

Migration Infrastructures

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INTRODUCTION

In this chapter, I chart the explanatory power of the concept of migration infrastructures. My focus is specifically on what can be called 'migration crisis infrastructures': contemporary tech-driven interventions developed to disrupt forced-migration crisis situations across the world, and I draw attention to the historical lineages of these interventions. In recent years, we have witnessed a proliferation of digital migration management, border control and humanitarianism initiatives that seek to contain and solve situations that have been constructed as 'crises' resulting from human mobility (Menjívar et al., 2019). This can be seen most poignantly, for example, with the Syrian Civil War, ongoing since 2011, which peaked with a 'crisis' response to the arrival of around one million Syrians in Europe in 2015, but also in 'hidden crisis' situations such as the three million displaced Venezuelans (UNHCR, 2018a) and over 700,000 Rohingya who have fled from Rakhine state in Myanmar and entered Bangladesh (OCHA, 2018), as well as 'forgotten'

crisis situations such as the 2.4 million people who were forced to flee from South Sudan (UNHCR, 2018b). Crisis situations feature a 'shared perception' of unprecedented threat, 'a sense of urgency', a 'high degree of uncertainty', which together demand strong forms of 'crisis-management' (Boin et al., 2018: 23–4). Since a crisis response to specific forms of migration is becoming the 'new norm' (Menjívar et al., 2019: 1), it is important to explore 'the kinds of work the term "crisis" is or is not doing', (Roitman, 2013: 3) because crisis situations suspend common practice and create a state of exception.

Forced-migration crises become 'infrastructural events' (Dijstelbloem, in this *Handbook*) that collapse imperatives of humanitarianism and securitization (Chouliaraki and Georgiou, in this *Handbook*). Particular types of political/bureaucratic infrastructures such as nameand address-registration systems have always steered, controlled and contained subjects (Scott, 1998). However, migration crisis infrastructures move beyond established forms of identifying, containing, controlling and selecting people. The demand for swift managerial action in order to protect forced migrants' basic rights, provide them with basic needs and to manage their mobility have paved the way for a host of technological innovations developed through public-private partnerships. Forced-migration crises are increasingly combatted with efficiency driven technological solutions, which commonly are unorthodox tech-based experimentations (Madianou, 2019). In Western, rational responses to global challenges, Sandra Harding (2011) recognizes a common lack of recognition of innovators' own locations, implications and assumptions in progress. Recent migration crises present a crucial conjuncture to critically assess the 'political desirability of modern Western sciences and technologies' (Harding, 2011: 4). Crisis situations present hardship for some population segments, while they also commonly present new opportunities for others: most notably in the cases below, crises become a (business) opportunity to test new technologies, tools and services on groups of isolated subjects who cannot but oblige to take part in trialling new technologies.

In this chapter, I develop the concept of migration infrastructure as a critical tool to account for the unjust ways in which forced migration is managed. For many forced migrants, migration crisis infrastructures result in forms of structural violence, which I understand to be 'normalized and accepted as part of the "status quo", but that are experienced as injustice and brutality at particular intersections of race, ethnicity, class, nationality, gender, and age' (Anglin, 1998: 145-6). Alongside defining the infrastructural approach, I trace the lingering traces of colonial and Holocaust technologies in contemporary unjust migrant infrastructures. In my argument, I take cues from postcolonial science and technology studies (Anderson, 2009; Harding, 2011): a critical framework oriented towards scrutinizing whose interests are served in innovation and whose are ignored. The analytic lens serves a drawing of attention to how top-down forms of governmentality and control are mutually shaped through bottom-up

lived experiences of forced migrants and acts of contestation.

SETTING THE TERMS

An infrastructural approach addresses migration as a constellation of non-migrants and migrants and of humans and non-human actors. Infrastructure scholarship emerged primarily from policy and the field of engineering, and gained further interdisciplinary attention after it was taken up by scholars working at the crossroads of actor-network theory inspired science and technology studies, urban studies and cultural geography as well as anthropology (Appadurai, 2015). From infrastructure studies on sanitation, electricity, transportation, housing and communication, we learn that infrastructures are commonly black-boxed and invisible, functioning in the background as stable, taken-for-granted processes and standard operating procedures. Infrastructures are furthermore not singular, fixed or stable entities that can be simply isolated or demarcated. They are embedded and co-constitutive of social, cultural, economic and political relations; enabling and disabling certain kinds of action (Graham and McFarlane, 2015). Infrastructures combine an aesthetic 'poetics' with a commonly hierarchical 'politics' in their operating as an 'architecture of circulation', and studying this architecture demands a 'systems analysis' that addresses the multidirectional relationalities between different actors and entities involved (Larkin, 2013: 328). As a corrective to the common over-emphasis on infrastructures in purely physical terms, AbdouMaliq Simone (2004) draws on her work on the social urbanization of marginalized Johannesburg residents, to propose the notion of 'people as infrastructure' (2004: 407). Similarly, Ash Amin (2014) in his focus on land occupation and informal settlements in Belo Horizonte, Brazil, demonstrates how 'lively infrastructures' are 'implicated in not only the making and unmaking of individual lives, but also in the experience of community, solidarity and struggle for recognition' (2014: 137). A 'relational infrastructure' approach accounts for the co-constitutive relations of top-down and bottom-up action 'through which political imaginations and claims are exerted' (Simone, 2015: 18). In order for infrastructures to function, they demand constant input and validation from a variety of actors involved. 'Infrastructuring' is therefore commonly studied through ethnographic approaches (Karasti and Blomberg, 2017), in a holistic attempt 'to study the technologies and techniques through which the visible and invisible are separated, connected and managed' (Appadurai, 2015: xiii).

Narrowing down from infrastructures to the specific workings of migration infrastructures in particular, we can take cues from mobility scholars who argue that mobility cannot 'be described without attention to the necessary spatial, infrastructural moorings that configure and enable mobilities' (Hannam et al., 2006: 3). Scholarship inspired by the mobility turn has primarily focused on the socio-technical arrangements of transportation infrastructures including roads, logistics and sanitation, among others (Lin et al., 2017). As a result, initial mobility research on the theme prioritized 'global flows' of objects and people, thereby blurring 'categories of migrancy' (Glick-Schiller and Salazar, 2013: 183), and took the WEIRD world (White, Educated, Industrialized, Rich and [more or less] Democratic) as a template and benchmark, which risks a continued 'EurAm-centrism' (Morley, 2017: 4).

Aside from attention to 'infrastructuring' among mobility scholars, the notion of 'migration infrastructure' was developed by a group of scholars who were interested in opening 'the black box of migration' mostly on the basis of research on labour migration in Asia and South-East Asia (Lindquist et al., 2012: 7; see also Lin et al., 2017; Xiang and Lindquist, 2014). This collective sought to move migration research beyond the fixation on migrants in isolation from broader societal transformations. To do so, Xiang and Lindquist for example draw attention to the workings of 'infrastructural involution', which they describe as the interrelated dimensions of migration infrastructures which 'make it self-perpetuating and self-serving, and impedes rather than enhances people's migratory capability' (2014: 122). Xiang and Lindquist's distinguishing between five infrastructural 'logics of operation': 'commercial', 'regulatory', 'technological', 'humanitarian' and 'social' dimensions (2014: 124), offers means of operationalizing an infrastructural approach in studying migration. These dimensions are respectively co-shaped by various actors including commercial intermediaries, state apparatuses, transportation systems, NGO-ization and migrant networks. On another side of the migration-studies spectrum, Bruno Meeus, Bas van Heur and Karel Arnaut (2019) take a multi-scale approach to urban 'arrival infrastructures' (2019: 1), Silvan Pollozek and Jan Hendrik Passoth focus on the 'logistics' of European migration infrastructuring to study the 'registration and identification at Moira hotspot' (2019: 1) of arrivals, while William Walters (2018) shows migration infrastructure does not chiefly concern mechanisms that curtail mobility: forced migrants whose claims are denied face a 'deportation infrastructure', which as an 'infrastructure of forced mobility' increasingly includes charter flights as a means of expulsion (2018: 2797). Additional ways to develop a historically and spatially informed infrastructural approach are offered by Suzanne Hall, Julia King and Robin Finlay (2017). On the basis of their indepth street-level fieldwork with migrant city dwellers and shop owners in Birmingham, UK, they call for 'a postcolonial analysis of infrastructure that relates properties of historic depth (power), socio-spatial texture (materiality) and locality (place)' (2017: 1311). From the discussion of infrastructures and migrant infrastructures above, I take cues to become attentive to how migration crisis infrastructures must be understood: (1) from a multi-actor and multi-scalar (ethnographic) perspective, (2) as reflective and constitutive of power relations and (3) as distinctly historically and geographically situated.

MIGRATION CRISIS INFRASTRUCTURES

In this section, migration crisis infrastructures are scrutinized as 'border spectacles' (Casas-Cortes et al., 2015: 68), which beneath their exceptionality reify unequal regimes of movement and stasis. In the wake of recent Syrian, Rohingya, South-Sudanese and Venezuelan 'refugee crises' as well as the Central American 'migrant caravans', we have witnessed a proliferation of experimental advanced technology-based infrastructuring initiatives. Border regimes are ever changing reflecting the 'mutability of infrastructure' (Walters, 2018: 2796) - and include digitized border control and surveillance through drones, sensors and robots, and machinebased migration management through datafication of biometrical information including 'fingerprints, iris recognition, DNA and facial recognition for identity management' as well as 'voice verification, vein pattern recognition', artificial intelligence, digital deportability and predictive analytics on the basis of smart phone and social media app user data (Kingston, 2018: 38).

For example, at border-crossing points in Greece, Hungary and Latvia, tech companies, researchers and officials collaborate in trialling an 'intelligent portable control system project' (iBorderCtrl, 2018) to interrogate travellers through a combination of technologies including 'biometric verification, automated deception detection, document authentication and risk assessment' (iBorderCtrl, 2018). Similarly, the Customs and Border Protection (CBP) in the United States is piloting a facial recognition based 'Biometric Entry/Exit Program' in eight major international US airports (CBP, 2018). In addition, the 'Vehicle Face System (or VFS)', another experimental facial recognition system designed for the border, will be tested at the Anzaldua Port of Entry in Southern Texas, in search of overcoming the technological obstacle of recognizing faces through the windshield of a car (Brandom, 2018).

In the Middle East, the United Nations High Commissioner for Refugees (UNHCR) has been cooperating with the corporation IrisGuard since 2013 to develop 'Eyehood refugees' (Kingston, 2018). Ever since, 2.4 million mostly Syrian refugees have had their irises recorded in Jordan and neighbouring countries. In Jordan, scanning takes place in cities and refugee camps including Irbid, Mafrak, al-Asraq, Zaatari and mobile stations outside of urban areas. Imad Malhas (cited in Nedden and Dongus, 2018: n.p.), the founder of the corporation that won the contract with UNHCR, argues this is the best way to efficiently manage aid for refugees and to counter fraud. In contrast with fingerprints, which are fully developed around age 13, he is convinced of the advantages of biometric identification, 'A person's iris does not change from age three until death... Anyone who has been scanned can be perfectly identified at the age of 100 on the basis of their biometric characteristics'. Besides registering refugees, 'EyePay' has recently been rolled out, and both inside camps as well as in cities, refugees are increasingly required to pay for supermarket goods from their €130 personal budget, which UNHCR allocates monthly through having their irises scanned.

In the words of Malhas:

When refugees flee war, they become citizens of a country called UNHCR until they return to their country or are resettled. Does this country UNHCR not have the right to own the data of its citizens? (cited in Nedden and Dongus, 2018, n.p.)

Speaking on behalf of the UNHCR, Karl Steinacker (2018) explains the rationale for this migration infrastructure as follows:

Biometric systems have become international standard. It's the safest, most efficient, and least expensive method – not unimportant for an agency funded by the tax payers and individual donations – to solve an important problem. (n.p.)

At first glance, such infrastructures can be applauded for efficiently facilitating recognition and identification needed to ensure 'fair, equitable distribution of humanitarian assistance' (Kingston, 2018: 38-9) to refugees. This is also the discourse presented by humanitarian organizations, quoting refugees who appreciate this form of recognition: 'I can be someone now. I am registered globally with the UN and you'll always know who I am', said 43-year-old Congolese refugee Olivier Mzaliwa, registered through biometrics in Malawi's Dzaleka refugee camp (UNCHR DPSM, n.d.). However, behind the success stories of technological innovation, alternative experiences, conflicts and violence can be uncovered. First, when individual iris scans are required to access aid and assistance, or pay for supermarket goods, refugees' mechanisms for coping with refugeecamp life can be undermined. For example, heads of households busy attending to younger children, recovering from illness or helping elders cannot send their teenage children or relatives to claim rations (Kingston, 2018). Refugees have no choice but to abide by the requirements to hand over their biometrics and have their irises scanned. This non-voluntary collection of biometric data would never pass the requirements of the recently installed European General Data Protection regulation, which demands informed consent and a legal basis for all forms of data collection, storage and analysis. The right of refugees to own and restrict the use of their data is commonly suspended.

The deployment in Jordan is just one instance of UNCHR's Biometric Identity Management System (BIMS), which originated in 2013 in Malawi. BIMS, co-developed by the global tech and service provider Accenture, is currently used in over 200 locations in 43 countries. From the '22.5 million refugees believed to be spread across the world, almost 20 per cent are registered. That's 4.4 million adults and children over the age of five' (Thomas, 2018, n.p.). UNHCR plans to have BIMS operating in 75 countries by 2020; as a result it will be one of the largest international biometric programmes in the world (ibid.). Infrastructuring happens through a continuous updating of data. UNHCR spokesperson Cécile Pouilly (cited in Thomas, 2018, n.p.) explained:

With each contact, including protection intervention, document renewal, assistance delivery, interview to determine refugee status and assessment of solutions, UNHCR builds the identity data held, and cross-checks and confirms previous elements.... UNHCR often has detailed knowledge of given individuals spanning years or decades, and with biometrics, those identities can be recognised across any UNHCR location.

A joint inspection of the UNHCR and WFP of the BIMS system in Kenya revealed UNHCR's data protection policies were not implemented by the UNHCR staff on the ground, as they were either not aware of or did not fully understand them. Also, laptops used for storing data did not feature encryption tools, while networks were not tested for nor protected against unauthorized intrusion (OIG/ GIO, 2015: 22). An audit of BIMS revealed theory is disconnected from practice: there is need for guidance of on-the-ground data protection measures. It demonstrated that refugees in, for example, the Democratic Republic of Congo, India and Thailand were insufficiently informed about the biometric programme, and information provided varied between countries (OIOS, 2016). Also, worryingly, the OIOIS (2016: 10) 'observed instances of data sharing with host governments, partners, other United Nations organizations, and other third parties, which included electronic and physical transfers of data and direct access to UNHCR systems'.

The UNHCR's regulatory framework is opaque, but it, for example, allows gathered data to be shared with third parties. The World Food Programme is partnering in the EyePay project, and their aggregation and analysis of data to check whether refugees have a 'balanced diet' (Nedden and Dongus, 2018) raises ethical concerns. This is but one example of possible 'function creep' (also known as 'mission creep'): the gradual widening of the use of a system beyond its original purpose, 'often with unintended consequences' (Kingston, 2018: 42).

In the case of Rohingya refugees residing in Bangladesh, the Bangladeshi government has stated it will use the biometric registrations to ensure all refugees return to Myanmar. It reportedly has shared data (including 'names, gender, birthplace, names of mother and father, date of birth, family relationships, address in Myanmar, professions and a family photo') gathered of at least 8,000 refugees with the Myanmar government (Thomas, 2018: n.p.). Myanmar promises a pathway for the large number of Rohingya living in Bangladesh's southeast Cox's Bazar district, to return and obtain citizenship, which they had initially lost in 1982. However, in order to do so they have to be registered to receive a National Verification Card (NVC), which will list them as 'foreign Bengalis', which reconfirms what a Phil Robertson, deputy Asia director of Human Rights Watch describes as a 'permanent apartheid-like' arrangement (Ellis-Peterson, 2018).

There is scarcity of documentation about practices of contestation. A group of over 2,000 Burundi refugees in a transit camp in Congo have been reported to have resisted biometric registration, stating religious motivations, which led to them losing aid from humanitarian agencies. Francoise Ndayisenga, the group spokesperson, (cited in Thomas, 2018, n.p.) stated: 'We are not going to accept this [database] registration in spite of the difficult existence they want to impose on us as our beliefs forbid it'. Meanwhile, the non-machine-readable bodies of asylum seekers in Europe who cannot be fingerprinted due to a lack of readable fingertips, caused by using acid, strategically gluing, cutting or burning off their fingerprints (Jones, 2014) or as a result of manual labour, are met with suspicion and may be forced to share other, more bodily intrusive biometrical data. The push for efficient assistance, containment and control is reflective of a celebratory but unjust 'infrastructural fetishism' (Dalakoglou, 2010). Guided by technological solutionism and hidden under the cloak of humanitarian aid, companies like Eyehood develop their business models with support of international institutions and donors. As a red thread, officials justify these

trials, pilots and experiments by referring to a situation of crisis and the state of exception (Agamben, 2005), while corporations such as tech companies and weapon manufacturers welcome opportunities to develop, test and experiment new hardware and software with a controlled population, who cannot opt out and whose human rights are conveniently (mostly) suspended.

HISTORICAL LINEAGES

The structurally violent workings of such migration crisis infrastructures addressed above do not emerge from a historical, decontextualized void. Rather, clear historical parallels with the development of experimental techniques of categorization, ranking, subjugation, disciplining, resource extraction and control during the European colonial era and Nazi totalitarianism can be discerned. The immense, unparalleled atrocities and geopolitical distinctiveness of the projects of colonialism and the Holocaust should not be overlooked. Beyond their distinctiveness, what these projects together demonstrate is the development of subjugation, containment and surveillance as a disciplinary gaze (Shohat, 1991), as well as the construction and exploitation of narrow concepts through which some subjects are constructed as fully human and others as those which can be dominated. European imperial and fascist knowledge systems relied on the usage of experimental techniques (such as phrenology, cartography, anthropology) to 'objectively' order races and to 'prove' white supremacy and the inferiority of non-white/ non-Christian/non-heteronormative bodies. Infrastructural forms of violence and coercion under colonialism and fascism were both based on 'rational economic calculation' and the exceptional permission to 'use maximal force in the absence of legal scrutiny' (Woodley, 2010: 118). Colonial and fascist racial formations rationalized physiological

differences between groups, in recent race thinking - which can be said to characterize migrant infrastructures - these differences are politicized by distinguishing assimilable and unassimilable groups (Taylor, 2004: 74). In the words of Michel Foucault (1975-6 [2003]), colonialism and fascism display how 'biopower' was used as an infrastructure, 'State racism', which legitimized 'a way of separating out the groups that exist within a population', to fragment 'the biological continuum' (1975-6 [2003]: 255). Technological infrastructural experimentation in the context of contemporary migration crises is haunted by technological advancement during the colonial era, where subordinated people and places were used as a testing ground, as we can learn from works such as Helen Tilley's (2011) Africa as a living laboratory; Daniel R. Headrick' (1998) Tentacles of progress: Technology transfer in the age of imperialism and Rudolf Mrázek's (2002) Engineers of happy land: Technology and nationalism in a colony.

Biometrics are a 'science of empire', according to Keith Breckenridge (2014: 27). The colonies offered a testing ground for experimentation with biometric registration, leading up to South African apartheid as an information-based police state. The act of governing by metrics and fingerprinting was invented by the South African Alfred Milner, who was responsible for developing fingerprinting, labour and movement registries for people of colour. Fifty years later, the Apartheid state sought to establish the first biometric order which sought to control the labour and migration of African people (2014). Colonial census-taking evidences that obtaining detailed enumerations of population characteristics is a crucial technology of state governmentality.

State population-data systems have been repeatedly used as infrastructural 'sociotechnical platforms for mobility' (Larkin, 2013), immobility, securitization and even extermination. Alongside the Nazi Holocaust – which, based on Adolf Hitler's 'racial hygiene' imperative, led to the killing of six million Jews, 500,000 Roma and Sinti, 270,000 disabled people and 15,000 homosexuals these systems were used to locate and contain population segments, such as the internment of Japanese Americans during the same period, the forced removal of indigenous Americans from their territorial lands in the United States in the nineteenth century, the forced migration of minority populations in the Soviet Union in the 1920s and 1930s and the Rwanda genocide of 1994 (Seltzer and Anderson, 2001). During the Holocaust, Hollerith punch cards became crucial biometric technologies that expedited efficient genocide: they assisted in identifying, registering, categorizing, transporting, processing, confiscation of possessions, exploitation and/ or extermination of Jews, ethnic minorities, communists, socialists, gays and people with disabilities (Fuchs, 2011: 95). Hollerith cards are named after Herman Hollerith, the founder of the global tech giant now widely known as IBM (International Business Systems). As a predecessor of contemporary microchips, punch cards stored information in holes punched in rows and columns; these cards could be processed by tabulating machines. Roger Griffin's (2007) analysis of the Third Reich's 'biopolitical modernity' shows it consumed 1.5 million specially printed punch cards in 1943 alone.

The punch cards could be coded to include various types of information (Black, 2012). For example, codes were actively used to differentiate between camps (Auschwitz, #001; Buchenwald #002) and to identify and track contained populations: Jews were type #8, homosexuals were coded #3 and Roma were coded #12. Deaths were also coded and ranged through death by natural causes (code #3), execution (code #4), suicide (code #5) and 'Sonderbehandlung' in gas chambers (code #8). Code #7 referred to those who managed to escape from camps. Subjugated people became numerical proxies, which sometimes even became tattooed on their bodies, showing again parallels to the colonial-era branding of enslaved bodies. Of course, the Holocaust was not entirely automated, the punch cards were only one of the mechanisms that made the genocide possible and the control and killing of people required many human acts. During colonialism, forced labourers were commonly similarly branded with burn marks to identify them as commodities, making them legible as a property that belonged to a master and could be sold. As such, colonial techniques allowed for vast resource extraction, and Hollerith cards under fascism enabled the repossession of Jewish assets. These mechanisms haunt the fierce discussions about the 'Jewellery law' which passed in Denmark in 2016, allowing the Danish state to repossess assets of refugees upon claiming asylum in Denmark (Hendricks and Vestergaard, 2018: 42-3). Another sad parallel can be observed in the ultimate acts of contestation of seeking freedom through escape as well as suicide, which are both well documented during colonialism and transnational slavery. Alongside escaping camp life, suicide is also increasingly documented as an ultimate remedy sought by desperate forced migrants who cannot bear the inhumane circumstances, for example, of life in refugee camps in countries including Greece (Hermans et al., 2017) and Kenya (Ong and Rovisco, 2019).

The imposing of race on the body operates as an 'epidermalization of inferiority' where blackness is inscribed with an inferior status (Fanon, 2008: 11). The 'history of branding in transatlantic slavery', as Simone Browne (2015) observes, is repeated in contemporary 'social sorting' of the racial body through biometric information technologies (2015: 26). Upon detention, or at hotspots, reception centres and camps, refugees are commonly allocated a personal registration number, which may be inscribed on their flesh with permanent marker (Tyler, 2017: 2-3), written on colour-coded wristbands (Pollozek & Passoth, 2019) or on their shelters as a mark of identification (see the chapter by Macias in this Handbook). Although 'epidermal

thinking' (Gilroy, 2000: 46) is not always readily visible in public in managing forced migrants, contemporary migration crisis infrastructures increasingly socially sort refugee bodies digitally, which results in their personal biometrical data being potentially permanently labelled for the purpose of recognition, containment, control and extraction.

CONCLUSIONS

In this chapter, I have sought to demonstrate the potential of taking infrastructure as an analytic lens to study responses to so-called migration crises. From critical studies on infrastructures in anthropology, urban studies and cultural geography, we learn infrastructures are commonly taken for granted, but are also sometimes deliberately removed from plain sight. Although often rendered invisible, infrastructures are not neutral, but are reflective or constitutive of a certain political rationality (Larkin, 2013). In their various constellations, infrastructures such as sanitation, transportation and particularly in migration as I have demonstrated, operate as a 'gathering force and political intermediary of considerable significance' (Amin, 2014: 137). I provocatively noted parallels in mechanisms of subjugation, discipline and control between how contemporary migrant infrastructures socially sort forced migrants at the border and in camps through digital technologies with historical epidermalization of black and othered bodies during colonialism and fascism. This rationalized the existence of inferior populations (indigenous, black, Jewish, Roma, homosexual or Muslim people, among others) that needed to be ruled, controlled or contained, and of superior white European male Christians who needed to be protected against dangerous non-normative outsiders. These Eurocentric norms of universality and desires of maintaining the colour line are still observable today through the 'infrastructuring of European

migration and border control' (Pollozek and Passoth, 2019: 1).

It should be noted that in this chapter, I focused in particular on structurally violent workings of top-down forced-migration management and control. More research is needed on how migration crisis infrastructures are experienced, negotiated and contested from the bottom-up in migrants' everyday lives; indeed 'there has been surprisingly little research about how people produce, live with, contest and are subjugated to or facilitated by infrastructure' (Graham and McFarlane, 2015: 2). We have a lot to learn from the perspectives of people negotiating these infrastructures, as they are a key 'political terrain for the negotiation of moral political questions' (Schnitzler, 2016: 107). For example, attention is emerging on refugee and migrant movements, and their streetlevel and digital protest of borders, camp life and securitization (Stavinoha, 2019). Behrouz Boochani's No friend but the mountains: Writings from Manus Prison (2018) is an important example of how refugees may engage in citizenship claims from the margins. Boochani wrote this autobiographical non-fiction book which won the 2019 Victorian Prize for Literature - through WhatsApp while being detained in an offshore detention centre on Manus off the coast of Australia. In his horrific surrealist narrative, he personalizes the Manus migration crisis infrastructure:

The government have constructed this system and they create terms to establish and reinforce their power ... 'Australian Border Force', 'off-shore processing centre', etc. I avoid using their language as much as I can when writing journalism, and through literature I can do whatever I like. I create my own discourse and do not succumb to the language of oppressive power. I create my own language for critically analysing the phenomenon of Manus Prison. (2018: 266)

More empirical evidence on everyday experiences and contestations would complement our understanding of technological infrastructural innovations, to realize that, like colonial and holocaust technologies, migration crisis infrastructures should not be understood in simple forms of dominance and submission but as complex, non-unidirectional relations (Anderson, 2009; Harding, 2011) developing within a deeply hierarchical context, but shaped by dislocation, contestation, hybridity, mimicry and adaptation.

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