shown, some don't even know what is happening. Acknowledging these dynamics of power, and the context in which biometrics are deployed, by the organisations using biometric technologies, would be a first step to address issues around informed consent and the creation of understanding and awareness of biometric technologies and its data use. The Engine Room also recommends that power asymmetries that affect informed consent should not only be considered, but new ways to replace or support processes of consent should be sought and placed if consent cannot be meaningful in a specific context.

I have tried to discuss this issue around the ability to ask about, or challenge, biometrics with refugees, but I was often met with laughter. "No, why would I?", Zaid once said when we walked up the hills. When he mimicked his conversation with UNHCR about his re-assessment regarding his 'vulnerability', he put on a little baby voice and said: "Yes, okay, I will come. I will obey". A funny way to make me understand his position in the relationship, one of a child that has to obey. As Aziz laughed away my whole research project and baptised it as the most boring topic anyone could have

[16] Fieldnotes February 2020

[17] Ibid.

[18] Ibid.

[19] Ibid.

ever come up with, I was not only pointed towards my own privilege as mentioned above and refugees' ability to oppose and question biometric enrolment, I also started to understand biometric technologies as normalised. Some people seemed to think nothing of it. It is normal and it is normalised. "It is fine, aadie [عادي]!", like Zaid would always say about everything. It is part of the process.

6.2 | An unmemorable moment

As outlined in the previous chapter, Bilal only experienced biometric technologies, and his extracted biometric identity, after he interacted with the technology again in Jordan. In line with this notion, not only did I find a rather normalised status quo of the use of biometric technologies in refugee registration, I also encountered many 'non-experiences' of biometric technologies. Looking for experiences with biometric technologies, I often tried to ask about the moment of biometric enrolment, as an UNHCR employee explained to me that all refugees and asylum seekers from the age of five are being biometrically enrolled.[20] Only very young children or elderly are exempt from biometric enrolment, due to the quality of their iris: either still developing or decreasing in quality. Numbers show that 85.3% of *persons of concern* in Jordan are biometrically enrolled (UNHCR 2021). Yet, whenever I would ask people about their registration at UNHCR, it was not uncommon if they could not recall the iris scanning, or 'eye scan', at all. Many times, people were unsure as to whether they have had the eye scan or not. They simply did not know. Even a Syrian refugee I sang in the choir with, who received WFP assistance that verifies people through iris verification every three months, did not know whether he was biometrically enrolled.[21] He could not remember his or his wife's *eye scan* during his registration, yet he must have had one as he uses a WFP card that draws from UNHCR's biometric database.

How come people do not remember the moment of biometric enrolment, the capturing of their iris? Becoming biometric, the moment of truth, where truth is sealed to your body and a self is extracted from you, appears to be an unmemorable moment. In Bilal's story he was told to just "Look here"[22]. Zaid also explained to just look somewhere on several accounts. Both did not seem to be informed about biometric enrolment happening. According to the UNHCR there is a policy at place in case a person feels uncomfortable with their biometrics taken. Council can be received by the person of concern and the process will be explained thoroughly, yet this has never occurred in the years the woman I "interviewed" had been in Jordan[23]. Informed consent is almost flipped, only to be asked upon request rather than a vital part of the process.

[20] Interview UNHCR January 2020
[21] Fieldnotes February 2020
[22] Interview Bilal April 2020
[23] Interview UNHCR January 2020

The shift to biometric technologies was explained to me with relative ease during the interview at UNHCR. It was a mere additional tool to the standard procedure; one that is more accurate, easier, and 'culturally sensitive' than fingerprints or facial recognition.[24] Culturally sensitive because iris scanning does not require women to unveil as was explained[25]. Rather than asking whether people *can* challenge and question the use of biometric technologies in their registration, the focus lies more on making sure that people will start to question: why would I challenge the technology? According to the interviewee at UNCHR, people see the benefits of biometrics, offering identity protection and access to assistance. Why would they then challenge it?[26] This same logic was posed to me by one of the financial managers of a grassroots NGO in Amman. Already being part of the Common Cash Facility Approach (CCF) and in the process of opening a bank account with Cairo Amman Bank. The man highly doubted my question regarding excluding refugees without a biometric template at UNHCR. He didn't think refugees would refuse biometric registration, whilst simultaneously referring to the process of taking biometrics as "the dirty work" that is already done by UNHCR.[27] The existence of a biometric database and the ability to distribute cash assistance through this technology makes it almost too easy and appealing for organisations, even grassroots smaller ones, to make use of biometrics; integrating biometric technologies further into humanitarian action in Amman and Jordan.

6.3 | Beneficiaries Only

In reframing a question of consent and power (can people challenge biometric enrolment) as a question of efficiency and effectiveness (why would people challenge biometric technologies?), the UNHCR and NGO interviewees hold on to an assumption of shared understanding of benefits. There is however a subtle adverb missing: potential benefits.

Just about one sixth (126,000 individuals) are reached through the biggest cash assistance program run by UNHCR. Only one person per household (just over 32,000) can be the cash collector, meaning they are the ones who can be verified for cash assistance. This means that only a very small population of Amman's urban refugees are eligible as cash collectors to use the *eye scan* at the ATM monthly. Yet even though a small number of refugees can only make use of this technology, the Cairo Amman Bank ATM with its iris scanning technology attached to it are inevitable to run into. They are scattered around Amman wand other cities), visible for all to see, and understood by many as cash assistance collection

[24] Ibid.
[25] Ibid.

[26] Ibid.

[27] Interview NGO February 2020

points. While they are within reach, they are at the same time out of reach, as only the eligible refugees identified as vulnerable can make use of the ATM and 'the eye scan'.

Under UNHCR's own roof this meaning of biometrics, where they are merely understood in relation to their beneficial context at ATM cash machines, could not reveal itself more clearly. As I was walked around the UNHCR registration centre in Amman, we stopped at the newest biometric tool: the registration renewal booths. These blue coloured booths had the same shape as a train ticket machine that can often be found in the middle of a train station hall. The idea is that biometrically enrolled persons of concern scan their iris, check, and update their registration data when needed before their appointment i.e., a phone number, address, marital status. The aim is to empower persons of concern by giving them more 'ownership of their data' by validating their registration data (UNHCR 2020). Approximately twenty of these blue coloured booths were lined up on the flanks of the crowded waiting hall of the registration centre. However, they were standing there left unused, except for one. When I asked why, it was explained to me that a lot of people think they cannot use the booths. According to the UNCHR representative, the re-registration booths are often confused with ATM machines and the cash-assistance people receive through biometric technologies[28]. Biometric technologies appear to be so clearly linked to their benefit, to cash assistance through the ATM, that other uses for biometric technologies that do not require eligibility for usage, like the registration renewal booths, are completely misunderstood.

Biometric technologies categorise individuals by nature and this automated 'reading' of bodies is most often the basis for analysis in border governance, where migrant bodies are either denied or accepted (Whyte 2020). The underlying notion of inclusion and exclusion is always at play with biometric technologies, and in the context of this study refugee bodies are included or excluded based on their vulnerability. However, the clear link between the 'eye scan' and the ATM seemed to already categorise and separate individuals – without automation and the reading of bodies even taking place. The mere eligibility to be read, to be verified by biometric technologies, shapes how people perceive and understand biometric technologies, but also themselves. For if you are not to be biometrically read in front of the ATM, you are not considered vulnerable (enough) or vice versa. The next chapter further dives into this notion, where it is exactly this categorisation of vulnerability, verified out in the open by biometric technologies, that mediates relations.

6.4 | Conclusion chapter 6

Whereas biometric technologies can play an active role in the way the world and the self are understood, as Bilal's case in the previous chapter showed, this chapter rather starts with the opposite: the extraction

[28] Fieldnotes January 2020

of biometric data does not seem to mediate an experience at all. The big paradox concerning biometric technologies is that there is a great unawareness and lack of understanding about biometric enrolment, yet the technology, in its material form and outcome, is widely known and out in the open. I have highlighted how many of the people I spoke to did not recall the moment of biometric enrolment and biometric technologies were merely understood by their overt benefits at the ATM; to cash-assistance. I have outlined how a rather instrumental understanding of biometric technologies lives among UNHCR and WFP, where biometric technologies are perceived as a-neutral; objective instruments for more efficient, effective, and accurate registration and delivery of assistance. Yet such an instrumental approach to biometrics leads to processes of neglecting informed consent and prioritising benefits, losing sight of relations of power. Technologies reveal and rearticulate power imbalances or even existing structures that dominate or oppress vulnerable populations (Dorpenyo 2019). If anything, the deployment of biometric technologies in refugee registration in its current form rearticulate dependencies and power imbalances that have to be addressed in order to protect vulnerable people from being misused. In this chapter I started to outline how biometric technologies are almost exclusively understood in relation to their benefits: biometrics come to equal cash assistance. The next chapter will further dwell on this link between eligibility to cash assistance and biometric technologies, outlining notions of vulnerability and belonging.

Chapter 7 | Becoming Vulnerable

In this final empirical chapter, I draw a connection between vulnerability, and notions thereof, and experiences of biometric technologies. By drawing on a categorisation of vulnerability, I outline how biometrics mediate relations among refugees, and co-shape how refugees understand themselves and others as vulnerable. It is exactly through this categorisation of vulnerability, verified out in the open by biometric technologies, that biometric technologies as mediators become visible. Firstly, how one perceives the self in the world, as I will show with the biometric queue and the case of Zaid. But also whether we need to situate biometric technologies within a context in which vulnerability is an embodied experience for many of Amman's *African* refugees.

7.1 |The biometric queue

On a rainy afternoon Zaid and I walked up the hills of *Jabal Al Weibdeh*: a touristy 'artsy expat' neighbourhood in Amman. Zaid received a text from UNHCR to collect his cash assistance at a Cairo Amman Bank, but after seeing a big queue of people in front of the CAB ATM in *downtown* Amman, we decided to look for a less crowded ATM. One where we would not have to wait in the rain. Downtown is the English translation for the Arabic '*Wassad Al Balad'*, which means the middle of the country. Even though the area is geographically not the centre of the country anymore, it is the historic centre of Amman, where poor East and wealthy-West Amman meet, located in between two touristy expat hills of Jordan's hilly capital. It can therefore be viewed as standing in the middle of different worlds; one of the few places where tourists and expats meet 'locals' around restaurants, shops, the downtown market, or Amman's famous Roman ruins. Crowded 'queues' of families, men, women, children or elderly can be witnessed every month in front of CAB ATMs to collect their monthly cash assistance in this downtown area. I write queues in quotation marks, as my perception of an organised and structured queue of people, waiting patiently in a straight line with relative distance in between, fails to describe the countless group of people clustered together without a logical order in front of two cash machines.

As a single man in his mid-twenties, Zaid is an exception to the families that mainly receive UNCHR's assistance. As outlined in chapter 4, dependencies, education or health are indicators of the VAF that make families with children to be scoring high on vulnerability scores. That Zaid, a single young man without children scored relatively high on the VAF, must be seen as an exception. At the time of my fieldwork, in January 2020, UNHCR distributed five and a half million dollars to over 30,000 families (131,120 individuals) of which 29,000 are identified as Syrians (UNHCR 2020). Zaid is one of the 1,000 *other families* (3278 individuals) that receive the cash assistance monthly, ever since he seriously injured himself in one of his informal construction jobs. Every month, though he can never time it, Zaid

receives a text from UNHCR on his UNHCR provided ZAIN sim card, that informs him to collect his cash assistance at a CAB ATM.

In inviting me to witness this process, Zaid deviated from his normal routine. Normally he would go to an CAB ATM in the evening to collect his assistance. Outside of the 'rush hour' at ATMs to avoid the long queues of people, as he explained. The queues occur as many people receive a text message to collect cash-assistance around the same time. This does not only happen with UNHCR cash-assistance, but also during the first complete Covid lockdown, where WFP's emergency cash assistance created a queue in front of the Jordan Ali Bank ATM, that stretched beyond what I could count. So that afternoon, unwilling to queue in front of the ATM, Zaid decided we should walk to the CAB ATM in *Jabal Al Weibdeh,* expecting fewer people in front of the ATM in that wealthy area. He was right. In comparison to the unstructured queue of people in downtown, there was only one man standing in front of the CAB ATM.

The queues in front of ATMs facilitate the exploration of how biometric technologies are embedded within a social environment, shaping experiences of and encounters with the technology. In contrast to biometric enrolment at UNHCR, biometric authentication for cash-assistance does not happen in isolation, sheltered off in a little white trailer or a waiting hall with other refugees. It rather happens in the public space, where CAB ATMs are placed near or within shopping areas or markets, next to busy roads, and among people. It was only later that I realised that Zaid's active avoidance of queues relates to this public element of the queue. I, thus, had to situate biometric technologies and the practices it creates.

For a long time, I took Zaid's explanation to avoid queues in front of the ATM due to the waiting times for granted. It was only later that I analysed his feelings of humiliation and embarrassment related to his presence at CAB ATMs and queues. Rationalising from my own perspective, I expected this feeling to be aimed towards the *outside world,* that is the 'non-refugee bodies' as it potentially could expose his refugee status or 'vulnerable' status. This notion of visibility was partially influenced by a WFP representative I interviewed. WFP is famous for their *'Building Blocks'* program in Jordan's Zaatari refugee camp, where blockchain and biometric technologies enable refugees to "redeem their iris"[29] at WFP shops in the camp. During the interview, it was explained that WFP does not run Building Blocks in Jordanian cities where 80% of all registered refugees reside. Besides financial complications, the potential of segregating refugees from non-refugees also played an important part in this decision. What was feared, was the potential of biometrics to create separate counters and queues of people in shops where refugees would have to pay through iris-authentication machines and non-refugees would and

[29] Interview WFP January 2020

could not. People, then, might lose their dignity, according to the WFP representative[30], as they would very be very visible as refugees.

In contrast to what WFP tried to anticipate and to what I expected, visibility and feared segregation rather works in a different way. Zaid's expression was that of feeling out of place in the biometric queue, a feeling directed towards the other refugees that were also queueing in front of the ATM. Towards the biometric bodies that, like him, *can* be and are verified at the ATM – refugees labelled as vulnerable. Rather than this 'non-refugees' group, it was the smaller world of 'vulnerable people' who know Zaid is there to verify his assistance, that shape Zaid's experience and behaviour. Zaid explained the following in referring to a day when Zaid and I walked past *biometric queues* in downtown Amman:

> "*Did you see when people get the assistance? They are fighting to get the assistance from there. Yeah, they just went and stayed in a queue and just wanted to take their assistance, they want their food. And for me if I can work, why did I come here? If I can save money for myself?*[31]

The overtly and visible presence of CAB ATMs and its *eye scan,* do not only make people mainly understand biometric technologies within this context of assistance and benefits, but also in relation to vulnerability. Furthermore, through the ATMs refugees who are able to make use of this technology become visible. For Zaid, to be queuing, to be visible as a beneficiary, feels like he perhaps should not be there, like he is not worthy of receiving as there are other vulnerable people desperate to receive assistance. As already mentioned, Zaid is an exception to the rule as a single man in his mid-twenties to receive assistance. Zaid knows this too, making him express his experience of such public appearance in front of the ATMs as humiliating and shameful – indicating that people who *know the queue,* who queue with him, *know* that he should perhaps not be deemed vulnerable. That is, not vulnerable enough to queue with them for biometric authentication that leads to assistance. Thus, whereas the queue at first sight might indicate waiting time, inconvenience or eventually empty ATMs, the queue carries implicit knowledge of belonging. Who belongs to be in the queue at the ATM and who does not, or should not. This results in a practice where Zaid is trying to authenticate himself in private rather than in public; almost trying to authenticate himself in secret, whilst being 'out in the open'.

7.2 | Internalising and Verifying Norms

The notion of belonging and Zaid's feelings towards his vulnerability became very tangible when he took me to his friend Samir, who has a family and receives cash-assistance like Zaid. We were talking at Samir's kitchen table, where Samir started to address the vulnerability assessment framework,

[30] Interview WFP, January 2020

[31] Interview March 2020

claiming not to understand how it works. He explained to often see people who have nothing be rejected (*vulnerable*), whilst others who have 'more' (*less vulnerable*) receive the assistance. Sitting next to Zaid, Samir started to use Zaid as an example to make his point:

> "*For me, I always say like families are suffering a lot. My friend Zaid over here, he will not have such problems as me. I am sorry to say that. 'No problems, you know single guys' [Zaid says jokingly and smiles with hesitation]. Muhammed [just left the house] is a single man so he can manage. For me I have kids. He can live with a group of friends, they share their monthly rent, their food and stuff, day by day expenses... They can share it. But I have a family, so I have to rely only on myself*."[32]

Zaid did not defend himself when Samir started to address his situation. He joked, but he seemed rather uncomfortable. This perception on his vulnerability, or rather invulnerability, he takes with him every time he goes to the ATM, every time he might end up in a queue. What adds to this, is that Samir was not the only person I spoke to who questioned the vulnerability assessments and the refugees that received assistance. Even though Zaid often tried to explain that "*we are all vulnerable",* comparisons were often made between people who deserve assistance and people who do not. Samir for example, also described his friend Muhammed in the quote, who, as a single man is judged to be suffering less than families, even though he applied for cash assistance at UNHCR due to heart failures. Comparisons between people's vulnerability were also drawn based on the area you live in, the country where you are from, or your household. Aziz, for example, once talked about "the dark side of the moon" as we walked in the very poor side of Jabal Amman's neighbourhood[33]. He stated that when you live in Jabal Amman, "*UNHCR will never cut you off any assistance"*[34]. Indeed, Aziz's family got cut off assistance after moving to a different, wealthier, hill in Amman.

The vulnerability assessment framework (VAF) is not only used by organisations like UNHCR to establish vulnerability and reach the most vulnerable or "the intended" as once stated by a WFP interview[35]. This framework with categories becomes internalised, creating borders and categories among refugees and their understanding of each other. Biometric technologies specifically make visible who has been deemed vulnerable by institutions, and who has not, as they are situated in public spaces at ATMs. The emphasis on vulnerability assessment framework in establishing who becomes eligible for (cash) assistance leads to conceptualisations of vulnerability. Even though the VAF draws from indicators and frameworks, the framework, if being used, remains very untransparent and vague for

[32] Interview March 2020

[33] Fieldnoter February 2020

[34] Ibid.

[35] Interview WFP January 2020

many refugees. Samir already indicated how he does not understand how the framework works and sees people who deserve cash assistance, from his perspective, to be labelled as less vulnerable. He shows how his perception of 'who is vulnerable' and who is less vulnerable does not always match UNHCR's or other organisations, or at least their scores. Reducing vulnerability to indicators, scores and data, many refugees are left guessing what established vulnerability and start to anticipate on what they think increases their vulnerability. Some have 'swapped' houses, pretending to live somewhere else under worse conditions. Some hide their washing machines, as they think such luxury lowers their vulnerability score. Diet and nutrition become topics to 'lie' about, as people get asked questions about how often they can eat meat or fish.[36] People consequently try to fit to what they think is the norm.

With the VAF being so important in becoming eligible, interpreting what makes you vulnerable and what does not becomes more and more salient. As I have stressed throughout the previous chapters, biometric technologies are to be perceived as technologies of truth. Creating truths about individuals and subsequently verifying these truths. Whereas these truths mostly relate to official identities that supposedly tell *who you are* in the previous chapters, at the ATM another identity is being verified. That is, an ascribed identity that is based on normative conceptualisations of vulnerability. What is being verified is a norm. Thus, instead of verifying the truth, biometric technologies verify norms and normative conceptualisations of vulnerability. They are not technologies of truths, but rather technologies of norms.

7.3 | A deeper understanding of vulnerability

Vulnerability, as the VAF also mentions, must be defined in terms of what it is a population is vulnerable to (UNHCR 2015). However, the VAF in Jordan is solely aimed at Syrian refugees and no particular attention, no specificity, is drawn to refugees from other nationalities, or more specifically, with other skin colours. Through Zaid's experience, the role of the VAF becomes visible, as people aim to anticipate on the indicators and norms and create categories of belonging to the group of *the vulnerable*. There is however another layer to Zaid's feeling towards the biometric queue, one where he does not belong, and vulnerability. That is, for Zaid, as a Sudanese black refugee in Jordan, there is another feeling of not-belonging, one where he does not feel like he belongs in Jordan. Walking home together one day, he explained that the VAF does not understand, or is very insensitive to, the daily lived experience of racism. Perhaps the VAF score on economic vulnerability or welfare is high, but when people work it does not mean that they are integrating into society or being accepted, Zaid said. People should not lose their eligibility for resettlement or assistance for that reason as he argued.[37]

[36] Fieldnotes February 2020

[37] Fieldnotes January 2020

Experiences of racism in daily life, makes life in Jordan not only challenging for Zaid, but also leaves him feeling like he will never be part of the community – of Jordan. "Because of who we are, we will never be accepted into this society"[38], Faisal a Sudanese refugee said to me. An example of experiencing racism in daily life is 'being stopped' by the police in the streets. Sudanese and Somali refugees often have to deal with the police stopping them in the streets for no reason and ask for their documentation – for their UNHCR status-cards. Such checks happen randomly and are experienced as both denigrating yet also as 'normal'. Once, Aziz was stopped by the police as we were meeting up. There was no reason for being stopped, but he was used to it. Talking about racism and harassment, Faisal, another Sudanese refugee, said to me "it is shocking to you, because it is new to you". It is not new to them, and Samir uses a normalised, or even overly friendly response to racist comments of "Abu Sambra" (meaning man with fat ass, slave, or black man) by smiling, laughing, and making others feel uncomfortable with his response.

Such strategies to live with daily life racism, however, do not take away the experiences of *being a refugee* in Amman. Living as a refugee in Jordan is shaped very strongly by such experiences of racism for black African refugees. It is thus an embodied experience. Samir said the following when we talked about a performance some Sudanese refugees gave at a talk the day before:

> *"Yesterday when I said: 'We are strangers here,' they told me: 'No you are home.' They said: 'No, no, no, you are a part of us, and you are home'. I said: 'We are strangers, and you know we are strangers.' […] You cannot feel home. It's actually just the relationships between us and this [Jordanian] community. Our black skin.[39]"*

We are strangers. Samir describes his community, to be strangers among the Jordanian 'host-community' based on the colour of their skin. A reality where one can never step away from, as it is embodied. It is particularly an experience that is very different from other 'Arabic' refugees, like Iraqi or Syrian, because of the colour of their skin, according to Zaid and Samir. "They [referring to Syrian and Iraqi refugees] are home here actually"[40], Samir said.

These experiences of racism, of being a stranger, of not belonging because of who we are, have to be understood and taken into account in order to understand Zaid's feelings in the biometric queue. Thus, facing racism and a structural feeling of being *the other*, and also being named as such by UNHCR, to not belong is something Zaid experiences through his body in two ways: as being a young man who

[38] Interview February 2020

[39] Interview March 2020

[40] Interview March 2020

should not be labelled as vulnerable and as being a black man in a country where he does not feel like he belongs.

7.4 | Conclusion Chapter 7

In his avoidance of queues, Zaid shows how normative conceptualisations about vulnerability become contested, but also lived through his own body in front of the ATM. With Bilal's story in the previous chapter, I introduced the idea of the biometric self, in relation to an identity that is projected upon you rather than presented by you. A self that exists, and is experienced, only because of biometric technologies. The moment of biometric verification in front of the ATM is therefore another moment the biometric self is projected upon individuals, situated in public space. *Coming into being* at the ATM, biometric selves, there, are projecting norms of vulnerability upon the people who have been deemed vulnerable enough to be eligible for assistance. As the biometric self now comes into being in public at the ATM, in the queue, the self does not at all exist in isolation. It is embedded within a social environment showing how normative conceptualisations of vulnerability are interpreted and rearticulated, by creating categories of belonging: who belongs to be there to be verified, who belongs in the queue.

Zaid and the biometric queue tell two stories of belonging. Firstly, as I wrote above. But this has to be understood in the background of experiences of racism, being a stranger and not belonging in Jordanian society. Vulnerability of Jordan's *other refugees* has to be understood in relation to these experiences of racism, which shape how everyday life is experienced and biometric queues with feelings of belonging run even deeper than belonging to *the vulnerable eligible* refugee.

Chapter 8 | Concluding Discussion

The overall aim of this thesis has been to capture and understand refugees' experiences of biometric technologies in the context of refugee registration and assistance in Amman, Jordan. To do so, I approached biometric technologies as mediators between humans and their world. Technologies are not just instruments or tools, but actively co-shape and co-determine how humans understand and perceive the world, and themselves and others in that world (Verbeek 2005). They [can] therefore play a role in the way people act and feel engaged with the world. In this concluding chapter, I will discuss my findings and will answer the main research question: *How do biometric technologies mediate relations in the everyday life of refugees in Amman, Jordan?*

8.1 | Discussion

8.1.1 | Extracting and experiencing a new self

I have titled this thesis 'Becoming Biometric' to capture what biometric technologies, biometric enrolment, entails: a process of becoming. Authors like Aas (2006) or Van der Ploeg (2004) allow us to view biometric enrolment as the moment your body becomes a readable source of information (Van der Ploeg 2004). However, another version of the self also comes into being. Through Bilal, who wanted to share his story, I have outlined that biometric enrolment at UNHCR is the moment a biometric identity is created, or as I wrote, a *biometric self* is born. The biometric self is a self that is extracted from you, to be projected upon you, rather than presented by you as a socialised version of the *I* (Goffman 1959). Not fluid and multiple, but fixed and one dimensional; perceived as the 'truth' as it establishes a foundational claim of truth about 'who you are' (Pugliese 2010). The biometric self can be viewed as a digitised entity, it does exist and is experienced as such by Bilal. And most importantly, it tells a story. Not a biographical story where intentions, beliefs, values, and experiences reside (Ajana 2013), but data concerning age, movement or your identity – who you are.

The notion of a biometric self therefore resonates with what Ajana (2013) terms a recombinant identity. Biometric technologies extract bodily characteristics, designing recombinant identities "from scratch in order to imbue those profiles with a life of their own (a life that might even negate, wipe out or, at least, momentarily override the 'lived life' of the person under scrutiny, as it is often the case with asylum seekers)" (Ajana 2013, 92). As Bilal showed, his biometric self became a profile with a life of its own, overriding his 'lived life' the moment Bilal tried to make another claim to who he says he is. Therefore, the biometric selves or recombinant identities that biometric technologies bring into being, can, and do,

interfere and affect Bilal's life course, 'his story to come' (Ajana 2013,92) as he is now labelled as a fraud, lacking a refugee status and chances of resettlement or assistance.

The concept of ID-entity (Møhl 2019) is often used to describe an entity without an actual person or identity. An ID-entity is described my Møhl (2019) as a 'synthetically crafted figure' an imaginary. However, through Bilal, I have shown how while the biometric self might be digital and synthetically crafted, it does get 'a life' and becomes experienced as real by Bilal. Bilal's experience therefore allows us to understand how an intangible (academic) notion of an 'imaginary, synthetic' entity is, in fact, a very real entity attached to your body, and experienced as very real by the people who have *become biometric*.

8.1.2 | Experiencing non-normativity

I used the title and notion of *becoming biometric* to also refer to a process of awareness. Awareness of this biometric enrolment itself, let alone the extraction of a biometric self, is often lacking. I have outlined how the apparent lack of awareness and 'non-experience' of biometric technologies stand in stark contrast with an experience such as Bilal – where normative judgements like fraud lead to processes of reclaiming who you are and delay the process of receiving a refugee status. There are rather extreme differences in experiencing biometric technologies, from it being normal or being unaware of it, to Bilal experiencing an extraction of a self and having a new biometric self that overrides his own lived life and being. Drawing from Epstein (2007), she writes how biometric power 'passes through' individuals rather than be used against them. Most people do not experience biometric power, like being stopped at the border. For them, the experience is seamless, movement is not stopped, nothing happens (ibid.). However, for a few, biometric technologies are experienced, as they are used against them; "their bodies are controlled for being known" (2007, 153). In the same way, Pugliese (2010) also argues that biometric technologies only fail, or show their bias and normative conceptions, when non-normative bodies present themselves in front of biometric technological systems.

In this thesis, I have provided an example of how non-normativity is experienced by refugees as they present themselves in front of biometric technologies. For Bilal's, in chapter 5, double registration caused him to deviate from a normative biometric body that will adhere to the biometric self that will be projected upon him. And Zaid, in chapter 7, experienced biometric technologies as a non-normative 'vulnerable' refugee, feeling out of place in the biometric queue. These examples of experiencing non-normativity go beyond bodily normativity (Van der Ploeg 2004) and add to Olwig's (2020) work on biometric technologies where biometrics verify normative conceptualisations about social constructions like family. In this thesis, Zaid shows how biometric technologies verify normative conceptualisations about vulnerability, and mediate relations among refugees as notions of vulnerability become contested, rearticulated and projected upon other refugees. I will elaborate on this in paragraph 8.1.4.

8.1.3 | Understanding fraud

In this thesis, Bilal provided a counter narrative to the IND officer's notions of creation and construction of biometric identities with the intention to commit fraud. Indeed, biometric technologies in humanitarian assistance and refugee registration are rooted in combatting fraud and double registrations (The Engine Room 2018; Madianou 2019). Critiques on biometrics' deployment to combat fraud often critique a neglect of upstream fraud (on the wider level of the aid supply chain) as opposed to downstream fraud (on the level of beneficiaries) (The Engine Room and Oxfam 2018). However, through Bilal's clear description stating: "*they took my eyes",* in this thesis the notion of fraud in refugee registration is critiqued on a more fundamental level. With this I mean, that normative judgments of intentional corruption, like claiming a false identity, are insensitive to Bilal's experience of extracting identities and critical circumstances in which biometric technologies are deployed.

As biometrics are designed to establish truths about bodies, the answers it produces are fixed, static categories: yes, no, legal, illegal, fake, real (Whyte 2020). Yet, embedding biometric technologies and providing a context to the situation in which they are deployed, 'fraud', or fraudulent claims to identities, do not always have to be understood as corrupt – as intentional. Bilal showed how important it is to understand 'the narrative', to see the context in which his biometric enrolment took place, with the involvement of a smuggler, *traveling* to Europe, lacking awareness, and information about biometric enrolment at the UN refugee agency or lacking a passport in general. As technologies of truth, in verifying and identifying identities, biometric technologies can merely provide normative judgements, yet the context in which these judgements are made require a more in-depth understanding. They require narratives and biographical stories to provide nuance to normative judgments, like fraud (Ajana 2013). For example, in another context, Hobbis and Hobbis (2017) write that multiple voter registrations in Solomon Islands should not always be understood in relation to corruption (voting twice). Rather, people at times did not know in which constituency they wanted to vote, therefore registering twice. Biometric technologies thus not necessarily would offer a solution to 'combat fraud'. Going back to this thesis, what remains important, thus, is that simple one-dimensional truths, created through biometric technologies, are insufficient to tell complex stories and circumstances under which biometric identities are created.

8.1.4 | Benefits and belonging

In chapter 6 I outlined how biometric technologies were rather normalised, and the technology was mainly associated with the ATM machine, with cash assistance. Biometrics were thereby mainly understood in relation to their benefits, as intended like the UNHCR interviewee articulated. This finding stands in contrast to studies where the opposite appears to be true for biometric technologies. Latonero et. al (2019) outline how biometric technologies, fingerprinting, became to be associated with

control, law enforcement monitoring and access to the camp. In their study, Latonero and colleagues describe how a refugee camp near the Italian border, run by international aid organisations, was guarded by the police who used fingerprint sensors to identify and 'check' refugees before they could enter. Only refugees or migrants with existing biometric profiles that were not 'flagged as a problem' gained access to the camp (ibid., 24). Others were denied access or taken to become biometrically enrolled at the police station. In a similar way, Nair (2018) stresses that the lack of evident benefits or entitlements connected to biometric enrolment in India's 'Aadhaar' – India's biometric program giving millions of Indians an identification number – resulted in the program becoming contested and entwined with notions of identity, migration, belonging and criminality. Biometric enrolment became associated with petty crimes, illegality, corruption, or bribes, rather than a tool for identification or transparency (Nair 2018).

According to Nair (2018), Aadhaar became contested as it was unclear to which community Aadhaar affords 'membership' to. Therefore, in addition to power passing through individuals (Epstein 2007), clear notions of membership and belonging to a group, and having access to benefits or entitlements, are important factors in understanding how biometric technologies become experienced and understood. Taking these ideas to the findings in this thesis, I showed how there was a very clear understanding of the benefits and entitlements that biometric technologies gave people access to. Moreover, as cash assistance is only distributed among a very small group of refugees in Amman, and Jordan in general, the evident link between biometric technologies, ATMs and cash assistance caused refugees and asylum-seekers who are not eligible for cash assistance under the assumption that they have not, and cannot, interact with biometric technologies. Where, on paper, biometric technologies include all enrolled refugees and asylum-seekers in a biometric database, biometrics in practice give access to one clear purpose for one, not so clearly defined, group: assistance for the 'vulnerable'. Therefore, biometric technologies not only give you access to assistance, but also make visible your membership to the group that has been labelled as 'vulnerable' (through the VAF), to receive assistance by means of biometric verification at the ATM.

In chapter 7 I outlined how the notion of 'vulnerability' in the VAF is very unclear, vague and open for interpretation among refugees. This makes belonging to the group of vulnerable people, membership to this group as Nair (2018) would term it, open for interpretation and, indeed, contested. This leads to ideas and judgements among refugees regarding who should be eligible for vulnerability, and who should not. Who deserves cash assistance and who does not. Notions of vulnerability become rearticulated among refugees and consequently projected upon members of the group. Biometric technologies play a role in these perceptions and notions on vulnerability that live within 'the community', as they verify out in the open who has been deemed eligible for assistance – who has been deemed vulnerable. Through Zaid I have provided a new understanding of the 'biometric queue' in front of the ATM for cash assistance. An understanding where we can see how biometric technologies

make visible who has been labelled as vulnerable, while at the same time, parallel perceptions of who *should* be labelled as such and who should not exist among refugees themselves. This makes Zaid avoid the queue, as he feels out of place, and experienced non-normativity – in relation to perceptions of vulnerability. I view this finding to be a contribution to studies that aim to situate biometric technologies in their social context and daily life, like Whyte (2020) called for.

Through Zaid, his avoidance of the queue and his feeling of not belonging there, a new perspective on 'segregation' becomes visible. With this, it can be observed that the use of biometric technologies has a potential negative consequence to make visible refugee bodies from non-refugee bodies, like the WFP articulated during the interview. Yet, through Zaid it becomes clear that it is equally important to understand dynamics that occur within the community, among refugees, due to the deployment of biometric technologies and the VAF – or accountability technologies as Jacobsen and Sandvik (2015) term. Indeed, aid should be viewed as the outcome of negotiations, actions, and interactions between different actors, be it between aid-workers, agencies, institutions, donors or beneficiaries (Hillhorst and Jansen 2010). The outcome of aid might be shaped by multiple actors' interpretation of either the context, their needs, their own role or the role of others (ibid.). Yet technologies also play a role in this outcome, and in the way refugees experience how aid is delivered or who it should be delivered to. In this thesis, I have shown how biometric technologies and the VAF co-shape understanding and feelings towards who should be labelled as vulnerable and granted access to assistance.

8.1.5 | Consent and power dynamics

By stressing that technologies, as biometrics, rearticulate structures of power, Dorpenyo (2019) urges us to understand biometric technologies as mediators of relations of power and dependencies. Several findings in my thesis articulate how biometric technologies mediate such relations of power, and thereby co-shape refugees' engagement with the world. Specifically, I have outlined how UNHCR says it provides the option to ask a question about biometric enrolment. Yet this does not mean anything when people do not feel like they *can* ask a question or if their question will not matter. I have outlined how my thesis research got laughed away purely through the assumption that nobody would care about biometrics being taken. In one Somali refugee's experience, none have the luxury to do so and "UNHCR knows it". Also, in responses such as, "why should I" when questioning whether they felt like asking a question when they became biometrically enrolled, expectations and relations between institutions like UNHCR became painfully clear. These findings can also be found in the Engine Room's (2020) work, where research participants experienced informed consent protocols prior to their interviews to be funny, as they had never experienced any of such processes. Or, in another case in that study, in Nigeria, research participants had never experienced processes of informed consent and perceived standing in the queue to become biometrically enrolled for Nigeria's national ID system as giving consent. The Engine Room also captured a lacking informed consent in UNHCR's operations in Ethiopia's Hitsats

and Jewi Camp, where only one informant said to have been asked for consent in biometric data collection. The authors describe how UNHCR partner organisation said the process of registration is rushed with photographs being taken while people talked (ibid., 104). As written above, situations where standing in a queue is equated to be giving consent indicate a very low expectation of their rights.

The Engine Room (2020) expresses concerns for the very low expectations of the behaviour, responsibility and with that the trust in institutions that should be there to protect them. In this research, I express these concerns too, having encountered feelings of mistrust, low expectations of UNHCR and feeling like you must obey – like Zaid mimicking a little baby voice. Moreover, the lack of awareness or information about biometric enrolment in general I see as very concerning. My findings do not stand alone. In April 2021, a year after I conducted my fieldwork, Access Now, an organisation defending and extending the human rights of 'users' at risk, wrote a letter to the biometric company IrisGuard, objecting the lack of transparency, privacy safeguards and meaningful informed consent in the deployment of biometric technologies by UNHCR and WFP in Jordan.

> *"Forcing people with little recourse, such as refugees, to surrender private information in exchange for food is an affront to human rights standards, and an insult to human dignity. WFP and UNHCR have willingly unleashed iris scan tech upon at-risk communities, and must, at a minimum, be aware of the potential consequences of their actions." (Access Now 2021)*

UNHCR and WFP Jordan have reacted to this letter and are now welcoming Access Now to address issues of privacy and data protection around the use of iris scan technology. Through my thesis, I hope to extend these issues of privacy and data protection, to issues of power imbalances, low expectations of the UNHCR and in general, a reassessment of the deployment of truth-making technologies in the very complex circumstances refugees and asylum seekers have found, or find, themselves in.

8.2 | Conclusion

Based on two months of fieldwork in Amman, Jordan, I have conducted research on the deployment and experiences of biometric technologies in refugee registration and assistance. The experiences and stories I have captured contribute to an understanding of biometric technologies in the lives of the people who *become biometric*. I have highlighted experiences of a new biometric self, non-normativity, power imbalances and feelings of belonging. Based on my findings, I will now aim to answer the thesis's research question: 'How do biometric technologies mediate relations in the everyday life of refugees in Amman Jordan?'.

Following Verbeek (2015), technologies mediate how humans understand the world, the self and others in that world, and co-shape how humans feel engaged with the world. I argue that biometric technologies actively co-shape understandings of the self and the body, by extracting a biometric identity from the body and project this identity upon the individual every time they interact with biometric technologies. Whereas I firstly only found biometric technologies to mediate a rather seamless experience where biometric power passes through you (Epstein 2007), Bilal's own body became the battle ground for truth-claims to who he is. Only through biometric technologies, Bilal became confronted with a new *biometric self* that was extracted from him, and projected upon him. Bilal's claim to 'who he is', became contested by his biometric self – a self that he embodies because of biometric technologies. Furthermore, biometric technologies have co-shaped Bilal's engagement with the world, complicating his refugee status and potential refugee resettlement, leaving him with an asylum-seeker status for more than three years.

Zaid exemplifies another way through which biometric technologies mediate understandings of the self in the world. Understanding biometric technologies to verify norms and normative conceptualisations, I have outlined how Zaid experiences his non-normative body and *being,* as a vulnerable yet young and healthy single man, as he interacts with biometric technologies. I explained this notion by showing that biometric technologies mediate how Zaid acts upon the world, as he avoids the *biometric queue* by only withdrawing his cash assistance in the evenings or when there are no queues. Biometric technologies co-shape how Zaid experiences 'the self', as notions of vulnerability, with regards to cash assistance, become contested and renegotiated among refugees. Zaid therefore experiences his own vulnerability to be out of place, not belonging to the group of who *should* be vulnerable.

Drawing from my findings, I conclude that the deployment of biometric technologies in refugee registration and assistance, or in a 'humanitarian context', do not merely signal the emergence of human-machine relations. Rather, they also generate new relations with new *selves* that have been 'designed from scratch' – with new identities that override the actual lived lives (Ajana 2013). In other words, the use of biometric technologies mediates a completely new relation between UNHCR (in this study) and refugees and asylum-seekers, where a new biometric self has come to replace the actual lived refugee body, containing the story, the narrative, intentions and beliefs.

My objective has always been to focus on refugees' experiences with biometric technologies and allow for a deeper understanding by looking for refugees' perspectives. In doing so, I have been enabled to understand biometric technologies as technologies that lead to new understandings of the body, where the body can become the battle ground for truth-claims about who you are. Biometric technologies mediate experiences of extraction and projection, where parts of your body are *taken* – without knowing – a new self is *created and projected upon* you every time you interact with biometric technologies. Perceived as 'the truth', the new self marks the beginning of a new relationship between UNHCR and

the designed biometric self, instead of the lived body of refugees and asylum-seekers. And finally, biometric technologies are technologies that verify norms. In deviating from these norms, as Zaid and Bilal have shown in this thesis, biometric technologies co-shape how the self is understood in a world, and shapes how you feel engaged with, and act upon that world.

8.3 | Future Research

Based on my findings and my fieldwork, I would like to conclude by recommending future research areas. In the process from gathering and analysing data to writing the thesis, I had to make choices in presenting my findings. Some important themes and issues stretched beyond my research scope and question, which I would like to recommend future research to address.

In trying to understand 'daily life of refugees' I would urge a research agenda that focusses specifically on black *African* refugees in Jordan, allowing issues such as racism in refugees' life in Jordan to be further understood. Feelings of racism and discrimination in daily life play an important part in the lives of many of Amman's urban refugees, further marginalising them and making it every more pressing to highlight and capture these *embodied experiences of being a refugee in Jordan.* Taking an intersectional approach to biometric technologies, I believe, would allow future researchers to examine how biometric technologies are experienced more holistically, with more attention to specific social realities and embodied experienced. Also, in the distribution of cash assistance it would be interesting to see how gender comes to play a role through biometric technologies, as only one person per household is designated as the cash-collector.

I view it important for future research to explore cases such as Bilal, where he was not aware of his biometric enrolment and experienced his body being taken from him. I did not have the time to explore whether other refugees or asylum-seekers have been or are in a similar position as Bilal, yet it would be worth researching whether this is the case. This will, then, also contribute to new objections by organisations like Access Now, that force UNHCR and WFP to critically assess the deployment of biometric technologies and take into consideration how biometric technologies are, in fact, changing lives and experiences of the people they aim to protect. Lastly, I would recommend future research to approach the VAF from the perspective of refugees and asylum-seekers, further understanding how notions of vulnerability become rearticulated within the community and projected upon members of the community – on other refugees and asylum-seekers. I believe this will give interesting insights in the way assistance and aid modifies relations among refugees.

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