Black Holes in the Global Digital Landscape: The Fuelling of Human Trafficking on the African Continent

Mirjam Van Reisen, Munyaradzi Mawere, Mia Stokmans, Primrose Nakazibwe, Gertjan Van Stam & Antony Otieno Ong'ayo

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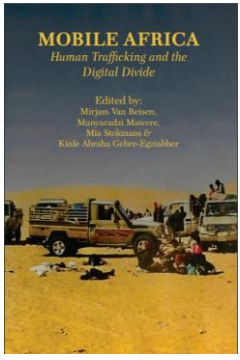

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Chapter 1

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Introduction

The use of spatial imaginaries has provided powerful metaphors surrounding Internet connectivity. Examples are terms like 'global village' and a 'shrinking world', which depict collapsing geographies. These metaphors play a powerful role in the positioning of information and communication technologies (ICTs) in the international discourse (Smart, Donner & Graham, 2016). In this discourse the 'digital world' is a common good to help innovate the economy and solve social problems. 'Digital' in this sense refers to digital devices and technology, characterised by computerised technology, with particular relevance to the mobility of people and global commerce. However, this terminology and the international

Today's digital architecture is based on the information networks of colonial times, which carried information and goods – including slaves – to knowledge centres in the West. Hence, structures like the Internet reflect biases in social and political connectivity. Those living in 'black holes' in the digital architecture are 'mined' for information, without enjoying any of the benefits of information flows. Hence, it is clear that digital technology is not impact-neutral. In fact, it seems to be fuelling trafficking in human beings, particularly trafficking for ransom on the African continent.

discourse seem to emerge non-locally and are far removed from the African context.

We explore the digital architecture in Africa and its social dimensions that generate political, economic and business practices. The information society has its roots in the 1500s, at which time it supported mobility around the world and the establishment of global commerce. This global commerce included the trade in persons – the slave trade – which still exists today. Although several researchers (including the authors of this chapter) have extensively described the link between digitalisation and new forms of the trade in persons (Van Reisen, Estefanos & Rijken, 2012; 2014; Van Reisen & Rijken, 2015; Van Reisen & Mawere, 2017; Van Reisen *et al.*, 2018; Adugna, Deshingkar & Ayalew, 2019), questions still remain: *Is the knowledge society providing an enabling environment for the trade in people? How can the association between digitalisation and new forms of human trafficking be explained?*

In order to answer such questions, this chapter explores the idea of a digital architecture as a social architecture in which information is handled and distributed to some, but not to others. Being the product of human invention within a social context, the digital architecture has social characteristics, which include a historic legacy through which social relations are reproduced. As a social structure in which information circulates, the question is not only who provides information and who receives it, but also who is able to decide which information is provided to whom and the conditions of the transaction. From this perspective, some people are excluded from the Internet and depend on others to receive information and provide or send information. These people are living in 'black holes' in the digital architecture. In this book we illustrate that these black holes in the digital architecture are related to the emergence of human trafficking for ransom, which depends on digital communication.

Methodology

The messy realities on the ground in many parts of Africa and Europe are somewhat more nuanced and diverse than dominant and

essentialising theories describe. There are many forms of 'connectivity' to information societies and ways to be included and excluded from access. This leaves much room for developing localised theories, furthering understanding of the inherent structures of the Internet from the position of the disenfranchised. In this book, we use the extended case method, as described by Michael Burawoy (2009). Burawoy (2013) argues that 'living with theory' takes away the separation between the participant and the observer, inspiring critical assessment of the conquest of existing theory and allowing for the conception of society in alternative understandings. We have amended this method to be transdisciplinary and culturally aligned, to recognise common threads in African society. We recognise embodied knowledge (Mawere & Van Stam, 2017) resulting from our engagement with communities and theories.

Furthermore, we recognise that cross-cultural research settings are social settings mediated by power, and that strategies to dominate, silence, objectivise, and normalise may be part of this setting. This can result in epistemic violence, which must be recognised and mediated (Mawere & Van Stam, 2016a). We recognise this actively, by being reflexive and ensuring interaction with local communities about our findings first, before reporting on them in broader fora. The authors are engaged in transdisciplinary research, interacting with various African communities of practice in both urban and rural areas in Eastern and Southern Africa. The book is the result of a collaborative, reflexive and retrospective analysis of our experiences, positioned from Africa.

The knowledge society

Castell (2000) sees the contemporary knowledge society of the information age as a comprehensive social reality in an economic, political and cultural sense that is historically rooted. Historically, these roots are in the 16th Century, when corporations, headquartered in Europe, made their way around the globe 'discovering' new continents (Harris, 1998). Information was collected, as were goods and slaves. While slaves were treated as products to be transported

along these networked routes (Ward, 2009), the information collected on the voyages was the 'gold' that fuelled the trade. From this perspective, some of the most prized items the ships would carry were the sacks of letters containing valuable information about the colonies. To give an example, during the fourth Anglo-Dutch war (1780–1784), the Middelburgse Commercie Compagnie (MCC), a company based in the Netherlands, had agents in London representing them. Among their tasks was retrieving letters and logs from ships captured by the British, as these were considered extremely valuable (Zeeuws Archive, n.d.).

Corporate agents were incredibly important gatekeepers of information and were able to decide what information would reach the European centres, where this information was analysed and where it was turned into knowledge that yielded efficiency improvements in the handling of their commerce, which, in turn, would generate more information. It allowed the headquarters in the centres, located in Europe, to 'act at a distance' and give instructions to their agents in the colonies. As gatekeepers, the corporate agents were located in the nodes of the information networks, linking the different parts of the routes.

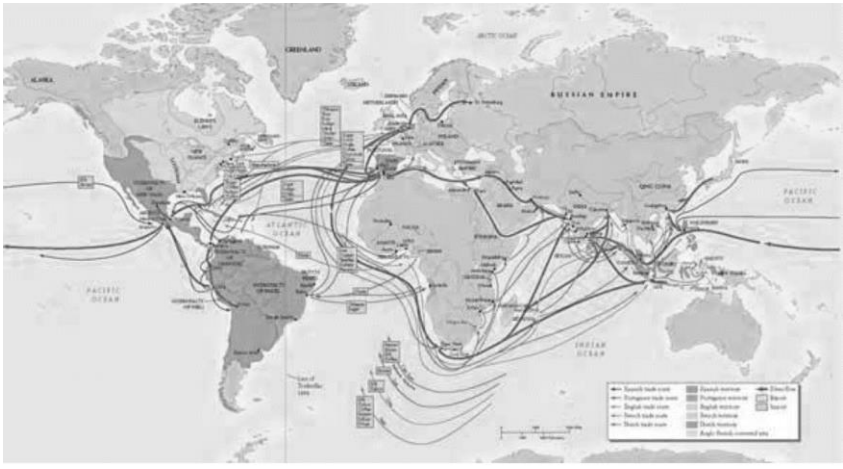

Figure 1.1. Shipping routes during colonial era
Source: Tignor (2002)

The original information society facilitated by colonial transport routes provided corporate control along trajectories (or networks) and over connecting points (or nodes). The nodes were points at which there was important representation of the colonial power, including legal and financial advisors, and where information was collected. The information nodes on the African continent (e.g., Cape Town for the Dutch and English) provided essential gateways for collecting information, which was transported to Europe where the information was analysed. Universities and other knowledge institutions were established as the 'centres of calculation', as Latour (1987, p. 215) coins it, with the aim to turn proceeds from the information society into fuel for a 'knowledge society'. Through this process, imported information was used in an actionable way, resulting in a European-based analysis and serving as a starting point for future economic, commercial, political and military activity in far-away places. In these European commercial centres of knowledge, the idea of a universal knowledge base emerged, as a result of these activities. The newly-acquired understanding would inform subsequent voyages. The centre of the colonial power would be irreversibly ahead in having the acquired knowledge, and so strengthen its ability to control and govern.

Latour (1987) advances the idea that during the colonial period a new space-time arrangement was developed. Through the *space dimension*, ships with information and goods could go back and forth, but African people could not do the same (or only as a 'commodity'). As for the *time dimension*, elite engineers and scientists appropriating the shipped-in information were seeking to turn it into (universal) knowledge. Based on this universal knowledge, engineers and scientists were able to design projects before local people could be involved, provide juridical labels and assign property claims on knowledge (Krohn, 2001). Through the idea of 'universal knowledge', rather than contextualised knowledge, the time-dimension favoured those holding the knowledge (Latour, 1987).

Architecture of the information network

The architecture of the early information society built in the 16th Century was shaped as a network of routes and nodes supporting colonial exploration. The architecture of the Internet follows the same pattern. Its heralded progress lies in the acceleration of the transfer of information and the generation of universal knowledge, the components of which are critical to sustain a globalised economy. Digitalisation has further enhanced the restructuring of the space-time dimension, for instance, in education (Malichi, Van Oortmerssen, & Van Stam, 2013). Information – called 'traffic' in technical environments – even between African nodes, continues to travel through European centres (Gueye & Mbaye, 2018). Although various organisations have sought to facilitate interconnectivity between African Internet service providers, these activities are being disempowered by the 'hunger for information' from 'the centre'. As a result, the network remains focused on existing directionalities, linking externally derived 'harmonies of interest', continuing to disempower the networks in the colonially defined 'periphery' (Galtung, 1971). Orientalistic, imperialistic and colonialistic thinking and behaviour have consistently heralded the 'real knowledge producers' in the North – setting the standard for 'real' knowledge, with the South seen as only delivering information (Mamdani, 2011; Mawere & Awuah-Nyamekye, 2015). Manning, Böhme and Stehr (1988) discuss the concept of the 'knowledge society' in terms of this increasing dependency of society on technology. The digitalisation of information plays a vital role in providing the means for new forms of expropriation in which data is the new gold, moving from the African continent to the data centres in the North (Van Reisen *et al.*, forthcoming, 2019).

However, the Internet is not the only infrastructure that is supporting an imperialistic perspective. The platforms designed to manage the information derived from global digital networks follow the same pattern. Service behemoths like Google, Facebook, Microsoft, and Amazon represent centralised information infrastructures (Van Dijck, Poell, & De Waal, 2018) that transport information to be

processed in a colonial centre (Van Stam, 2017a). 'Free' services or products, like Facebook, sweeten the harvesting of information, typically targeting areas with limited connectivity and high barriers to access information, attracting users to these forms of social media. The corporate narrative states that its information informs enhanced business approaches; in practice it ensures the continuation and growth of intangible and tangible resources from the periphery to the centre. This move won Mark Zuckerberg the title of 'digital colonialist' (Shearlaw, 2016).

The following maps show the old colonial routes for the flow of information and today's information infrastructure, with fibre optic submarine cables supporting the Internet, which feeds into the knowledge society. The main information routes are overseas and connected through nodes; the directionality is to the hegemonic centre of the North. A quick comparison of the old colonial shipping routes and the current Internet intercontinental network cabling shows an incredible similarity. In resembling the architecture of the global information society as it was created in the 16th and 17th centuries, the direction of the benefits of the Internet is one-sided (as is seen in the market capitalisation of the so-called 'beltway bandits').

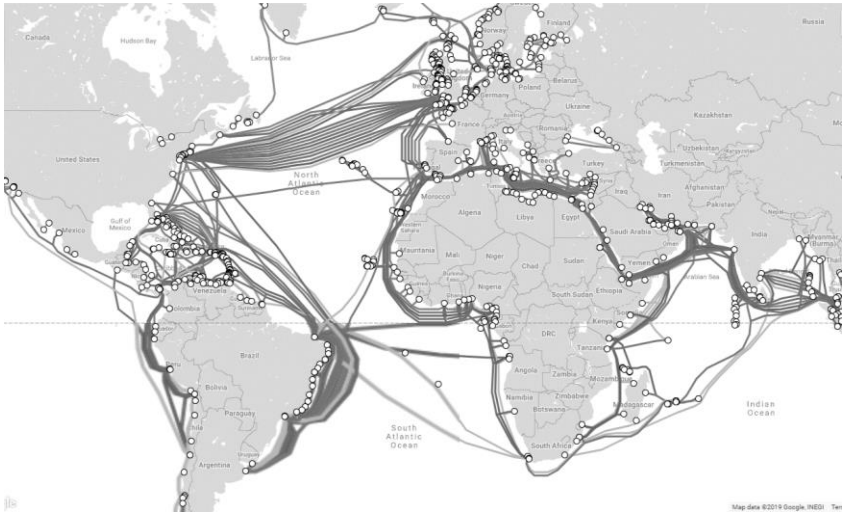

Figure 1.2. Fibre optic submarine cables
Source: Telegeography (n.d.)

As in the past, the contemporary information society supports the digital traffic to its centres, thereby supporting the basing of economic activity on historic architectures (Heemskerk & Takes, 2016). This can be seen by comparing the maps of the fibre optic submarine cables, social media traffic such as Facebook and the location of the global corporate elite structures.

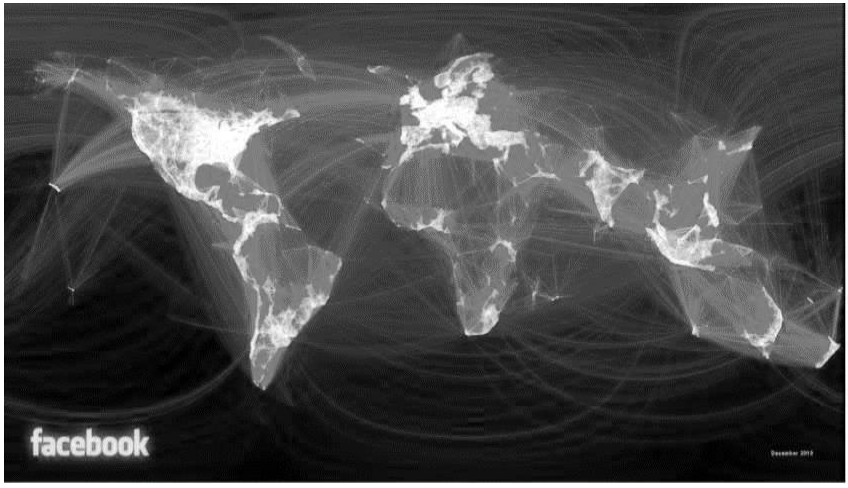

Figure 1.3. Facebook nodes; Source: Butler (2010)

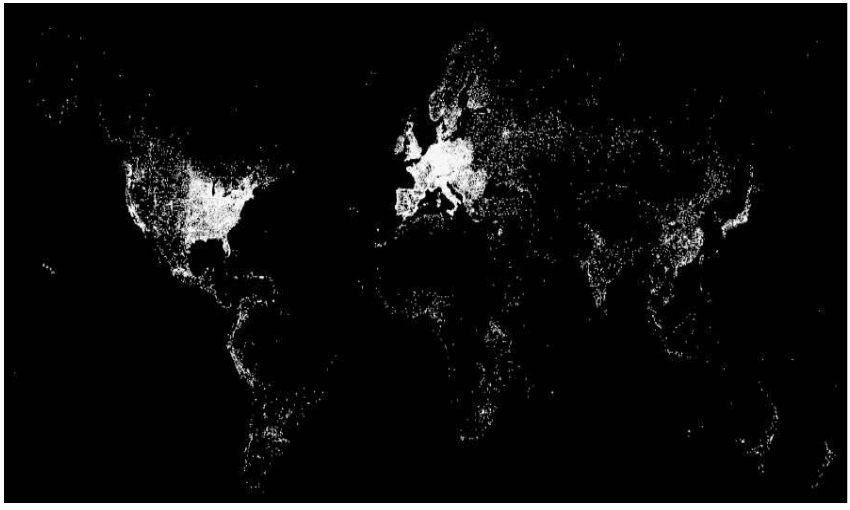

Figure 1.4. Global corporate elite structures; Source: Heemskerk & Takes (2016)

As illustrated above, the information society facilitates the traffic of data to the data centres in Europe, the US and increasingly China to support commercial interests (Heemskerk & Takes, 2016). The geographic and social realities of African communities have not informed the conceptualisation and structuring of the digital architecture of the Internet. Moreover, these technologies are not designed in ways that work to empower African communities to sustain their knowledge societies (Van Stam *et al.*, 2012; Johnson & Van Stam, 2016; Van Stam, 2016a; Bidwell, 2016; Van Reisen, 2017), as will be discussed in the next section.

The geographic misrepresentation of Africa and its effect on latency

The dislocation of knowledge from space and time has been translated into the representation of the world on abstract maps. Maps are tools that affect the perceptions of power and space through projection techniques. The earliest world maps that guided ships placed Europe both central and dominant on the world map (Wintle, 1999). The traditional representation using the Mercator projection represents Europe's landmass as proportionally larger than Africa's landmass, although in reality Africa's landmass and geographical distances are much larger. A map based on the true geographical size of Africa would show that Africa's landmass could incorporate China, India, the United States and Europe (Krause, n.d.).

Matching the architecture of the Internet with a more correct geographical representation of Africa in terms of distances clearly indicates the fundamental barriers to the implementation of communication infrastructure, particularly if information network density in Europe is taken as a benchmark. Distances compound the universal connectivity problems due to the combined effects of latency (distance) and congestion (due to limited bandwidth and economic modelling constraints), in combination with the type of equipment and software used, due to older machines and unsupported software (Johnson et al., 2016; Van Reisen, 2017).

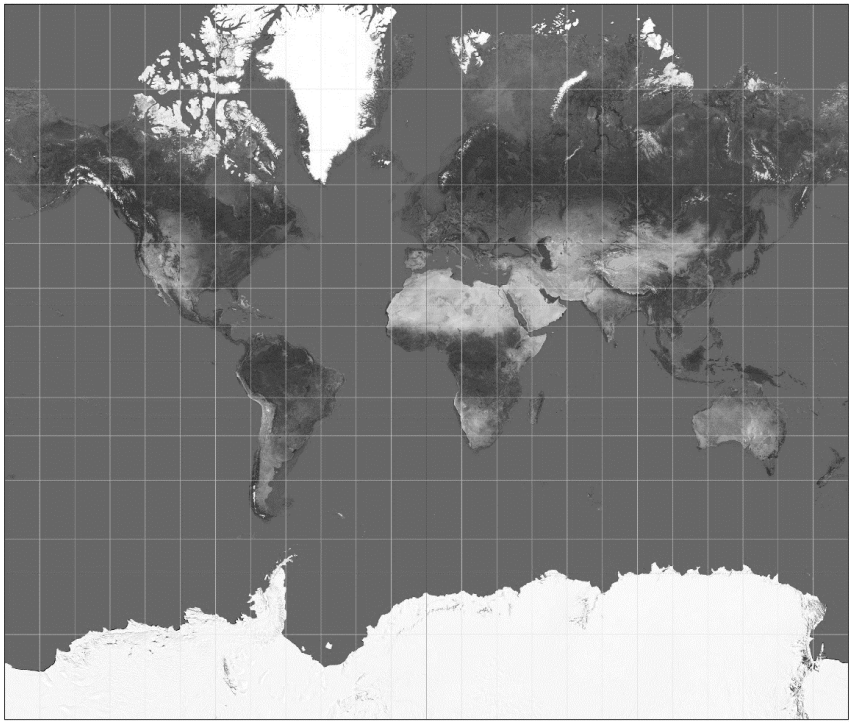

Figure 1.5. Map of the world, Mercator projection

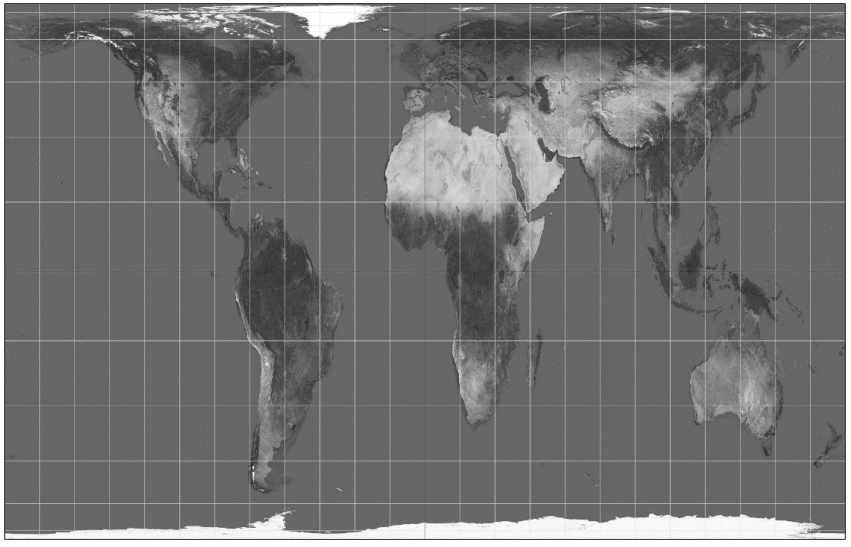

Figure 1.6. Map of the world, Peters projection

Australia, another vast landmass continent physically located far from dominant digital centres, experiences similar latency-related connectivity dark buffer-float problems, creating delays in gaming and affecting time-sensitive communication-related transactions, such as financial and trading markets (Armitage, 2003; Brun, Safaei, & Boustead, 2006). Only if one accepts the correct size of the African continent can it be appreciated how ambitious the idea of connecting Africa using this European benchmark for the Internet is.

Since digital networks are constrained by natural limitations, such as the speed of light, technical limitations, and the information processing capacity of the intermediate technical equipment, the geolocation of connectivity predicts its fitness for use, if this is conceptualised on the basis of latency. Therefore, geographic location is a specific and sensitive factor in the instrumentality of the Internet.

Black holes in the global digital landscape

When matching the hegemonic power centres and their sources of knowledge with daily realities in many African communities, the colonial powers had (and still have) very little information about the real geography, social nature, and local values and means of knowledge production on the African continent. This lack of information translates into gaps in the African information society. Burt (2000), in his work *The Network Structure of Social Capital*, represents society in terms of connections and nodes that deliver a capacity to share information and knowledge. The weaker connections in or between nodes can be represented as 'structural caverns' or 'black holes'. Places that are unconnected or weakly connected with the network, therefore, cannot play a part in the social network underpinning the economy (Burt, 2000). Similarly, Castells (2000) argues that digital technology has created a new social structure. According to him, information processing is the core activity of capitalism within this digital society. Castells refers to the structural holes in this digital social structure as the 'black holes of informational capitalism'.

The concept of 'black holes' not only relates to weak connections in the global digital architecture, it also relates to the imperialistic perspective on information. Hence, it relates to what geographically-located people can (or cannot) do when using the digital architecture in an agentic way. From an imperialistic perspective, people living in 'black holes' are approached as 'objects from which to glean information', or 'subjects of foreign intervention'. So many people in Africa may recognise little, if any, instrumentality in digital infrastructures. Yet unknown to them, they may be the subject of information harvesting, being monitored by digital technologies. As in the past, these data trajectories are one-directional from the periphery to the centres in the West. Mass surveillance is carried out, for instance, by Western-supported military drone-ports in Africa (Turse, 2015): "For years, American military expansion in Africa has gone largely unnoticed, thanks to a deliberate effort to keep the public in the shadows". The digital information network that routes messages through its nodes monopolises narratives by filtering communication so it disseminates a dominant story derived from the perspective of Eurocentric social norms. Williams (2017) refers to this as digital imperialism: extending power and dominion by gaining indirect control over the political or economic life of other areas – in other words, the extension or imposition of power, authority, or influence. Black holes are proof of the inability of the architecture and digital infrastructure of the Internet to facilitate African voices on their own terms. This practice perpetuates a super-colonial dominance over Africa.

The imposition of power in the process of digital imperialism not only refers to what technologies are available for use and by whom, but also the norms, values and ways of doing that are implicitly incorporated in these technologies. From their African base, Mawere and other authors (e.g., Mawere, 2014; Nhemachena, 2016; Mawere & Van Stam, 2015) call for the respect of local philosophies and knowledge, countering practices that they labelled as 'super-colonialism' (Van Stam, 2017b). Buskens and Van Reisen (2016) point out that Western epistemology, embedded in contemporary ICT, is positioned and imposed as a universal understanding of the

world. They call for the recognition of the diverse and sovereign epistemologies that ICTs should reflect if they are to be relevant to local communities. Williams (2017) calls this digital sovereignty ('your data equals your control'). Mawere and Van Stam (2016a) propose that decolonised African engineers must lead the processes of design and digital engineering for technologies deployed in Africa in order for them to reflect African epistemology and serve African (general) interests.

Stuck with this legacy

In the foregoing, it was argued that contemporary digital architecture is a structure that is historically and geographically informed and reproduces biases in social and political connectivity and access. Hence, digital technology, including ICTs and, for instance, cryptography, is not neutral. It is inherently a set of political tools that incorporate social-political and moral dimensions of inclusion, exclusion and bias (Rogaway, 2015). Logically, it follows that if digital architecture and its application are inherently biased, then they are also inherently potentially harmful. The acknowledgement of this is the first rule for responsible computing (Zook *et al.*, 2017). Concerning Africa, this assertion is especially relevant, given the exploitative basis of Africa's insertion in the global economy and the ongoing appropriation and direction of the flow of goods, information and data from Africa to other continents (Mawere & Van Stam, 2016b).

Can Africa change this reality? In answering this question, digitalisation could be regarded as a 'public good' that is available to all members of society to ensure a life in dignity. In the contemporary international community, national states are identified as the caretakers of public goods in respective societies. In the ideal image, it is the role of the state to provide governance that protects its citizens from (digital) exclusion from these public goods. In this context, digitalisation should be facilitated by the state, as part of its responsibility to provide appropriate governance. In reality, African states are coerced to remain more reliant on external centres of

power, rather than on their internal capacities (Herbst, 1989) and needs. Such dependency has weakened the ability of governments to govern in the interests of their citizens (Davidson, 1992; Mamdani, 1996). Governments in Africa have little if any ability to govern digitalisation as a public good for African people (Abrahams & Mbanaso, 2017), and lack specific decolonisation strategies in education (Chukwueren, 2017). This situation is sustained by the lack of local research and indigenous policy development (Paterson, 2017). Exceptions are home-grown innovations, such as South Africa's Television White Space (TVWS) regulations, which are based on African research (Johnson *et al.*, 2016). African broadband operators typically cream off the 'market' and "serve telecommunication services to limited numbers of wealthier (customers) at extremely high prices for bandwidth and voice" (Avila, 2009, p. 142), and the pricing of satellite connectivity serves crisis management in high price-ranges, but de-favours sustainable long-term connectivity based solutions for end-users (Van Reisen, 2017). The increasing divide alienates citizens, which impacts negatively on the governance, security, and development prospects of African nations (Sommers, 2011).

An additional complicating factor of digitalisation as a public good is the definition of the members of a society. In line with Krohn (2001), we believe that the global information society depends on two main variables: technological innovation (digitalisation) and institutional transformation (states in Africa). When the European colonial actors met in Berlin to divide Africa among themselves (in the Berlin conference in 1884–1885), they were ignorant of the geography and life in most parts of Africa. The subsequent transposition of the Westphalian state model, which was created as a bordered geography in Europe to solve specific contextual problems of governance at that time, was alien to the African socio-political reality. Nevertheless, national borders in Africa, based on this model, were imposed (Mbembe, 2002; Van Binsbergen & Van Dijk, 2004). The aim was to distinguish different areas of colonial rule by each of the European empires in Africa and, in doing so, local and contextual factors that are generally taken into account when borders are established were

not considered (Mbembe, 2002). An estimated 30% of the African borders were drawn as straight lines (Touval, 1966). Even if there was some African participation in some parts in the process of partition, the final borders did not reflect local ethnographic or topographic realities, and they were drawn in total disregard for local needs or the circumstances of the communities (Touval, 1966). Consequently, today, historically-connected communities are under the supervision of different states, which affects the information society at the African level.

Digitalisation of human trafficking for ransom

Borders and cross-border dynamics play a critical role in the political economy of migration, especially what is now often referred to as 'irregular migration' – migration that is not the result of the prior approval of the administrations in the countries of origin or destination. These forms of migration depend heavily on (digital) information networks facilitated by smugglers and human traffickers.

From 1950 to 2000, Africa's urban population increased from 33 million to 288 million, and is expected to increase to 1.3 billion people by 2050 (UNDESA, 2013). Due to various factors, many youth, in particular, have decided to leave their home. These homes are often located in black holes in the digital architecture. Access to relevant information about where to go to increase (economic) opportunities and enhance safety is not available using the Internet, due to lack of access, but is only available from middlemen. These middlemen bridge the gap in the digital black holes and bring (filtered) information to those who want to leave. Therefore, social capital moving in different networks can be seen as a function of brokering these black holes. This idea is supported by Burt (2000), who claims that the nodes of the Internet are connected to a social network of real people who share (filtered) information and knowledge with those who are living in digital black holes. A two-step flow model of communication (Lazarsfeld, Berelson & Gaudet, 1944; McQuail & Windahl, 1993) clarifies this. This model states that individuals are not social isolates, but act as members of a social group or

community. Moreover, it recognises the different roles of individuals in the information society: those who are active in receiving and passing information from the Internet, and those who rely on personal contacts as their information source. Those who are active in receiving and passing information can be regarded as 'gatekeepers' (Shoemaker, 1991; McQuail & Windahl, 1993). These gatekeepers are not only selectors of information (what is worth passing and what is not), but they occupy bridging roles between networks of those who do and do not have access to the Internet. Since these gatekeepers are part of the community that is living in the digital black hole (or closely associated with it), they are regarded as a reliable source of information (Kidane & Van Reisen, 2017). Adugna *et al.* (2019) refer to the brokers in migration-routes from Ethiopia to South Africa as 'door-openers'.

The intricate connection between migration and social networks has been extensively described (e.g., De Haas, 2008; Lazzolino & Hersi, 2017). Several researchers have also described the link between digitalisation and the new realities of refugees (Leung, 2010; Maitland & Xu, 2015). Migrants are facilitated or trafficked along the routes on trajectories towards and along nodes. Outside the digital black holes, in the nodes, information is available, mobile phone payments can be received, and travel along routes can be prepared and resourced (Van Reisen & Mawere, 2017; Adugna *et al.*, 2019). The networks strongly resemble the network of the information society, as observed in a Tweet of a map with old slavery routes (retweeted by Cochetel, 2019).

Youth in particular move from the black holes in the information society towards nodes, and once they have access to greater connectivity they can draw on the support of relatives in diaspora communities to try and make their way along the network to "ever better-connected places" (Dekker & Engbersen, 2013). The directionality is from the South to the West (Nyamnjoh, 2015; Van Stam, 2016c). From this perspective, the nodes function as magnets attracting people out of black holes into the digital information society. At the nodes, smugglers and human traffickers provide those who have newly arrived with further information about possible

destinations and migration routes. Those who leave their homes depend on the information provided by trusted middlemen and smugglers. But can we find empirical evidence to substantiate these observations? The next section looks at whether empirical data relates to the concepts explored in this chapter.

Some empirical evidence

During a research visit to Usuku, Katakwi in Northern Uganda by the first and fourth authors, a focus group meeting was held in which access to phones was discussed. The area is poor in the extreme. From the group of around 30 women, only 5 had a phone (a feature phone). Asked why others did not invest in a phone, the women explained that they would very much like to and that it was a prized item that would give them social respectability, but they explained the phone was too 'thirsty': too difficult to charge and too costly to make calls. Those who had phones had received them from someone else; a son or a husband living elsewhere, who wanted to be able to communicate easily with the family and community in Katakwi and who would pay for the phone costs. Those sons or husbands who provided the feature phones were critical gatekeepers of information, even if with the best intentions, and with the power to provide information, take information and remove access to the device (Focus group discussion, Usuku, Uganda, 25 February 2019).

The importance of digital access for young people is well illustrated in an observation by the first and second authors during a field visit to Masvingo, Zimbabwe. During the night all along the fence of the Great Zimbabwe University the researchers observed men standing near the fence, from where they could pick up a free Internet connection available at the campus through a password, which apparently, they could access. During a focus group meeting with teenagers (boys and girls) in more remote towns near Masvingo, they explained that they spend long hours on smart phones. They explained that they were spending (almost) all the pocket money they received from their parents on buying connectivity and charging their phones. The news received through social media on the smart phone

was their main source of information (Focus group discussion, Masvingo, Zimbabwe, 14 October 2018) and youth were the best connected in the community. Here we see that, assuming a community has access, the Internet is the main source of information about local, national and international affairs for those living in remote towns in Africa, but not all community members have access. Consequently, those who do have access to the Internet are the gatekeepers of information for those who don't.

In another research on the origin of human trafficking networks in Eritrea, the first author found through interviews that people working under forced labour conditions in Eritrea on road construction were not allowed to have or bring a mobile phone. The researcher also learnt from another informant that it is extremely dangerous to disobey this rule and that heavy punishments can follow. Give the very tightly-controlled digital environment in the country, any digital material that proves situations of human rights abuse needs to be smuggled out of the country at high risk and with the highest secrecy (M., interview, face-to face, with Van Reisen, May 2019; T., personal communication, telephone, with Van Reisen, May 2019).

The above case illustrates that connectivity is the first barrier to overcome to gain access to information, especially in remote or (almost) unconnected places in Africa. The urge to be connected to the Internet was also observed in a study among Eritrean youth refugees in a camp that lacked digital connectivity in northern Ethiopia. The researcher found out that the youth had developed ingenuous and creative solutions to overcome the lack of connectivity, including, for instance, phoning the European emergency number, which would provide them, not with a response, but with a short connection to a satellite that would allow them to pull in or send messages on Facebook (Schoenmaeckers, 2018). Researchers also found that the youth depended heavily on social media and on digital networks of family members or friends whose information was trusted (Kidane & Van Reisen, 2017). Such trusted digital social networks are crucial entry points for smuggling and human trafficking networks to recruit young people. Moreover, such

trusted networks are misused by human trafficking networks for extortion (A., interview, face-to-face, with Van Reisen, the Netherlands, 5 May 2019), as also illustrated in the following example reported by Spratt for the BBC:

> *I'm here to meet 35-year-old Chandani. Just over a year ago a stranger added her on Facebook, she accepted, and soon he slid into her DMs and they began exchanging private, direct messages online. The stranger turned out to be an agent for the traffickers. [...] "Social media has really helped the agents – nowadays they don't have to go to rural villages to find girls," she tells me. "They can just search for potential targets online and send them a message with one click." "There was a man who used to chat with my sister on Facebook," she explains. "He added me and started messaging. [...] When this trafficker messaged her, she was living in a temporary shelter. The agent had already been talking to her sister for months, in effect grooming them both. Then, in the continuing chaos in the aftermath of disaster [the earthquake in 2015], he seized his moment. [...] she was locked in a hotel room with 18 other women for several weeks. Chandani looks away when I press her about the details. I notice her eyes glisten. [...] She tells me she knew she was "about to be sold" because tales of trafficking are everywhere in Nepal. Women grow up being warned not to let this happen to them.* (Spratt, 2018).

For migrants held in detention centres in human trafficking-related situations, access to the phone may present a lifeline to get information out on their predicament, and despite heavy sanctions, the phone may be their most important possession:

> *Z: Now he [The Chief of a camp where refugees are held captive in Libya] wants to collect the phone, but they refused. The chief beat refugees by gun, like 20 persons*
> (Z., interview with Van Reisen, WhatsApp, 23 April 2019)

In battles between different factions in Libya, the Guardian newspaper reported on a situation where hundreds of refugees were left isolated and locked in a hangar, based on footage smuggled out of the place and:

> *In WhatsApp messages sent to the Guardian on Tuesday, some of the child refugees said: "Until now, no anyone came here to help us. Not any organisations. Please,*

please, please, a lot of blood going out from people. Please, we are in dangerous conditions, please world, please, we are in danger". (Taylor, 2019)

As the situation worsened, guards reportedly attempted to take the phones from the refugees, who refused at gunpoint to hand these over, reflecting the importance they attach to their phone:

Tranchina took a statement from a man who escaped from the centre after the militia started shooting. "We were praying in the hangar. The women joined us for prayer. The guards came in and told us to hand over our phones," he said. "When we refused, they started shooting. I saw gunshot wounds to the head and neck, I think that without immediate medical treatment, those people would die. "I'm now in a corrugated iron shack in Tripoli with a few others who escaped, including three women with young children. Many were left behind and we have heard that they have been locked in". (Taylor, 2019)

Lack of information provided by the gatekeepers also leads vulnerable people into deceitful situations, with little information on which they can base their choices. A refugee secretly sending messages from another detention centre in Libya, reported the following predicament, during a visit by the International Organization for Migration (IOM) to arrange repatriations to the country they had fled from:

Today the members of IOM came with our chief police of [...the] detention centre[1] and the chief said that for us repeatedly, you must be registered to IOM just like an order. His aim is to return us back to our home country. Surprised we are asking him: why? He gave a surprising answer. He said that after one or few months, war will be started in Libya and the war will affect you. So the only option you have is to return to your home country. We are confused. Why he said like that? What I mean is, if he said like that maybe after few days, he want to sell us for that reason who knows. So, the UNHCR Libya office must take urgent action to evacuate us to the other safe detention centres, or to do something for us. (Z., interview with Van Reisen, WhatsApp, Libya, 6 March 2019)

[1] Name withheld to protect the security of the respondent.

The refugees, as reported in this case, are entirely dependent upon information from the gatekeeper who holds them and who has his own interests. It is clear that information is not objective or neutral and in such a setting, where there is no access to alternative sources of information, the gatekeeper has the power to determine what information is provided. If refugees establish their own channels for information, this may become a serious power struggle and a matter of life and death, as indicated in this interview:

> *The chief [of the camp where refugees are held] is very dangerous. They collect phone one by one. [...] In Gharyan they remove all clothes from your body then they collect money & phone also documents. Now with the new group in Gharyan only one phone is there. Only after 10:00 pm it [is] turned on.* (Z., interview with Van Reisen, WhatsApp, Libya, 18 March 2019)

Even if a phone is (secretly) available, it may be very hard to send information to the outside world to inform others about what is going on. In a place where refugees are held and in fear of being sold to those extorting ransom (reportedly of around USD 20,000, Z., interview with Van Reisen, WhatsApp, Libya, 17 March 2019), it is real challenge to send information:

> *Yesterday I was calling by line but my money is too much few. That's why I cut our conversation yesterday. Totally no network prof. Am not okay to inform anything. This is problem of network data. But I will try every time at night. I will send information until network becomes good.* (Z., interview with Van Reisen, WhatsApp, Libya, 11 April 2019)

Black holes create a situation in which those living in them are dependent upon gatekeepers for information and cannot send information, or only with great difficulty. This establishes a social reality in which the power relations control the information that goes in and out. The digital architecture, with its advanced information network, creates opportunities, but also increases dependency on gatekeepers (or 'door-openers', Adugna *et al.*, 2019) for those who have no access. The result is a more pronounced polarisation between those with no access and those who can facilitate access. This

dependency provides fertile ground for exploitation, extortion and the corruption of vulnerable people who seek to move on in order to improve their situation. The human trafficking networks depend on control information in order to avoid reputational damage (Van Reisen *et al.*, 2018). Due to this dependency, gatekeepers can easily exploit the situation which can then lead to human trafficking.

Conclusion

The Internet and digital infrastructure mirror the architecture of the information society established during the colonial era, and they fulfil the same function in creating the routes and nodes for a global economy driven by corporate expansion in a new time and space dimension. This architecture is not geographically bordered, but extends around the globe – it is not equally distributed. The result is the disempowering of less connected communities (which can include technical, financial, social or legal barriers to connectivity), referred to as 'black holes'.

The Internet as a public good relies on international geopolitics and on the nation state as the guarantor of the participation and protection of citizens. Yet, states in Africa, as structures inherited from western colonialism, are relatively weak and ill-equipped to counteract the one-directionality of the information society, with digital technologies, services and data directed from hegemonic centres without social contextual embeddedness. The growing inequality emerging from the increasing global digital divide cannot be adequately governed through international bilateral or multilateral cooperation, as nation states in Africa are unable to resist the connected digital corporate economic networks.

The concept of 'black holes' in the information society helps to explain why many Africans are forced to move, namely, because of *de facto* exclusion from the benefits of the information or knowledge societies. Excluded from the digital infrastructure, people in marginalised, poorly-connected places depend on gatekeepers, who control the information they receive. As they try to move out of those

caverns and migrate towards the information nodes, they still depend on information provided by gatekeepers, who hold considerable power over these people. At the nodes, they find their way into the information society and enter into its network of routes and trajectories, where new mobility perspectives arise, both in a geographic and social sense. Migration to 'tap into benefits' has a long history in colonised, exploited and excluded Africa, resulting in the uprooting of people. In human trafficking for ransom, a modus operandi which heavily depends on digital communication, it can be shown that the dependency on information to enter these new worlds gives the gatekeepers one-sided power, leading to the exploitation and extortion of those who are dependent. In the most severe cases of dependency people simply become a tradeable commodity, just as it was in the days of slavery.

Harris (1998) makes the point that the knowledge society was created by *doing*, by a '*via activa*', a way of operating from which architectures arose. So, what solutions are available to change this situation? Latour (1987) proposes that the space-time dimension created by the information society can only be challenged if trajectories are created in different directions. In the spirit of Achille Mbembe, Lovemore Mbiqi, John Mbiti, Sabelo Ndlovu-Gatsheni, Francis Nyamnjoh, Cornell du Toit, and many others, the heritage, epistemology and knowledge in local communities could be used to direct the recognition and handling of information and the production of knowledge and technology in a different way. As this chapter has shown, however, this may be a struggle, as the digital architecture is negatively skewed against such a change and more exploitation may result from this. Hence, it is clear to see that the technical infrastructure of digital technology is not impact neutral. How digitalisation affects societies in differentiated ways is, therefore, a relevant and necessary area of academic inquiry.

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