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Introduction

This edited collection attempts to understand the dynamics of all things digital in Africa, especially the impact for those excluded from electronic participation. The 11 chapters covered in the book are not just case studies of a wide range of African countries such as South Africa, Zimbabwe, Rwanda and Nigeria but they try to provide an alternative methodological and theoretical comprehension of the digital divide in Africa, south of the Sahara. Despite well-documented issues associated with the ICTs disparities (See Norris, 2001; van Dijk, 2005; Wilson, 2004; Ragnedda & Muschert, 2013), mobile telephony is growing extortionately in Africa and better still, the rise of smartphones has given (some) citizens easy access to social networking sites. But the digital divide, a multidimensional phenomenon, which mostly reflects on one's race, gender, socioeconomic status or geographical location, stands in the way of progress, be it socio-political or economic. While most regions of the world have enjoyed a robust boom in Internet adoption, Africa has plenty of catch up to do if statistics provided in this collection are anything to go by. What possibilities are available to tame digital disparities in Africa? How are different societies in Africa handling and responding to digital problems? How do Africans understand the digital divide? What innovative methods are being used to provide citizens with access to critical information that can help improve their lives? Experiences from various locations in several sub-Saharan African countries have been carefully selected in this collection with the aim of providing an updated account on the digital divide and its impact in Africa.

A paltry 10 percent of the continent's 1.216 billion citizens has access to online activities even though 70 percent of sub-Saharan Africa's inhabitants are mobile phone subscribers (GSMA, 2017). The number of households with Internet in Africa is pegged at 16 percent in comparison to the global average of 51 percent. With the majority of Internet sites available in English or other colonial languages, several Africans are left out of the digital participation given online activity is limited to those who can read and understand the aforementioned languages. Taking its origins in the mid-1990s (Robinson, DiMaggio and Hargittai 2003; Ting, 2014), the digital divide —the unavoidable void between those with access to information and communication technologies (ICTs) and those without— remains a major problem in Africa. Mobile phones are too expensive for many and accessing mobile Internet is even worse. Therefore, unless affordable smartphones are made available to people with low socioeconomic status, then the digital divide will persist. Not even the east African nation of Tanzania, which is considered to be home to the cheapest rates of mobile internet with citizens folking out 0.89 US dollars for one gig isn't as affordable if you consider the fact that a third of the country's population earn less than a dollar a day (UNICEF, 2009). Worse still, one gig is priced at 5.26 US dollars in South Africa and Nigeria, while Malawi, one of the world's poorest nations asks citizens to pay as much as 5.8 US dollars for one gig. These figures paint a gloomy outlook for Africa. In fact, access to online technologies remains largely for the elite.

But the digital divide is one way of understanding the simmering inequalities that exist not just in African societies but also in communities across the globe. For example, only 21 of South Africa's 55.9 million citizens have access to the Internet. Data access in the country is more expensive than Australia, which perhaps explains why in spite of the overwhelming 3G coverage in most of its urban centres, access to the Internet is still limited. South Africa along with Botswana and Namibia remains one of the most unequal societies in the world according to the World Bank (2017) with factors such as one's gender and ethnicity or level of education attained explaining one's social status. Income inequality, according to Orthofer (2016) is one way of explaining South Africa's social disparities. She notes: "Ten percent of the South African population earn around 55%–60% of all income, compared to only 20-35% in the advanced economies." If you are living in a society that is distinctly unequal, then the presence or potential of the digital divide should be of no surprise to anyone. African countries have been warned they have to "surf the great wave of the information revolution, they will be crushed by it' (Nulens et al., 2001: 318). Warnings such as this are put to test in the volume,

which puts together diverse digital experiences within Africa, contextualizing the challenges they face and how they are dealing with those problems.

Background

Predications in the 90s suggested the presence of online technologies would ensure information would be available "any place" at "any time" (Knoke, 1996). While in some parts of the world, some may consider the prediction accurate, that cannot be the same in sub-Saharan Africa, where access to digital information is bluntly constrained. This situation compels us to conclude the digital divide is still very much present across the continent. The digital divide, which targets certain segments of the population, predominantly in the case of Africa, low-income and rural communities, is not only the gap between those that do and those who do not have access to new forms of information technology, but also the inequalities in using ICTs (Van Dijk, 2006). The digital divide is, indeed, also associated with different skills, motivations, confidence and support in accessing and using ICTs. Separating the "digital" divide from the "knowledge" or "information" divide (see Mwin and Kritzinger, 2016) is becoming majorly impossible in Africa because of the dual social-economic impact potentially attributable to one's failure or reluctance, willingly or not, to gain online connectivity. It however must be noted that gaining online connections does not leave people with plenty of information. While access to information and knowledge are critical prerequisites for human freedom and development (Benkler, 2003), we cannot expect every "connected" citizen to be empowered. In other words, not everyone who has access to digital connectivity is using it for the purposes of acquiring knowledge. Digital inequalities arise in relation to the use of the ICTs and not only to the access to it. Possessing ICTs and accessing the Internet, is a prerequisite to bridge the digital divide, but it is not enough to close digital inequalities, since they depend on the different Internet usage.

Way back in 1960s, Merton (1968) developed the 'Matthew Effect,' which acknowledged the benefits of digital accessibility. The advent of ICTs has been seen positively by many authors (Negroponte 1995), underestimating the social and cultural consequences of its spread. Indeed not everybody can access and use it properly, aggravating inequalities already existing in the society, both at local and international level (Ragnedda 2017). A widening gap emerged, affecting mostly those without access to digital resources. It therefore is nearly impossible especially in the case of sub-Saharan Africa to separate "economic divide" from "the socio-cultural divide" because there is very little to benefit for those excluded from digital

participation. Access to ICTs, argues Flor (2001) facilitates economic growth and remains a permanent ingredient towards universal poverty alleviation. There is need to rethink developmental policies if the direction of the global information age is to be transformed, argue Castells and Himanen (2014). While technological innovation has the power to positively influence the economic direction of a country, very few studies have proven the correlation between digital innovative prowess and improved social welfare (Mansell, 2017). Technological innovation that fails to improve one's social status appears meaningless because it keeps those from low social-economic communities completely excluded from the digital involvement. Most of the people from this category do not have the tech-know-how to be able to make any meaningful contributions in the digital environments, which normally use languages unfamiliar to them. At government level, African countries may find it too costly to participation in technological innovative projects, which require plenty of time to implement, as shown by Bilbao-Osorio (2013)'s research.

Advocates for increased digital participation of African normally fail to understand how complex Africa is. Not every African government considered access to digital information as a right (La Rue, 2011). Policy makers keen to see much of the continent digitally connected do not realise or are not willing to accept that Africa is not a country. While governments in the West, are likely to come up with an African policy, very few acknowledge the complexities involved in implementing such a policy because, for example, each and every African country maintain sovereignty to its laws making policy and regulatory engagements a highly complex affair. Botswana, for example, could be willing to accept technological interventions it sees as beneficial to its citizens while mildly repressive Uganda could decide against that. The digital exclusion of many Africans can therefore only be understood by those willing to acknowledge and historicise ICTs interventions in the Africa within the context of the continent's diverse historical, political and cultural experiences.

Digital Complexities

While many people are concerned with ensuring that the digital gap in Africa is either minimised or eliminated, it is important to note that the main issue at stake is not just limited to accessibility. Indeed, poorer communities in many parts of the continent have limited access to digital technologies due to, as noted, high costs involved or an impoverished infrastructure. But the "problems" that these communities face are larger than digital access or participation. In fact, they could well be happier living without access to online technologies, which means

the so-called digital barriers are an invention of our own. Do these communities see the value of digital participation? If not, then it is rather a waste of time to try and engage them. Some communities are if anything fighting against perceived integration into the so-called modern and civilized world. The government of Botswana for example has been haunting the local Bushmen off their ancestral land, taking their right to choose where and how they live, arguing "services" could not be provided in "remote" areas, which hosts these indigenous tribesmen. Thus, improving people's standards, as proven by Marcus, Weinelt, and Goutrobe (2015)'s study in Brazil, does not always guarantee that they will see the need for digital participation. In fact, Thomas (1988) affirms that the availability of existing technological and infrastructural factors is a key ingredient of digital development.

The African digital sphere is home to several divides, which can be explained by one's age, residence (rural-urban) or gender, for example. With some areas traditionally developed than others, the digital divide in Africa can also be seen through provincial or regional lens. Gender gaps, on the other hands, are continuing to rise across the continent with 28 percent of men accessing the Internet in 2016 compared to just 22 percent female participants. Over 80 percent of Ethiopia's Internet users are males. Another way of looking at digital divide in Africa remains the politically repressive environments that are still prevalent in some parts of the continent. It is for instance very normal for governments to shut down the cyberspace in Africa. In 2017, Togo disrupted Internet communication to supress anti-government street protests while Cameroon launched a 93-day Internet blackout in its English-speaking regions, also to stifle protests. While it is still unclear how these measures could have exacerbated the existing digital divide in these countries research in other parts of the world including China has shown that censorship or continued surveillance paralyzes potential interest in political and social activism (Yang, 2003; Zhou, 2006). The modernization theory also argues that in an openly democratic society competitiveness in key parts of the economy is central to developing information technology (Robinson & Crenshaw, 2002). Thus a government that strictly controls the Internet could be a hindrance to potential digital participation by citizens, who may lose interest or could guard against potential reprisals. Notably, some studies have argued effective Internet control is impossible to implement (See Hachigian, 2001; Boas, 2004).

Taming the divide

There is need to arrest the digital gaps in Africa and several remedies and recommendations have indeed been suggested. Most of these are not in tandem with the realities on the ground,

however. One common recommendation has always been the need to provide adequate infrastructure to enable ICTs development. While this idea is noble, it is important to note that very few digital interventions have involved the local communities to find out what they want. There is danger in suggesting what we feel people want as opposed to what they actually want. It is important to encourage more empirical studies in this area, especially those that are participatory in nature because failure to involve these communities could lead to the implementation of policies that further digitally isolate them. The key to taming the digital divide therefore lies in the ability to improve one's social and economic status for poor communities in Africa will not use the little money they have in their pockets on computers on Internet. Once they have jobs or more money to spend, their priorities will also be significantly altered.

Education is central to eradicating all forms of digital divides in Africa. As noted, Africa is noted to housing diverse cultural and religious beliefs. In some parts of the continent, people are adamant, the Internet is foreign to their cultures. They consider it to be a platform encouraging what they consider anti-social vices including criminality and pornography. You there cannot expect everyone to adopt digital technologies given they view them with suspicion. While many government departments in Africa have adopted ICTs, not all of them are on social media or use email communication. It is important for these people to first realise using these technologies is in their interest otherwise, no or few changes will be realised. If people have communicated for centuries using open, face-to-face communication, why then should they adopt new forms of communication, which they do not understand. Again, some skills such as using a computer are easily taught at schools. Including such skills in primary and secondary school curricula could enhance their digital participation. Again, it should not be forced on them otherwise they simply will just focus on studying and learning what they want.

Decolonizing the Digital

The digital divide perpetuates colonial legacies. New scholarly discussions focusing on the decolonial, postcolonial, or anti-colonial approaches to digital cultures are emerging. Indeed, historical and current processes of colonization, decolonization, neocolonialism are present in digital realms and only a multifaceted research intervention will be able to disentangle way through which they have and continue to isolate Africa from digital participation. Empirical research in needed to investigate how digital decolonisation can serve as a critical prism that

can help us understand the broader implications of transformations ushered in by digital and technological innovations? Decolonization in general terms, refers to the dismantlement of historical injustices associated with colonialism. Scholars who have delved into the decolonial debacle are aplenty (See for example Smith 1999, Shohat, and Stam, 2000; Ndlovu-Gatsheni, 2013; Chasi and Rodny-Gumede 2018). It is important to examine ways through which modernisation, which may come in all shapes and sizes, enjoying the blitz of one-sided marketing escapades, actually propagates structural inequalities among Africans. That is important because modernisation should not be forced on people.

The belief that the digital sphere is the only place where knowledge should be conceived and comprehended is fatally flawed too. Knowledge can be gained through experience for example. Africans gained and shared knowledge though rock paintings, postulates Davis (1984), crucially challenging ideas that only Western civilization can be considered the acceptable source of knowledge. Several other works have questioned the belief that Western knowledge can be applied in all settings of the world, especially Africa or any other indigenous settings. (See Zavala, 2013; Rabaka, 2010; Obeng-Quaidoo, 1985). If rock art provides information or better still, conceptual knowledge on how a group of indigenous people feel or communicate, then surely that should be seen to be inferior because of the perceived lack of digital connotations.

Chapter summaries

At the end of this opening chapter, Massimo Ragnedda comes in in Chapter 2 with a chapter that provides a universal conceptualization of the digital divide before Tenford Chitanana's theoretical contribution to the digital divide with a Zimbabwean narrative in Chapter 3, concluding the opening "Foundations and Theory" section. Next up in Chapter 4, Toks Oyedemi opens the "Social Inclusion and Digital Exclusion" section by analyzing digital cultures in the South Africa context attempting to assess the impact of Internet connectivity for the nation's youths. In Chapter 5, Beschara Karam investigates the link between the digital divide and the film industry in Africa, clarifying on the impact of limited access to films and cinemas before Chika explores digital disparities among rural and urban African communities arguing in Chapter 6 that even though technological advancements are improving economies in Africa, our focus should not be on the perceived lack of access but rather how communities adopt and use these online technologies.

In Chapter 7, Leyton Ncube attempts to evaluate the connections between online divides and sport followers using football-mad Zimbabwe as a case study. In Chapter 8, Mohammed Musa uses Bourdieu's notion of 'capital' to rethink the digital divide in Africa. Chapter 9 opens the third and final section of the book "Cultural and Economic paradigms" inviting Margaret Jjuuko and Joseph Njuguna to use a thematic framing analysis of Imvaho Nshya and The New Times newspapers to explain a gender-based digital exclusion/inclusion of women in Rwandese media. In Chapter 10, Lorenzo Davlit, Tatenda Chatikobo and Mbali Buthelezi have an obligation to find answers to one question: how do mobile phones mediate bonding, bridging and linking social capital in a South African rural areas? Steven Sam critically evaluates the contribution of language literacies to the digital gaps in sub-Saharan Africa in Chapter 11.

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