SECURING THE FUTURE? IDENTITY AND SECURITY AMONG MIGRANTS, POLICYMAKERS, AND TECH DEVELOPERS[1]

¿Asegurando el futuro? IDentidad y seguridad entre migrantes, responsables políticos y desarrolladores tecnológicos

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ABSTRACT: As an attempt to ensure national security, there has been an increased use of biometric technologies in recent years. These involve a wide range of technologically mediated practices which format and digitalize bodily attributes such as fingerprints, iris and face, for the registration and verification of the identity of individuals. While biometrics are used in a wide range of settings and assume an increasingly important regulating role in society, their use is particularly salient in the tracking of movements and identification of migrants. Building on multi-sited ethnographic fieldwork, this article seeks to explore the importance of- and desire for security and its entanglement with the production of identities among Somali migrants, European Union policy makers and tech developers. We are particularly interested in the various ways in which what we call biometric "IDentities" are negotiated, as borders have become ubiquitous and extend into the far corners of society. In the article, we argue that the relationship between security and biometric technologies is important for both Somali migrants, tech developers and policy makers albeit in very different ways. The practices emerging from such entanglements are all informed by contextual and sociocultural understandings and negotiations of security and identity along multiple lines. Additionally, we argue that security plays a prominent role despite these actors' very different positions in the biometric border world.

Palabras clave

Tecnologías biométricas
Fronteras
Seguridad
Identidad migrante
Desarrollo tecnológico

RESUMEN: En un intento por garantizar la seguridad nacional, el uso de tecnologías biométricas se ha incrementado en los últimos años. Estas involucran una amplia gama de prácticas tecnológicamente mediadas que dan formato y digitalizan atributos corporales como huellas dactilares, iris y rostro, para el registro y verificación de la identidad de las personas. Si bien la biometría se usa en una amplia gama de entornos y asume un papel regulador cada vez más importante en la sociedad, su uso es particularmente crucial en el seguimiento de los movimientos y en la identificación de migrantes. Con base en un trabajo de campo etnográfico multisituado, este artículo explora la relación entre el deseo de seguridad y la producción de identidades entre inmigrantes somalíes, responsables políticos de la Unión Europea y desarrolladores de tecnología. Estamos particularmente interesadas en las diversas formas en que se negocian lo que llamamos las «IDentidades» biométricas, dada la omnipresencia de fronteras y su extensión hasta los rincones más alejados de la sociedad. En el artículo argumentamos que la relación entre la seguridad y las tecnologías biométricas es importante tanto para migrantes somalíes como para desarrolladores de tecnología y los responsables políticos, aunque de maneras muy diferentes. Las prácticas que surgen de tales enredos están todas informadas por entendimientos contextuales y socioculturales, así como por las negociaciones de seguridad e identidad a lo largo de múltiples líneas. Argumentamos que la seguridad juega un papel destacado a pesar de las muy diferentes posiciones de estos actores en el mundo fronterizo biométrico.

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September 2008. It is 6 am when Fuuad arrives in Lampedusa, 36 hours after he boarded a boat from Libya's coast along with many other hopeful migrants searching for safe livelihoods. The Border Police that spot Fuuad and the other passengers bring them to a camp in Lampedusa, where they want to "take the European fingerprints, [because of] the Dublin convention", as Fuuad explains. He continues: "I give my fingerprints because the one who refuses will never be released. Some people go on hunger strike, they don't drink and eat, but the police takes the fingerprints by force, they don't respect them". He goes on to explain how, during the past three years, the Eritrean community has sometimes avoided having their fingerprints registered in Italy, as they have made a joint protest. Fuuad continues: "thousands [of Eritreans], they refused to get fingerprinted because they don't want to sleep on the streets [in Italy]…" At the same time, in a large city in a dark ground floor laboratory, Robert and María, two biometric tech developers, are testing fingerprint sensors for a large company. It is clear that some sensors will not capture the fingerprints if the tester´s fingers are not placed with great precision onto the sensors. This precision has to be worked on in order to make the devices more accurate.

As an attempt by the European Union (EU) to ensure national and EU security, recent years have seen an increased use of biometric technologies at border sites, involving a range of technologically mediated practices that format and digitalize bodily attributes such as fingerprints, iris and faces for identification and verification of the identity of individuals. While biometrics are used in a wide range of settings and assume an increasingly important regulating role in society, their use is particularly salient in the tracking of movements and registration/verification of migrant identities.

In the empirical vignette above, the worlds of EU policy makers, tech developers and migrants come together the moment Fuaad and his companion travellers are made to place their fingers on the biometric fingerprint sensor at the EU border. From this encounter between Fuuad and a biometric fingerprint sensor we aim to gain an understanding of the negotiations of ID/identity that underpin such encounters, and the different notions and practices of security that they are linked to. Furthermore, we pose the question: what happens if we understand all these practices as inherently entangled?

In the context of the fortification of EU borders, the way in which the Italian national border is externalised in so-called "hotspots" on the coast seems emblematic of what Tsing has coined zones of "awkward engagement" (2005: xi) produced by encounters, interactions and entanglements, and the grip of these encounters in terms of 'friction' (ibídem). Tsing is concerned with how to study global connections across multiple types of differences in power, positioning and interests. Friction, Tsing argues, is "the awkward, unequal, unstable, and creative qualities of interconnection across difference" (Tsing, 2005: 4); and as a phenomena, she argues, friction only occurs when two different entities come together, e.g. two sticks rubbing against each other produce fire. One stick alone does nothing, but two sticks generate something new. By using this image, Tsing opens the possibility that even encounters between different and unequally placed actors may "lead to new arrangements of culture and power" (Tsing, 2005: 5).

Thus, such new arrangements (understood here as new practices of security and negotiations over identity) are the main focus of this article. Inspired by Tsing, we explore such global encounters through concrete engagements rather than in already agreed upon notions of power and knowledge (2005: 267). We further conted, that when Fuuad is confronted with

the biometric sensor in the Italian Hotspot, it also becomes an encounter with biometric laboratory work and tech developers, with commercial vendors and their activities, with security agency practices and conferences, with EU policy makers and other entities involved in the facilitation of biometric security. All these actors are often understood a priori as being on different sides of a political, hierarchical, and power divide. However, if we take this as a given, we run the risk of losing sight of the particularities of the encounters and what they may produce.

1. METHODS

The article is based on ethnographic fieldwork through participant observation and interviews conducted separately by Grünenberg and Simonsen in multiple locations among different groups of interlocutors, namely Somali migrants, tech developers and policy-makers. Simonsen has followed Somali migrants since 2010 while in refugee camps in Ethiopia, in their homes in Somaliland, and en route in Turkey, Greece and Italy. For this article, the focus is placed particularly on the data produced by Simonsen during four months of fieldwork conducted in Milano, Italy during 2017/2018 at small *cafés*, parks and churches that provided food, showers and sometimes shelter to refugees, as well as the SPRAR centres (*Sistema di Protezione per Richiedenti Asilo e Refugati*) where, at the time of the fieldwork, migrants that received refugee status were allowed to stay for six months. Grünenberg's fieldwork took place, in turn, through participant observation and interviews in two European biometric laboratories, through visits to local organisations working in favour of rights of newly arrived migrants, as well as through participation in security and biometric conferences and events across Europe together with policy makers, tech developers and security agencies. The main focus was to understand how biometric technologies come into being in and outside the labs.

2. SECURITY AND ID/IDENTITY — AN EMPIRICAL MATTER

Biometric border control is based on the assumption that biometric technologies are neutral and objective, since they are based on the biological/physiological attributes of the body. As Aas (2006) argues, they are thus tied to the notion that "bodies do not lie" (Aas 2006), but are reliable and "stable, unchanging repositor[ies] of personal information" (Magnet 2011: 2). Elsewhere we have coined the distinction between IDentity and identity as two different ways of conceptualising and treating identities (Grünenberg *et al.*, 2022). We define *IDentities* as the "rudimentary identity markers contained in biometric data" (ibídem, 2022: 4) and, as such, IDentities link individual body parts to what is perceived to be "stable objective and unambiguous thing-like identities" (Aas, 2006: 147, in Grünenberg *et al.*, 2022: 2; see also Van der Ploeg, 1999). *Identity,* in turn, encompasses "the complex and variable senses of personal identities as situated, experienced, lived, temporal and far from static, always in the making through social processes of interaction" (Grünenberg *et al.*, 2022: 4).

This article shows how, on the one hand, biometric tech developers work on the accuracy of the links between body parts and particular individuals and thereby strive to establish

unequivocal Identities. All while security agencies and policy makers, in their desire to ensure national and EU security, work to make the identities of people *en route* transparent and infer their intentionalities through the biometric processing of their IDentities. On the other hand, we argue that Somali migrants attempt to make use of biometric IDentity to secure not only their livelihoods, but also to establish a valued *identity* as EU residents. However, it is precisely this correlation between biometric ID and their refugee identity that may stop them from achieving this aim and, instead, has them struggling along and potentially sleeping on the street in Italy.

The article thus seeks to explore the importance of and desire for security and its entanglement with the establishment of identities and IDentities in migration contexts, and how this constitutes the centre of concern for all these actors. We are particularly interested in the various ways in which identity and IDentities are negotiated, as borders have become ubiquitous and extend into the far corners of society. The article shows that the socio-cultural and relationally informed ways that Somali migrants practice security by negotiating identities through IDentities may not be as far away from the IDentification endeavours of policymakers and laboratory tech developers as imagined. We argue that such contextual and relational negotiations take place across our field sites. Thus, we place ourselves along the lines of the PARIS approach (Political Anthropological Research for International Sociology), which calls for the study of everyday (in)securitization processes and practices, as well as for the equal importance of studying practices of state security and human beings' sense of security (Bigo and McClusky, 2018).

Furthermore, we argue that rather than operating with a predefined notion of 'securitization' as emblematic of the security practices of the state and of individuals and communities as two totally separate domains, where one is seen as the effect of the other, it might be fruitful to investigate how this relationship is configured and played out in specific contexts (Pedersen and Holbraad, 2013; Jensen and Stepputat, 2013). Security, as Bubandt (2005) argues, can only be compared in the various local experiences and uses made of it. Hence, we are inspired by the idea of security as produced, enacted and experienced, and by security practices as diverse and undertaken differently within different communities and across the various inherently related scales of the global, the national and the local (Bubandt, 2005; Pedersen and Holbraad, 2013). Consequently, we explore the ways in which notions of security emerge empirically in our particular fields and how they are related to negotiations of ID/identity.

3. "THEN, SEPTEMBER 11th HAPPENED!"

Since the attack on the twin towers in New York on 9/11/2001, there has been an intensification in the efforts to avert potential terrorist threats and enhance national security and safety for citizens, particularly in the US, but also within the EU. In the context of the 9/11 attack, biometric technologies were widely claimed as measures that could have prevented the event through the automated face recognition of the attackers and the subsequent possibility to stop them (Gates, 2011; Lyon, 2008). Since then, biometric technologies have been promoted by vendors and the security industry as objective and fool-proof tools that can accurately pre-empt possible threats from terrorism, on the basis of identification of ill-

intentioned individuals (Olwig *et al.,* 2020; Scheel, 2019). This led the United States to sign the PATRIOT Act in 2001, which enabled massive investments in both national and global surveillance infrastructures, including biometrics (Masco, 2017). Constituted as a secure, objective and infallible technological response to the new threat scenario, in 2002, the US government encouraged the biometric registration of certain groups of immigrants already *in* the US, as well as of travellers from certain countries in the national security entry/exit registration system. In this process, biometrics "came into their own and industry profits began to soar" (Magnet, 2011: 9; Masco, 2017; Lyon, 2008).

By 2003, discussions about the implementation of biometrics at EU Schengen borders had also become a hot topic in the EU and were largely justified on the grounds of the war against terror and the fight against illegal immigration (Apap & Carrera, 2003). In 2008, the European commission sent out a communication launching the intent of developing a common policy on illegal migration, smuggling and trafficking involving the use of biometrics (ibídem). Finally in 2013, the European Commission proposed a "smart borders package" of biometric installations using 10 fingerprints. The aim was to enable a more accurate technological verification of identity/identification of different types of travellers, particularly what is known as third country nationals (non-eu citizens). This also permitted a higher and quicker 'throughput' of what is known as "bona-fide travellers", that is, travellers that are identified as legitimate according to the laws and regulations. As Scheel argues, travellers are divided into "fast moving, low-risk 'kinetic elites' who experience a form of 'borders lite', and slow-moving, high-risk 'kinetic underclasses', who have to queue repeatedly for intensified control" (Scheel, 2019: 21).

In practice, biometric automated border installations are constituted by increasingly mobile sensors in different types of systems, that are able to *capture* and register parts of the body (e.g., fingerprints, faces, irides) to identify travellers or verify their IDentities. In this way, when they work, enable the state to control the movement of people across borders. Biometric installations have been implemented in most major European airports and at some land and sea borders, exemplifying the perception of security as something that can be achieved once and for all through state sanctioned investments in what is perceived as objective, infallible technologies. The proliferating and generalized investment in and use of biometric technologies has led some scholars to announce the emergence of 'the biometric state' (see Breckenridge, 2005, 2014; Muller, 2010 in Scheel, 2019).

4.   THE EU INSTITUTIONAL FRAMEWORK

The larger field within which these technologies are embedded encompass a wealth of different actors, topics, places and spaces, such as researcher groups affiliated to universities, as well as large national and multinational private companies (industry), often with their own research/development departments. The field also includes different EU actors such as the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA), which is in charge of the operational management of large-scale IT. Additionally, the EU invests heavily in systems such as the European Asylum Dactyloscopy Database (EURODAC), which contains biometric information on asylum seekers. Today, EURODAC can cope with 7 million records (i.e. asylumseekers). The

records contain ten rolled fingerprints, digital facial images, the name of the state sending the data, the place of biometric capture, and date of the international asylum application, the person's gender and a reference number. All this information is used for the European Union's migration policy, particularly the Dublin regulation adopted in 1990. In the initial roll-out of EURODAC, access to the information was restricted to migration authorities. However, with the EURODAC Regulation No 603/2013 implemented in July 2015, national police forces and Europol can access the in system and the fingerprint/facial database as well, which enables a more comprehensive tracking of the movement of individuals. Arguments for the increased access to databases are easier prevention, detection, and investigation of crimes such as terror (Thales Group, 2022).

Another important EU actor in the context of border crossing is the European Border and Coast Guard Agency (Frontex), established in 2004 to "safeguard internal security from organised crime networks who do not respect borders" (Frontex, 2022). Today, Frontex has a giant budget of 320,198,000 euros (Frontex, 2019) and plays an important role in the implementation of biometric installations, return of refused asylum seekers, and in training/controlling national border guards in "EU Hotspots" (i.e., asylum seeker registration centres in physical locations in Greece and Italy). The hotspot approach was formulated by the European Commission in April 2015 (European Union Agency for Fundamental Rights (FRA), 2018) and provides the EU with a tool to manage non-European migration by identifying, screening and filtering all newly arrived men, women and children through pre-identification, registration, photo and biometric fingerprinting operations in both countries. Registrations are part of the Dublin regulation and have two primary goals: "to ensure quick access to protection for those in need" (Fratzke, 2015; 1), and "to prevent people from seeking asylum in more than one EU country" (Brekke & Brochmann, 2014: 147; Fratzke, 2015: 1). This also means that people who arrive at the Italian border and are acknowledged as refugees cannot seek asylum in other EU countries but will have to stay in Italy unless relocated as part of EU relocation schemes. This does not mean however, that they refrain from trying.

5.   ITALY: "OUR FINGERS ARE TESTIFYING FOR US WHILE WE ARE STILL ALIVE"

Fuuad and thousands of other hopeful individuals arriving at the shores of Italy had risked their lives for the security (they thought) a life in Europe could provide. By moving physically from Somaliland to Europe, they dreamed of "taking the passport". "Taking the passport" opened up job opportunities that were otherwise out of reach in Somaliland. Fuuad, along with the majority of other young Somali men Simonsen encountered during fieldwork, explained how Somalis with a European passport would be known by name, not only to the inhabitants of Hargeisa, the capital of Somaliland, but also to Somaliland government officials and members of parliament. Somalis with international passports would also be trusted with and encouraged to invest by the state. Hargeisa was filled with the visible proof of such investments: big hotels, fancy cars, and luxurious houses in the more affluent neighbourhoods. Possessing international ID documents and being able to invest with money earned by living and working abroad turned many Somalis of the diaspora into important players in Somaliland. It made them capable of creating an identity within and across the

clan(s) and, thus, represented a way of securing a sustainable life for themselves and their families (Simonsen, 2020a).

Somaliland was the home country of Fuuad and of many of the other young Somalis who Simonsen encountered during fieldwork. Somaliland was formerly known as Northwest Somalia and a country that is often described as the peaceful part of Somalia since its independence from the greater Somalia in 1991. In contrast to Somalia, where civil war and continuing conflicts between the government and rebel groups have remained part of everyday life, Somaliland has managed to establish a high degree of political stability by adopting their own constitution and political system with democratic elections for president and parliament (Hansen, 2006: 9; Renders *et al.*, 2010: 723). Despite the political stability, the general trust in the government and the parliament as institutions that could provide security for Simonsen's interlocutors and their families were at a minimum. Life, as experienced by Fuuad and many other young Somalis, speaks to one in which insecurities are constant. In Somaliland, according to Fuuad, there was a lack of general security mechanisms, infrastructure and jobs. Regarding the latter, he referred to the high percentage of unemployment among the young that amounts to 75 percent (IOM UN Migration, 2013). As a result, many households depended on remittances to survive, sent by relatives who migrated during times of war or instability.

The general instability following the late 1980s war between South Somalia and Somaliland, and the many years of absence of a central government have created societal political orders in Somaliland which involve diverse actors such as clan and religious leaders, and businessmen (Bradbury, 2008; see also Bellagamba and Klute, 2008: 11). This means that "Somalis have responded to state collapse by re-activating informal, mostly clan-based, security and governance mechanisms" (Menkhaus, 2007: 74). In this context, social, often kin-related, relations such as clan families are increasingly seen as a social security net for Somalis living in Somaliland. However, many families who Simonsen encountered in Somaliland lacked a source of income and could not live up to the responsibility of providing a social security net for kin-related relations. These processes spurred dreams of migratory journeys that represented an opportunity for the young Somalis to secure their future in a concrete material sense, as well as becoming socially visible, e.g., through EU identity papers. Such migratory journeys are known in Somali as *tahriib, a* notion that came into the Somali vocabulary in the 1970s, at a time when many Somalis migrated to Arab countries. However, according to a young Somali scholar who Simonsen met in Somaliland, *tahriib* was an intrinsic part of the history of humanity: "*Tahriib* starts with the history of humankind. Even the Europeans did *tahriib* because Columbus, he sailed away from Europe to America facing the dangerous sea looking for a good place". Relating this tale to the present, Fuuad argues: "The young people go to Europe, they don't fight for Al Shabab. Instead, the Somaliland people are travellers. The ones leaving for Qatar were their grandparents". In the present context then, *tahriib* also became a strategy against insecurity.

Hence, both in the past and present, movement and migration have been understood and practised as a way to secure livelihoods, social identity and status in Somaliland. But upon arrival in Italy, the implementation of the hotspot approach and the biometric registration resulted in a new form of insecurity for Somalis doing *tahriib*. Fingerprints and their registration in the EURODAC database established a newly enforced and embodied IDentity as asylum seekers for Fuuad and others alike, which made it difficult to move between different European member states. Abroon, a Somali friend in Denmark who left

through *tahriib* several years before, replied when asked about the consequences of being IDentified by biometric technologies:

> "After the technologies have been implemented, then the opportunities have decreased [...] The Quran prescribes how when you die one day and you stand in front of God, on the Day of Judgement, and you will be told whether you are going to heaven or hell, you cannot lie in front of God. Your feet, your hands, your eyes, your ears have done this and that [your body will tell your story]. What should we do now, is what many people ask themselves. Our fingers are testifying for us while we are still alive". (Simonsen, 2020b: 157)

Previously, for Simonsen´s interlocutors, the body had acted as a reliable tool to circumvent moments of enhanced insecurity in Somaliland through movement. This tool had now been turned against them. With the implementation of biometric technologies, the body had turned into a form of 'truth' of physical whereabouts —an ID tracker— that was hard to argue against. It had, as Abroon expressed, become "just as powerful as the eyes of God, which no one could argue against", and it often went against their own desires.

While some of Simonsen´s interlocutors gave their fingerprints willingly, happy to be alive and having reached European soil, many of them protested against biometric registration and thus risked being punished by the police through physical assaults or imprisonment. Such experiences were tolerated if it meant that they avoided biometric registration and were therefore not permanently tied to Italy. It was, therefore, not the fingerprinting or registration itself that was experienced as producing insecurity. Instead, it was the ways in which the fingerprints were attached to and might set in motion the Dublin Regulation of return to the first country of asylum, and which would 'fix' Fuaad and the others in time and space. Fuuad described this sensation as follows: "The Dublin regulation is the enemy for humanity [...] the one who has the fingerprint is like a hostage, but he does not know who he is arrested by". Fuuad was allowed to travel with the documents obtained as a refugee in Italy. The understanding of "being a hostage" referred to the experience of being stuck in the kind of insecurity, which the Italian affiliation provided. Even when officially recognized as a refugee, there was often not enough space in the shelters to accommodate everyone and many ended up on the streets. Furthermore, should a space in a shelter be provided, this was only for six months, and many Somalis were back on the streets by then. "Being a hostage" also referred to the fact that, since Fuaad was not an EU citizen, his options of finding and getting a job outside of Italy were very limited.

Fuuad had experienced times where he had to live on the streets and survive by eating free food provided by churches scattered around Milan despite being acknowledged as a refugee in Italy. He described the situation as follows:

> "When I took the documents in Italy, I did not get anything. I slept on the streets for twenty days and then I got food from the church [...] Italy took only the fingerprint. The EU did give something [referring to the financial support from EU to Italy], but it is nothing. They don't give a house, job, nothing, not even a building or some training. You come from the boats and then directly to the streets".

Experiences such as unemployment or lack of educational possibilities were broadly similar to the insecurities experienced in Somaliland. Upon arrival in Italy, however, adding to these insecurities were homelessness, the fear of violence and abuse on the streets from Italians

and other migrants, and of 'becoming crazy', referring to the Somalis who had given up on ever making a sustainable living for themselves, and had become mentally ill. Besides, the future prospects of acquiring a passport looked even slimmer, since this required a permanent address, steady income etc. Fearing all these scenarios, one of the first questions Somalis would ask each other when travelling from country to country while attempting to stay as invisible as possible was: "Did you get your fingers taken?" Getting their fingers 'taken' became emblematic of the stuckness in time and space produced by biometric registration. In this way, the Italian context stood out, together with countries such as Spain and Greece, as the Somalis would have to fight for their daily survival in contrast to people IDentified as refugees in Northern Europe, who at the time did not face the same types of insecurity if accepted as refugees (Simonsen, 2020a).

Hence, despite Italy's many years of European membership, the Somali women and men who Simonsen followed on their hazardous journeys declared that "Italy is not Europe". They had risked their lives to reach European shores, but not the Europe, which Italy represented. Their hope was that the European Union, considered to have a strong economy, could provide security for them and their families back in Somaliland, and ensure the establishment of their own family. Europe, in other words, was considered to be a substitute to the traditional social security net of the greater family network in Somaliland, which had failed them. However, as Fuuad pointed out in the opening vignette, many people who arrived at the shores of Italy became aware that also here, the state had failed not only them, but also the Italians. As a result, dreams of providing a secure future as successful heads of family by acquiring an IDentity through European documents, a worthy fulfilled life and a recognized social identity were undermined, and the notion inherent in *tahriib* that movement of the body across space was a security-producing practice had become problematic.

6.   NEGOTIATING IDENTITY

Though biometric borders —in this case, the registration of fingerprints in Italy— made it difficult for Somalis such as Fuuad to stay mobile, they kept looking for ways to secure themselves. Some tried to physically damage the parts of their bodies, which could identify them to the European authorities. For instance, the case of a young Somali man who Simonsen encountered during fieldwork who had burned the tip of his fingers with an iron, so that his fingerprints could not be recognized in EURODAC. To his regret, however, he was imprisoned for six months until his fingertips had healed. His fingertips were then scanned again and there was a positive match from his registration, so he was returned to Italy.

Others simply took alternative and clandestine routes that avoided biometric installations or borrowed passports from other Somalis with seemingly similar facial features. Fuuad used a different strategy. He tried his luck by travelling to another European country and seeking asylum there. Although he was fully aware of the Dublin Regulation, he hoped that the system would fail to IDentify him, or that the country would feel sympathy for him. Fuuad's fingerprints were found in EURODAC and he was deported back to Italy. Just as he arrived in Italy, the meeting between the state (in the form of a fingerprint sensor) and Fuuad produced a new form of insecurity —one where the state of Italy, in collaboration with the rest of the EU through international collaboration and databases were constantly catching up with him—.

It was no longer enough to have crossed borders negotiating his IDentity *en route* through the use of other people's legal documents (Simonsen, 2017). Nonetheless, and in spite of the biometric technologies and the restrictions they implied, four years later Fuuad is living legally in another EU country and working for a major international company. Furthermore, although Fuuad's situation was difficult after his biometric registration in the Italian hot spot, he was still able to use the position as a migrant abroad to negotiate his visibility and social identity in Somaliland (Simonsen, 2020).

Seen from the perspective of European authorities, Fuuad's continuous attempts to stay mobile as a security producing strategy were also what made him a potential security threat. For most Western countries, greater Somalia has become the emblem of a failed state and a country of war, hunger, piracy and terrorists due to its historical and current condition. Somalia is often portrayed by the media and policy makers as a regional security threat, with ongoing fighting between the government and so called terrorist groups such as Al-Shabaab (Besteman, 2017). As Besteman argues, this complicated context also means that many Somalis are automatically identified as potential security threats in Europe and the US, thus instigating particular security measures (Besteman, 2017). This becomes clear in the following section, where Grünenberg attends a border security conference in Italy. At this conference organised by a private security actor with the participation of EU and national policymakers, government security officials, experts and representatives from the biometric industry, biometric technologies were conceived of as security producing tools, and were tied to the political and security apparatus efforts to find 'waterproof' security solutions and ways of 'foretelling' the future through a particular way of identifying bodies.

7.   SECURING BORDERS — PREDICTING FUTURES THROUGH THE BODY

A border security conference in Italy

The border security conference takes place in a big hotel in the centre of Rome. The presentations are manifold and varied, ranging from heroic accounts and pictures of military engagements in border zones with the sound of grandiose music in the background, to research presentations of different ways of acquiring knowledge about travellers (e.g., through "biometric corridors"). In a presentation by the OBIM (Office of Biometric Identity Management), part of the US homeland security, biometrics were configured as enabling safe, secure, and resilient homelands. The mission of OBIM was presented as: "...[to] advance informed decision making by producing accurate, timely and high assurance biometric identity information and analysis [...] thereby producing a homeland that is safe". The example given to illustrate the OBIM mission and its success was exactly that of a Somali man seeking asylum in Canada, whose fingerprints were taken at the Canadian border, passed on to OBIM and run through the US IDENT database[2]. In this search, the Somali man

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[2]   IDENT is an acronym for the Automated Biometric Identification System, the largest automated biometric identification system in the U.S. government. It is operated and maintained by OBIM (Office of Biometric Identity Management), which is part of Homeland Security and contains about 220 million fingerprints. It is currently about to be replaced by the HART system (Homeland Advanced Recognition Technology), which also contains faces, DNA, as well as information from multiple other sources.

came out as a "hit" or what is known as a "KST" (Known or Suspected Terrorist), because he had tried to enter the US without valid documents three years earlier. The fingerprints and photos in the OBIM database were then correlated with data from the FBI terrorist screening centre, which also found a match and returned the information to the Canadian authorities. In the OBIM presentation then, fingerprint matching not only denoted the Somali man's IDentity, but also his potential identity as a terrorist. Through a form of "time and space compression" (Appel, Anand and Gupta, 2018: 23) that allowed for the instant exploration of this Somali man's whereabouts over time and across space, a potential future source of insecurity had —according to the OBIM officials— been pre-empted. On the one hand, the example points to the power that imaginaries of potential futures might have in the present. On the other hand, it shows how biometric technologies supposedly reinforce the state's ability to determine a person's identity based on a technologically produced IDentity and, thus, conflate the two "even though this may not correspond to individuals' understandings of themselves" (Grünenberg *et al.*, 2020a: 2).

At this conference, biometric technologies were presented by industry representatives, as well as government security officials, as both instruments to contain uncontrolled migration and potential terror activities (two phenomena often conflated), as well as end the insecurity attached to unknown bodies on the move, whether across Schengen or US borders. Knowledge about any-body could, seen from this perspective, be carved out by correlating biometric and other types of data. In the context of this border security conference, security was configured as coterminous with the control of not just actual, but also potentially unlawful migrating and terrorist bodies. Louise Amoore calls this focus on pre-emption "the politics of possibility", which she defines as: "the mapping and enactment of possible futures in the present —independently of their probabilistic likeliness"—, i.e, a governing of "emergent, uncertain, possible futures" (Amoore, 2013: 5).

According to her, it is the particular algorithmic framing of time and space at play in this pre-emptive security strategy that makes the possible future seem actionable (Amoore, 2013: 61) and, thus, possible to secure. Previous risk models operated on the basis of linear time conceptions that used data from the past to calculate in the present and make predictive models of the future, based on surveys and statistical inferences. In contrast, risk —in what Amoore (2013: 63) calls "its derivative form"— operates mainly on the basis of projections produced from correlated fragments of data, drawn from isolated elements across different types of datasets (such as: card transactions, insurance categories, school registrations, employment, etc.), which are then assembled to appear as a whole (Amoore, 2013; see also Aradau and Blanke, 2017). In the case of the Somali man presented above, the lack of a proper visa three years earlier was correlated with a seemingly routine fingerprint capture at the Canadian border that, in turn, was compared to other information in an FBI database.

What became clear during my fieldwork, however, was that what security meant, and how to achieve it, was a controversial matter that was continuously negotiated even at such conferences (see also Grünenberg, 2020b). Two positions were particularly marked: on the one hand, positions advocating for biometric technologies as objective, secure and accurate tools of identification that could be used to manage migration flows and secure European borders and societies. And on the other, those concerned about what they saw as a 'tech hype' and the erroneous assumption that technologies represent a quick-fix solution that ignores the complexities of the systems, their potential errors and glitches and, thereby, also their potential for mis-identification.

This negotiation of security, borders and technological border systems did not only take place in relation to broader understandings of security at conferences. Every time a new biometric system is invented, biometric tech developers in their laboratories have to clarify the optimal balance between the security it provides in identifying and filtering out whoever is defined as an illegitimate traveller, and the convenience the system should produce for those identified as legitimate users of the system. It is ultimately up to the buyers of the biometric system to set this threshold. For example, at the border, the system threshold is the subject of negotiations between general security actors, security staff on the ground and commercial actors interested in airport sale and in keeping the flow of travellers as smooth as possible, as Møhl (2019) has shown.

The types of biometric modalities that are actually developed and refined in biometric laboratories are deeply entangled with conferences such as these. The scientific work in biometric laboratories was part of a field where competition over market share, contacts and funding was at times fierce and trading secrets abounded. Tech developers, industry and policy-makers were also deeply entangled in reciprocal yet unstable, contingent and sometimes conflictive relations. In other words, biometric security was negotiated across a large assemblage of actors (see Olwig, Grünenberg, Møhl & Simonsen, 2020). In the biometric laboratories, tech developers were acutely aware of the potential insecurities of the technologies themselves. The repetitive trial and error processes involved in their development, and the complexity of running flawlessly the many components of the systems were at the forefront of intensive laboratory efforts to produce security and convenience. So let us now turn from the border security conference to a biometric lab in Spain.

8.   THE LABORATORY

The lab in Spain was a rather large, densely computer-and-tech furnished room affiliated to a university. The lab was the workplace of 12 young tech developers, located mostly in front of their computer screens, two slightly older researchers working on funding proposals and evaluations, and Jorge, the head of the lab. This lab was partially funded by money from collaborative EU and industry partnership projects, as well as from evaluations undertaken for different types of industrial partners.

As in other biometric laboratories, tech developers work on the potential and actual use of different body attributes as individual identifiers and enable their automated registration and recognition through the production of digital maps/templates. The work then mainly revolves around finding and processing physiological and/or behavioural patterns that are considered unique to an individual and can be used to establish what is perceived as an unequivocal IDentity. So, tech developers such as Robert and Maria spend their time exploring and mapping the body's nooks and crannies in order to find unique bodily IDentifiers, thus marking the reason why Grünenberg has elsewhere named these biometric tech developers and researchers 'body cartographers' (see Grünenberg, 2020b). However, none of them necessarily believe that they are able to find *the absolute bodily identifier*. Time in the labs is spent on repeated cycles of trial and error, with no expectation of reaching a 100 percent accuracy. In fact, part of the challenge (and fun) for the tech developers is

the inherent uncertainty as to whether things would even work in the lab. As Robert told Grünenberg: "[In biometrics] you can never reach one hundred percent accuracy, that's what makes it interesting!" Whereas the inherent uncertainty, experimentation and processes of trial and error made the job interesting, it also made the further development and testing of biometric technologies ubiquitous (Grünenberg, 2020a).

In this specific lab the work focused on 'biometric modalities' such as fingerprints-, signature-, gait-, voice-, heartbeat-, wrist-vein- and, to a smaller extent, face recognition. The work is shaped by research interests and practices that often draw on sci-fi imaginaries (Grünenberg 2021, 2022). But it is also designed by particular funding interests, research and commercial alliances (often forged at conferences or other biometric events), and potential clients' desires. Another part of this labour was to imagine how such technologies would work in what the tech developers called "the wild", referring to everything outside the controlled environment of the laboratory (see Grünenberg, 2020a).

One way of imagining the implementation in "the wild" was by taking on evaluation assignments, like testing sensors for biometric companies. Usually students would be invited to test the accuracy of sensors under various imagined conditions. This effort also entailed training the students to place their fingers the right way, with the precise amount of pressure and at the right angle, in order for the sensors to register an adequate image and thereby establish an IDentity, which would later be compared to a registered template. For some students, this process implied several frustrated attempts before a proper fingerprint was achieved, testifying to the inherently relational and fragile achievement of sensor accuracy. In spite of the insecurities, errors or weaknesses found during tests and research processes that are discussed in the biometric research literature, such problems generally seem to disappear when biometric technologies are marketed, especially by large companies to governments and other agencies for the purposes of controlling border crossings or other types of access.

As we saw in the introductory vignette, fingerprints are sometimes taken by force, or by the threat of the use of force, like in the case of Fuuad's travel companions. In the context of Hotspots, fingers were often placed on the sensors in random ways, making it impossible for the systems to register and compare them. These types of imagined and real situations of malfunctioning made it paramount for the biometric labs to continuously develop and test new and better systems and sensors, which could accommodate the reality of badly/ imprecisely positioned fingers, or even physically severed ones. As Bourne, Johnson and Lisle (2015) point out, it is in this "looping back of assumptions" about how biometric sensors work "in the wild", and the integration of this knowledge in the ongoing development of the technologies, that the tech developers often inadvertently become part of what we have elsewhere called the European 'border world' (Bourne, Johnson and Lisle, 2015: 309; Olwig *et al.,* 2020):

> "[...] the sovereign decisions of bordering are made not only by border guards (using devices) at the moment of border crossing, but they are also disaggregated across time and space such that the multiple decisions made by scientists and engineers in their laboratories are also (and necessarily) constitutive of the 'sovereign decision' of the border". (Bourne, Johnson and Lisle, 2015: 309)

Thus, researchers and tech developers work to ensure that the laboratory part of the assemblage of fingers, sensors, algorithms, software programs, hardware systems, designers,

engineers, as well as ultimately particular border sites, border guards or other official users and a host of other elements, work as intended. On the one hand, this work was performed in order to develop more secure modalities, better working sensors and better quality digital prints or even prints at all in 'the wild'. But on the other hand, the continuous processes of development also served to sustain funding for biometrics, for the labs, and ultimately for tech developer livelihoods (Grünenberg, 2020b). Hence, *if* the other elements in the network work as planned, then laboratory work should enable the seamless recognition or rejection of bodies wanting access, be it migrants, such as Fuaad, wanting to cross a border or blue-collar workers wanting access to their office space. In these situations, where the maps and templates produced in the laboratories are potentially seen to speak the truth of living bodies, the distance between biometric ID and the identity of border crossing individuals collapses. In this context, biometric technologies and the body maps and templates that served as identifiers were also turned into objective and waterproof tools of security that regulated mobility across nation states. It was in these particular instances of testing and developing that migrants, hotspot officials, Frontex staff, biometric vendors, policymakers, tech developers and biometric laboratories became entangled across time-space and scales and affected one another.

9. CONCLUSION — AWKWARD ENGAGEMENTS

The conception of Somali migrants, policymakers, and biometric tech developers as part of the same assemblage, instead of as opposing entities placed on different scales in the biometric landscape, has enabled us to see how these very different actors conceive of and negotiate IDentities in the attempt to achieve security, though in contrasting ways. For the Somalis, 'getting the passport' is intricately related to biometric registration and to passports that carry fingerprints and facial images that secure the right to stay in Europe; to travel home and visit family and friends and to potentially provide economic security; and not least, the chance to negotiate socio-cultural positions in Somaliland. For policymakers, it is a question of how to safeguard EU borders and societies against what is defined as unwanted and unknown threats; to protect the borders by making bodies on the move transparent and available for scrutiny through biometric identification and the production of IDentities. For the tech developers, security is unfolded by inventing new biometric modalities that provide supposedly more accurate and more secure sources of IDentification, as well as by refining the accuracy between already existing combination of softwares, sensors and the bodies they are supposed to represent.

This lab work feeds into the migration policies of increased border control and serves to secure the survival of not only laboratories in a very competitive funding environment, but also the livelihood of individual tech developers. What is in stark contrast, as this article has shown, is the purpose of IDentification, where it takes place geographically (whether in a hotspot in Italy or in northern Europe) and which forms of security such IDentification practices enable for whom. In this article, we have tried to show how such practices are informed by contextual and sociocultural understandings and negotiations of security along multiple lines, and how despite their very different positions in the biometric border world, security plays a prominent role for everyone.

We have furthermore argued that new practices continuously emerge and feed into each other as an outcome of the awkward engagements taking place every single day at European borders sites and across our field sites. Migrants continue to challenge and/or circumvent state practices of IDentification at border sites (such as the Dublin Regulation, the hotspot approach and EURODAC) by finding new ways of arriving and by conducting secondary migration within Europe. Some hide in trucks while others attempt to negotiate their current positions by, for instance, storming borders collectively in large numbers, like the 2000 women and men who at the end of June 2022 stormed the border fences around Melilla, the small independent Spanish enclave in Morocco. As a consequence of such major events, as well as of small everyday resistances to fingerprint registration like Fuuad's, the EU and international collaborating states such as Morocco and Libya implement the use of new biometric technologies or technologies such as drones that patrol the borders at land and at sea, which are all developed in tech laboratories around the world.

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