Mapping the Digital Divide in Africa

Mapping the Digital Divide in Africa

A Mediated Analysis

Edited by Bruce Mutsvairo and Massimo Ragnedda

Table of Contents

Section III   Cultural, Social, and Economic Paradigms

List of Figures and Tables

Figures

Tables

Acknowledgements

Section I

Foundations and Theory

1. Comprehending the Digital Disparities in Africa

Bruce Mutsvairo and Massimo Ragnedda

Abstract

The digital divide has a significant impact on the ways in which information across Africa is developed, shared, and perceived. This opening chapter seeks to analyse the problems and opportunities associated with the ubiquitous digital revolution, providing a cross-disciplinary examination of digital disparities inhibiting social, political, and economic progress across Africa. It also attempts to conceptualise the digital divide in an African setting. It will introduce some of the main concepts associated with the digital divide and analyse them from an African perspective. The chapter also provides specific examples of how various countries in Africa are dealing with problems associated with the digital exclusion of their citizens. This contribution also provides the justification, aims, and objectives of the book before ending with chapter summaries of the collection.

Keywords: Africa, Digital Divide, Challenges, Inequalities, Internet

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 book's twelve chapters are not just case studies presenting the challenges of the digital divide across a wide range of African countries including South Africa, Zimbabwe, Rwanda, and Nigeria, but the book provides an alternative methodological and theoretical comprehension of the digital divide in Africa, south of the Sahara. We sought to provide an updated account of the problems posed by the ubiquitous divides among

Africans following previous attempts to highlight these predicaments by several scholars (see Mutula, 2005, 2005b; Okoli and Mbarika, 2003). This book's aim is not to showcase the positive strides of the ICT revolution in Africa. If anything, it seeks to demonstrate, regardless of what others may call 'positives', the extent to which ICTs have exacerbated inequalities in Africa. Despite well-documented issues associated with the ICTs disparities (see Norris, 2001; van Dijk, 2005; Wilson, 2004; Ragnedda and 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 sociopolitical or economic. While most regions of the world have enjoyed a robust boom in Internet adoption, Africa has plenty of catching up to do according to the statistics provided in this collection. 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 which could 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.

While all 54 African nations are said to have Internet connectivity (Jensen, 2002), a paltry ten 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 sixteen 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, the digital divide will persist.

While acknowledging the potential of new media technologies to transform businesses and education in Africa and perhaps to influence

entrepreneurship and economic growth, we are keen to emphasise that social and economic quagmires such as broadband costs, which continue to be beyond the reach of most African citizens, remain rampant. Consequently, as demonstrated by Lopez, Jose, and Rogy (2017), only 64 percent of people living in the Sahelian region of Africa – which includes countries such as the Central African Republic, Chad, Mali, Niger, and Guinea – have a working mobile phone, compared with 71% in the rest of sub-Saharan Africa, and 95% worldwide. Not even the east African nation of Tanzania, which is considered to be home to the cheapest rates of mobile Internet in Africa, with citizens paying 0.89 US dollars for one gig, offers affordable access to the net if one considers 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, as argued by Mutsvairo (2016) access to online technologies remains largely for the elite, which explains why few among us, while eager to embrace it, are less keen on celebrating the so-called digital explosion.

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 percent of South Africa's 55.9 million citizens have access to the Internet. Data access in the country is more expensive than in 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. Orthofer (2016) 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 no surprise to anyone. African countries have been warned that if they do not '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 the test in this volume, which collects diverse digital experiences within Africa, contextualising 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 somewhat accurate, that cannot be the same in sub-Saharan Africa, where access to digital information is bluntly constrained. This situation compels us to conclude that 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 and sometimes even urban communities, is not only the gap between those with and without 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 must be noted, however, that gaining online connections does not provide 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, 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 different Internet usage. Besides not all initiatives are a success. Many African universities, for example, have established online-based distance curriculums highlighting some of the benefits of the ICT revolution. However, several problems – from the non-availability of digitalised books for students and staff to sporadic Internet lapses (see Aluochu, 2006; Echezona and Ugwuanyi, 2010) – are commonplace, leaving many questioning the real benefits of the ICT revolution.

Back in the 1960s, Merton (1968) developed the 'Matthew Effect', which acknowledged the benefits of digital accessibility. The advent of ICTs has positively been seen 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 societies, both at local and international levels (Ragnedda, 2017). A widening gap has 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 sociocultural divide' because there is very little 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 influence the economic direction of a country positively, 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 digital involvement. Most of the people in this category do not have the technological know-how to be able to make any meaningful contributions in digital environments, which normally use languages unfamiliar to them. At the government level, African countries may find it too costly to participate 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 nations normally fail to understand how complex Africa is. Not every African government considers access to digital information 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 maintains 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 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 to engage them. Some communities are, if anything, fighting against perceived integration into the so-called modern and civilised 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 the ´remote´ areas which hosts these indigenous tribespeople. 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 historically developed compared with others, the digital divide in Africa can also be seen through a provincial or regional lens. Gender gaps, on the other hand, 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 suppress anti-government street protests, while Cameroon launched a 93-day Internet blackout in its English-speaking regions, also to stifle protests. Similar shutdowns were reported in the Democratic Republic of Congo and Zimbabwe in 2018 and 2019. 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 paralyses potential interest in

political and social activism (Yang, 2003; Zhou, 2006). The modernisation theory also argues that, in an openly democratic society, competitiveness in key parts of the economy is central to developing information technology (Robinson and 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).

Decolonising the Digital

The digital divide perpetuates colonial legacies. Before the colonial arrival in the 1870s, Africans used different forms of communication, chief among them rock paintings and talking drums. Upon their arrival, Europeans introduced new, modern communication systems such as the telegraph and telephone. It must be noted, however, that these innovations, just like the current ICT penetration in Africa, were never fully meant to benefit Africans. Instead, their role was to facilitate the colonisation of Africa. They made it easy for colonial demagogues to communicate with one another. For example, it would be absurd to think that, when mining magnate Cecil John Rhodes constructed the railway line linking South Africa and present-day Zimbabwe and Zambia, he did it for the greater good of African citizens living in these countries. As a fervent believer in British imperialism, Rhodes used the new railway line to push for his economic and supremacist agenda. New technological innovations in Africa should also be seen in this light. Just like the colonial legacy controlled the school and university curriculums in Africa, the perceived competence and benefits of ICTs are likely overstated to undermine Afrocentric forms of communication.

New scholarly discussions focusing on the decolonial, postcolonial, or anti-colonial approaches to digital cultures are emerging. Indeed, historical and current processes of colonisation, decolonisation, neocolonialism, and recolonisation are present in digital realms and only a multifaceted research intervention will be able to disentangle the ways in which they have and continue to isolate Africa from digital participation. Empirical research is 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. Decolonisation, 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 the 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. This 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 through rock paintings, postulates Davis (1984), crucially challenging ideas that only Western civilisation 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 indigenous settings (see Zavala, 2013; Rabaka, 2010; Obeng-Quaidoo, 1985). If rock art provides information or, better still, conceptual knowledge as to how a group of indigenous people feel or communicate, then surely that should not be seen to be inferior because of the perceived lack of digital connotations.

Taming the Divide

There is a need to arrest the digital gaps in Africa and several remedies and recommendations have indeed been suggested. Most of these, however, are not in tandem with the realities on the ground. 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 and 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 houses diverse cultural and religious beliefs. In some parts of the continent, people are adamant that the Internet is foreign to their cultures. Some consider it to be a platform encouraging what they see as

anti-social vices including criminality and pornography. One therefore cannot expect everyone to adopt digital technologies given that they are sometimes viewed 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 that using these technologies is in their interest, if that is the case; 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.

There is also a need to 'Africanise' technology. For example, despite the collapse of Apartheid system in South Africa in 1994, the country's education systems have not changed (Heleta, 2016). Many African countries have centred their curriculums on models introduced by the colonial master. But if, as Shizha (2013) argues, before the colonial arrivals, Africans were educated using knowledge obtained from indigenous cultural methods and practices, why are many Africans shying away from that identity? In fact, Higgs (2012) proposes that African educational systems should redesign their curricula to reflect the power of indigenous practices and attributes. Unfortunately, not everyone agrees with this approach. Efforts to redesign the colonial curriculum for primary and secondary education in Zimbabwe, for example, have been resisted, as the majority of the country's citizen believe colonial education is superior. The ex-minister, who was in charge of pushing for curriculum reform became the most hated public official before he was replaced in 2017. Many parents in Zimbabwe choose for their children to sit for exams set in Cambridge, UK at the expense of those run by a local body. While the locally run exams are not without problems, they need popular support. This is, however, not the case, as the majority of the people seem to be stuck in colonial hangover.

Chapter Summaries

The main theoretical contribution made by this book pertains largely to its holistic critique of the digital divide, which not only identifies but also attempts to historicise the problems associated with ICT revolution in Africa. Methodologically, several diverse approaches ranging from an inductive

approach underpinned by a grounded theoretical framework (Corbin and Strauss, 2007) to a constructionist ontological stance (Bryman, 2012) are adopted in this volume. Ethnographic accounts as well as qualitative interviews are also used in this book, whose chapters are divided between theoretical and empirical foundations. This is significant because the digital divide is a huge problem across Africa. Thus, it needs to be analysed using various approaches to avoid one-sided conclusions and interpretations. As a way forward, the enabling liberative capacity of ICTs should be thwarted while any efforts to foil the extending digital demises among Africans should take note of the people's needs and their technological abilities. International institutions such as the United Nations should adopt country-specific ICT programmes rather than drafting generalised 'African policy' documents, which fail to take into consideration the diverse technological disparities among African countries. African governments should also reject attempts to be seen as one country. More importantly, we do not think policies to address the digital divide should be crafted in Brussels or Washington. Instead, we strongly believe there should be a multifaceted involvement of Africans in policy formation.

At the end of this opening chapter, Massimo Ragnedda provides a universal conceptualisation of the digital divide, also making particular references to African cases in Chapter 2. Tenford Chitanana turns to theory in Chapter 3 to examine existing digital differences between global conceptualisations of the digital divide and notable local experiences from urban and rural Zimbabwe seeking to make a theoretical contribution to studies in Afrocentric digital inequalities. In Chapter 4, Mohammed Musa concludes the 'Foundations and Theory' section by disputing the contribution of the digital divide to democratic movements in Africa, arguing that such notions reject the potential influence of human agency to popular grassroots movements while also thwarting the contributory role of communicative capitalism towards Afrocentric political activism. Next up, in Chapter 5, Toks Oyedemi opens the 'Social Inclusion and Digital Exclusion' section by analysing digital cultures in the South African context by assessing the impact of Internet connectivity for the nation's youths. In Chapter 6, Lyton Ncube evaluates the connections between online divides and sport followers using football-mad Zimbabwe as a case study. In Chapter 7, Margaret Jjuuko and Joseph Njuguna 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 to conclude this section. Beschara Karam opens the 'Cultural, Social, and Economic Paradigms' section in Chapter 8 by investigating the link between the digital divide and the film industry

in Africa, clarifying the impact of limited access to films and cinema. Chika *Anyanwu* explores the social and economic realities and digital disparities among rural and urban African communities in Chapter 9, arguing 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 10, Mbali Buthelezi and Lorenzo Dalvit seek to find answers to one question: how do mobile phones mediate bonding, bridging, and linking social capital in a South African rural area? In Chapter 11, Steven Sam critically evaluates the contribution of language literacies to the existing digital gaps in sub-Saharan Africa. The volume ends in Chapter 12 with Sara F. Brouwer's analysis of digital disparities inherent in Kenya's mobile agriculture.

Bibliography

Aluoch, A.A. (2006). 'The search for affordable quality Internet connectivity for African universities'. *AAU Newsletter, 12*(3), 8.

Benkler, Y. (2003). 'Freedom in the Commons: Towards a Political Economy of Information'. *Duke Law Journal, 52,* 1245-1276.

Bilbao-Osorio (2013). A new digital divide. World Economic Forum.

Boas, T.C. (2004). 'Weaving the authoritarian web'. *Current History, 103*(677), 438.

Castells, M. and Himanen P. (2014). *Reconceptualizing Development in the Global Information Age.* London: Oxford University Press.

Chasi, C. and Rodny-Gumede, Y. (2018) 'Decolonising Communication Studies: Advancing the discipline through fermenting participation studies'. In B. Mutsvairo (Ed.), *The Palgrave Handbook for Media and Communication Research in a Decolonising Africa* (55-71). London: Palgrave.

Chiumbu, S.H. (2008). Understanding the Role and Influence of External Actors and Ideas in African Information, Communication and Technology Policies: The African Information Society Initiative (PhD Thesis). Oslo, Norway: University of Oslo.

Echezona, R.I. and Ugwuanyi, C. F. (2010). 'African University Libraries and Internet Connectivity: Challenges and the Way Forward (2010)'. *Library Philosophy and Practice (e-journal), 421,* 1-13.

Flor, A.G. (2001). 'ICT and poverty: The indisputable link'. *Third Asia Development Forum on 'Regional Economic Cooperation in Asia and the Pacific'.* Bangkok, Thailand, 11-14 June 2001. Bangkok, Thailand. Asian Development Bank.

GSMA (2017). *The mobile economy: Sub-Saharan Africa.* Retrieved 8 December 2017, from https://www.gsma.com/mobileeconomy/sub-saharan-africa-2017

Hachigian, N. (2001). 'China's cyber-strategy'. *Foreign Affairs, 80*(2), 118-136.

Jensen, M. (2002). 'Information and communications (ICTs) in Africa–A Status Report'. *Third Task Force Meeting of the UN ICT Taskforce.* New York, September 2002–October 2002. New York, United Nations Headquarters.

La Rue, F. (2011). Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression. United Nations General Assembly, New York.

Lopez, C., Jose, R., and Rogy, M. (2017). *Enabling the digital revolution in Sub-Saharan Africa: what role for policy reforms?* (*English*). AFCW3 Economic Update. Washington, D.C.: World Bank Group. Retrieved 10 December 2017 from http://documents.worldbank.org/curated/en/822981493749732711/Enabling-the-digital-revolution-in-Sub-Saharan-Africa-what-role-for-policy-reforms

Mansell, R. (2017). 'The mediation of hope: communication technologies and inequality in perspective'. *International Journal of Communication*, *11*, 20. ISSN 1932–8036.

Marcus, A., Weinelt, B., and Goutrobe, A. (2015). 'Expanding Participation and Boosting Growth: The Infrastructure Needs of the Digital Economy'. *World Economics Forum.* Retrieved 8 December 2017 from http://www3.weforum.org/docs/WEFUSA_DigitalInfrastructure_Report2015.pdf

Mutsvairo, B. (2016). *Digital Activism in the Social Media Era: Critical Reflections on Emerging Trends in sub-Saharan Africa.* (ed) London: Palgrave Macmillan.

Mutula, S.M. (2005). 'Peculiarities of the Digital Divide in sub-Saharan Africa'. *Program: Electronic Library and Information Systems*, *39*(2), 122-138.

Mutula, S.M. (2005b). 'Bridging the Digital Divide Through E-Governance: A Proposal for Africa's Libraries and Information Centres'. *The Electronic Library, 23*(*5*), 591- 602.

Mwin, E.N. and Kritzinger, E. (2016). 2nd African conference on information systems & technology (ACIST) 2016, Information Systems & Technology Innovation for a Digital Africa: 5-6 July 2016. Executive Conference Centre, Ghana Institute of Management and Public Administration, Accra, Ghana. Retrieved from https://easychair.org/conferences/?conf=acist2016

Ndlovu-Gatsheni, S.J. (2013). *Coloniality of Power in Postcolonial Africa: Myths of Decolonisation.* Dakar, Senegal: CODESRIA.

Negroponte, N. (1995). *Being Digital.* New York: Alfred A. Knopf.

Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide.* Cambridge, UK: Cambridge University Press.

Nulens, G., Hafkin, N., Van Audenhove, L., and Cammaerts, B. (2001). *The digital divide in developing countries: towards an information society in Africa.* Brussels: Brussels University Press.

Okoli, Chitu and Mbarika Victor A. (2003). 'A Framework for Assessing E-Commerce in SubSaharan Africa'. *Journal of Global Information Technology Management*, *6*(*3*), 44-66.

Orthofer A. (2016, October 7). 'South Africa needs to fix its dangerously wide wealth gap'. *The Conversation.* Retrieved 8 December 2017 from https://theconversation.com/south-africa-needs-to-fix-its-dangerously-wide-wealth-gap-66355

Rabaka, R. (2010). *Against Epistemic Apartheid: W.E.B. Du Bois and the Disciplinary Decadence of Sociology.* New York: Lexington Books.

Ragnedda, M. and Muschert G.W. (2013). *The Digital Divide: The internet and social inequality in international perspective.* London: Routledge.

Ragnedda, M. (2017). *The third Digital Divide: a Weberian approach to digital inequalities.* Oxford: Routledge.

Robinson, J. P., DiMaggio, P., and Hargittai, E. (2003). 'New Social Survey Perspectives on the Digital Divide'. *IT & Society, 1*(*5*), 1-22.

Robinson, K.K. and Crenshaw, E.M. (2002). 'Post-industrial transformations and cyberspace: A cross-national analysis of Internet development'. *Social Science Research, 31*(*3*), 334-363.

Shohat, E. and Stam, R. (Eds.) (2000). *Unthinking Eurocentrism: Causes, Manifestations, and Solutions.* London: Routledge.

Smith, L.T. (1999). *Decolonizing Methodologies: Research and Indigenous Peoples.* London and New York: Zed Books.

Ting, C. (2016). 'The role of awareness in Internet non-use: experiences from rural China'. *Information Development*, *32*(*3*), 327-337.

Thomas, F. (1988). 'The Politics of growth: The German telephone system'. In M. Renate and T.P. Hughes (Eds.), *The development of large technical systems* (179-213). Boulder, CO: Westview Press.

UNICEF (2009). *Childhood Poverty in Tanzania: Deprivations and Disparities in Child Well-Being.* Retrieved 7 December 2017 from https://www.unicef.org/socialpolicy/files/Tanzania_FinalChildPovertyStudy.pdf

van Dijk, J.A. (2005). *The deepening divide. Inequality in the information society.* Thousand Oaks, CA: Sage.

van Dijk, J.A. (2006). 'Digital divide research, achievements and shortcomings'. *Poetics*, *34*(*4-5*), 221-235.

Wilson III, E.J. (2004). *The information revolution and developing countries.* Cambridge, MA: MIT Press.

Yang, G. (2003). 'The Internet and civil society in China: A preliminary assessment'. *Journal of Contemporary China, 12*(*36*), 453-475.

Zavala, M. (2013). 'What do we mean by decolonizing research strategies? Lessons from decolonizing, indigenous research projects in New Zealand and Latin America'. *Decolonization: Indigeneity, Education & Society*, *2*(*1*), 55-71.

Zhou, Y. (2006). *Historicizing online politics: Telegraphy, the Internet, and Political Participation in China.* Stanford, CA: Stanford University Press.

About the authors

Bruce Mutsvairo is an Associate Professor in Journalism Innovation at the University of Technology Sydney. He earned his PhD at Leiden University, The Netherlands.

Massimo Ragnedda is a senior lecturer in Mass Communications at Northumbria University, UK. Prior to joining Northumbria University, he worked at the University of Sassari from 2006 to 2012. During this time, he worked as a lecturer and supervisor of research, published widely and delivered presentations in several countries across the world. He earned his PhD from the University of Sassari.

2.   Conceptualising the digital divide

Massimo Ragnedda

Abstract

The aim of this chapter is to discuss the change of perspectives in under-standing and attempting to bridge the digital divide, and to reconceptu-alise this concept by offering a nuanced theoretical approach to analyse the rise and persistence of digital inequalities. The chapter will focus on the development of the digital divide, explaining how it is not the simple access to the Internet itself (first level of digital divide) that determines digital inequalities, but rather the motivations, skills, and purpose of use (second level of digital divide) that influence online inequalities. The chapter goes beyond the binary approach of 'have' and 'have not', by introducing and discussing the third level of digital divide, seen as the social and cultural benefits deriving from accessing and using the Internet, stressing how social and digital inequalities are intertwined. The third level of digital divide focuses on the social consequences of Internet usage and it moves away the focus from the digital arena, by addressing it as a social issue.

Keywords: Digital Divide, Inequalities, Gaps, ICTs, Africa, Online

Introduction

The term 'digital divide' emerged in the 1990s to define inequalities in access to the Information Communication Technologies (ICTs), framing it as a matter of having or not having access to ICTs (Compaine, 2001). The first empirical researches have shown how some specific socio-demographic variables, such as employment status, income, education level, geographic location, ethnicity, age, gender, and family structure, influenced the access to the ICTs, creating a digital gap or divide among citizens (domestic digital divide) or countries (global digital divide). Such inequalities have widened

during the years, despite the fact that the World Summit on the Information Society, held in Geneva (2003) and Tunis (2005) has stressed the idea that no one should be left out from the benefits offered by the information society. In some continents (such as Africa), the disparities in terms of access and use of ICTs is wider than in others (such as Europe). The importance of the Internet as a prerequisite for economic and social development, has been further stressed by the United Nations in 2015 when the Internet was included among its goals for resolving the most persistent social and economic challenges of our time (UN, 2015, 15). Indeed, in a digitally enabled society, part of the human activities depends on how we access, generate, and process information. It is then worth asking how the phenomenon of digital divide and digital inequalities has been approached and analyzed both by scholars and policy-makers and how such approaches have changed over the years. Hence, the aim of this chapter is to discuss the change of perspectives in analyzing and attempting to bridge the digital divide, and to reconceptualise this concept by offering a nuanced theoretical approach to analyse the rise and persistence of digital inequalities.

In order to shed light on this issue, I shall draw on some of the most important researches that have been carried out on this topic in the last two decades, exploring the rise of the digital divide as a matter of public concern. The chapter will start by defining the digital divide, taking into account its multidimensionality, and stressing how the apparently simple matter of 'accessibility' is a sophisticated phenomenon. The chapter will underline the development of the digital divide by focusing on the shift from the first to the second level of digital divide, discussing how researchers have moved their focus from inequalities in access to inequalities in use, going beyond the black-and-white approach of 'have' and 'have not'. The chapter will then introduce and discuss the third level of digital divide, seen as the social and cultural benefits deriving from accessing and using the Internet, stressing how social and digital inequalities are intertwined. Finally, conclusions will be drawn and some recommendations and further direction for future work will be also made.

The Origin and the Evolution of the Digital Divide

Although the digital divide is a relatively new phenomenon, research on the digital divide has 'created its own literature and [has] gained the reputation as a legitimate academic field' (Wang, McLee, and Kuo, 2011, 323). However, not only is there not a clear and commonly accepted definition (Epstein et