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THE SOCIAL MEDIA REVOLUTION IN AFRICA- CHALLENGES AND OPPORTUNITIES



NSD-S Hub, *Via Madonna del Pantano, Lago Patria - Italy 80014*

www.TheSouthernHub.org

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THE SOCIAL MEDIA REVOLUTION IN AFRICA – CHALLENGES AND OPPORTUNITIES

EXECUTIVE SUMMARY

Beginning at the turn of the century and gathering force in the last decade, an information and communication technology (ICT) revolution has swept across Africa. Fueled by the expansion of wireless networks, submarine cable connections, and mobile broadband services, this revolution has afforded access to the internet and social media to the majority of Africans. The lives of Africans have been changed in many ways, including in the political sphere. In Tunisia and The Gambia, use of the internet and social media by civil society groups led to the toppling of longtime authoritarian rulers. Elsewhere, the internet and social media gave Africans tools to monitor elections and challenge corruption. Many African governments have embraced the internet as a medium for improving government services, and they have applied a light regulatory touch. Several other governments have sought to limit access to the internet, especially in times of political tension, and a few have put laws and regulations in place that would inhibit free access to ICT. Extremist groups have also exploited the internet and social media, but the new communications technologies may have harmed those groups as much as helped them. It would be in the interest of the countries of NATO to promote the use of the internet and social media by African governments and civil society. There are several areas in which Western cooperation and assistance would be particularly helpful and mutually advantageous.

BACKGROUND

ICT is an umbrella term that includes the internet, cellular telephone networks, and social-media platforms. ICT'S impact on Africa has been revolutionary. Africa's ICT revolution was ignited by three major developments:

- **Wireless Networks:** In 1994, New York City had more telephone subscribers than all of Africa. Since then, landline connections in Africa have increased slowly, but mobile connections have proliferated rapidly. At the end of June 2017, there were 995.85 million mobile subscriptions in Africa. (The number of unique subscribers is considerably less because some users possess multiple devices. Nevertheless, the majority of Africa's 1.2 billion people are now using mobile services.)
- **Submarine Cables:** The deployment of mobile networks was necessary but not sufficient to bring the ICT revolution to Africa. Africa also needed to be connected to the rest of the world, and that process took considerably longer. Before 2009, only 16 African coastal countries were connected to a submarine cable system. By 2016, 42 submarine cables were connected to 33 African coastal countries at 79 landing points (see Figure 1).
- **Mobile Broadband Services:** Africa's ICT revolution began with the advent of basic mobile services, but has been supercharged by the rapid deployment of mobile broadband. Mobile broadband connections accounted for one-quarter of total mobile connections at the end of 2015. In 2016, those connections increased by 36 percent and were complemented by a 15-percent increase in fixed broadband connections. The rapid expansion of mobile broadband can be expected to continue.

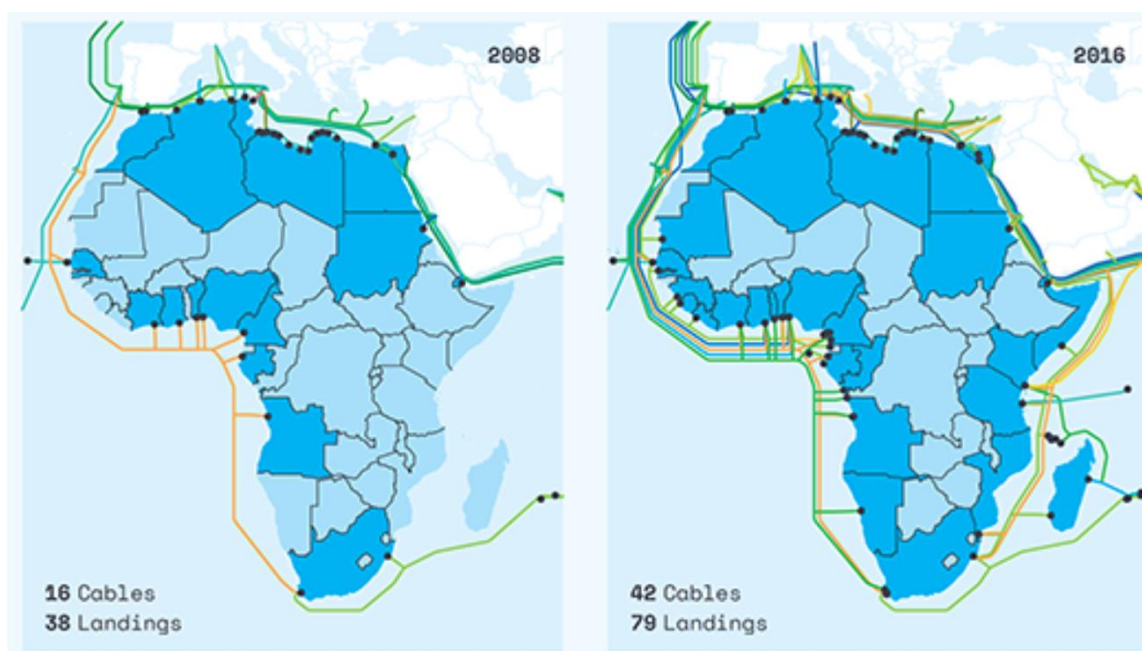


Figure 1. Map of Submarine Cable Connections in 2008 and 2016. (Source: Jayne Miller, “The Evolution of Submarine Cable Connectivity in Africa,” *TeleGeography* (blog), February 22, 2017, <https://blog.telegeography.com/the-evolution-of-submarine-cable-connectivity-in-africa>.)

Together, these three major developments have in Africa produced a cycle of what Professor Clayton Christensen of Harvard Business School calls “disruptive innovation.” According to Christensen, “an innovation that is disruptive allows a whole new population of consumers at the bottom of a market access to a product or service that was historically only accessible to consumers with a lot of money or a lot of skill.” Thus, in Africa, cell phones did not compete against landlines, which were unavailable to all but a few, but rather against the absence of any personal communications capability. Later, smartphones did not compete against computer-based fixed broadband connections, which were unavailable to all but a few, but against the absence of any possibility of connecting to the internet.

One consultancy projects that by 2022 Africa will have 1 billion mobile broadband subscriptions. Modern communications technologies—and thereby social media—already touch, directly or indirectly, the majority of Africans.

CIVIL SOCIETY AND SOCIAL MEDIA

A difference between Africa’s media landscape and that of the rest of the world is that in Africa there are fewer media alternatives. In noting that television news reaches only 60 million households in sub-Saharan Africa, the World Economic Forum headlined, “Why Social Media is the Only Media in Africa.” In 2017, the Facebook user base in Africa was reported to be 170 million, of whom 94 percent accessed the social network through mobile devices.

Perhaps more than in the rest of the world, social media have become an important means of political expression and advocacy in Africa. In its 2015 study, “How Africa Tweets,” the Portland consultancy reported that political hashtags made up 8.67 percent of all hashtags across the African continent, a proportion higher than in the United States, UK, France, or Canada. It is instructive to look at a few examples of how Africans and African organizations have used social media to express protests, organize politically, and call attention to corrupt practices:

- **Revolution in Tunisia:** Tarek el-Tayeb Mohamed Bouazizi was a Tunisian street vendor who set himself on fire on December 17, 2010, in protest against police repression. His self-immolation became a catalyst for the Tunisian Revolution and the events of the so-called Arab Spring more widely. Despite the arrest of activists, news of state oppression and police brutality and announcements of times and venues for street protests spread rapidly and widely via social media. Twitter was used extensively, and over 30,000 videos were posted on YouTube. The stream of images of violence and protest fueled public outrage that ended with the flight of President Zine al-Abidine Ben Ali into exile.
- **The Gambia—Social Media Overtakes a Dictator:** Yahya Jammeh ruled the West African nation of The Gambia for more than 20 years before the election in December 2016. With the mainstream media dominated by Jammeh’s regime, the opposition turned to social media during the election campaign. The Gambia Youth and Women’s Forum, a public Facebook group with 55,000 members, endorsed the opposition coalition. The opposition United Democratic Party (UDP) created over a dozen WhatsApp groups, and the number of those groups nearly doubled when other parties joined the UDP in a coalition. The Gambian diaspora raised over \$50,000 in 24 days through GoFundMe, a crowd-funding tool. The regime belatedly recognized the power of social media and attempted, unsuccessfully, to block WhatsApp. Later, it closed down the internet 12 hours before the polls opened. These censorship efforts failed, and one of Africa’s most brutal dictators was toppled through the election.
- **Zimbabwe—#ThisFlag:** In April 2016, a Zimbabwean pastor, Evan Mawarire, draped himself in the national flag and posted a video on Facebook that went viral and launched a nationwide social media protest campaign. Soon, Zimbabweans at home and in the diaspora began posting videos of themselves wrapped in the national flag and using the hashtag #ThisFlag to call on Twitter for government reforms to address the numerous serious issues facing the country. Government authorities sought unsuccessfully to prosecute Mawarire, but he eventually fled the country. His influence since his return has been limited.
- **Ushahidi—Homegrown App Goes Global:** When widespread violence broke out following the 2007 elections in Kenya, an ad hoc group of technologists and bloggers decided to produce software to organize and map the myriad reports of violence that were coming in through the internet and mobile telephones. The result was Ushahidi (“witness” in Swahili), a crowd-mapping application that compiled all the incoming reports into a coherent, comprehensive, and verifiable picture. The evidence compiled via Ushahidi, which helped focus the international community on the post-electoral violence in Kenya, was instrumental in the indictments of senior Kenyan political figures by the International Criminal Court. Since then, Ushahidi has been used for additional purposes, including tracking of endangered species on the African savannah and guiding search-and-rescue teams following the 2010 Haitian earthquake.
- **Anti-corruption and Transparency Efforts:** Corruption in Africa is widespread and constitutes an obstacle to development. Corrupt practices thrive when political systems are opaque and inaccessible. Citizens of several African countries are working through social media to expose corruption and increase political transparency. One example is Corruption Watch, a South African chapter of Transparency International. Corruption Watch offers an online platform for citizens to report instances of corruption in a safe and secure way. Another example is Shine Your Eye, an initiative of Enough is Enough Nigeria. Shine Your Eye allows citizens to follow online the activities of elected officials, connect with those officials, and share concerns.

GOVERNMENTS AND SOCIAL MEDIA

Most African governments have opened their telecommunications markets to competition and in the past employed a light regulatory touch. Ethiopia, Africa’s second most populous country, is the exception. Ethio Telecom, its state-owned company, is a monopoly and Africa’s largest mobile operator in terms of

subscriptions. Change may be in the wind even in Ethiopia as the government announced on June 5, 2018, that it would open a minority share in Ethio Telecom to domestic and foreign investors.

Recently, several African governments have shifted course and sought to limit access to the internet for political purposes. The case of The Gambia has already been mentioned. Preceding that, in January 2015 the Mobutu government in the Democratic Republic of the Congo ordered telecommunications providers to shut down the internet and text-messaging services for several days during anti-government protests. The Ministry of the Interior in the Republic of the Congo (Brazzaville) ordered a telephone and internet shutdown for “reasons of security and national safety” one day before that country’s election on March 20, 2016. Similar moves have occurred in Cameroon, Chad, Gabon, and Uganda.

In addition to these episodic attempts at internet censorship, a few countries are limiting ICT access in a more comprehensive fashion:

- Eritrea has been called “the world’s most censored country.” The government limits access to mobile telephony and the internet by keeping prices relatively high and rationing service. As of mid-2017, mobile penetration was about 7.4 percent. Only about 3 percent of households owned a computer, and only 2 percent of households had access to the internet. With these access limitations in place, the government effectively censors internet traffic without having to do so actively.
- The Zambia Information and Communications Technology Authority (ZICTA) has threatened those who violate its loosely defined standards of decency on the internet with prosecution. ZICTA’s Director for Consumer Protection made the threat explicit: “I always wish to remind people that with great power comes great responsibility. When you sit in your room on your iPad or your phone and you start commenting, writing, and rubbishing people, we will catch up with you.” Chisala threatened violators with prosecution, loss of internet access, and confiscation of devices.
- On June 11, 2018, the government of Tanzania ordered all unregistered bloggers and online forums to suspend their websites immediately or face criminal prosecution. Existing regulations in that country make it compulsory for bloggers and owners of other online forums to pay license fees of up to \$900.
- On May 30, 2018, Uganda’s parliament was reported to have imposed a tax on the use of social media services such as Facebook, Twitter, and WhatsApp. One human rights activist stated, “It (tax) is a new tool of stifling free expression and citizen organizing ... It’s intended to curtail the ever increasing central role of social media in political organizing.”

Other governments have taken a different track, embracing the internet and social media as mechanisms for improving access by citizens to the benefits of government.

- Some of the most interesting e-government efforts have been implemented at the grass-roots level. In Kenya, Chief Francis Kariuki, head of the 29,000-strong Lanet-Umoja community, provides a running Twitter feed that disseminates news; transmits guidance (e.g., fill holes in your fields so that animals are not hurt); and helps people find lost children, animals, and personal possessions.
- Other e-government ventures are unfolding at the national level:

Kenya has established the “eCitizen” platform that performs over 100 government-to-citizen and government-to-business services, including driver’s licenses and passport applications, for 4 million registered users. The system, which processes more than 300,000 transactions monthly, has led to significant savings in compliance costs.

Rwanda’s “irembo” eGovernment system is a public-private partnership that offers more than 40 services, including tax filing and tax payment. The system serves more than 100,000 users each month. Rwanda’s goal is to expand *irembo* to include around 100 services by 2020.

Ghana has established a National Data Center that serves as a centralized repository for the storage, management, and dissemination of government data and provides a common platform for ministries,

departments, and other public sector organizations. Online portals to the center facilitate applications for birth certificates, establishment of businesses, and filing police reports, among other things.

VIOLENT EXTREMISM AND SOCIAL MEDIA

Much has been written about the use of social media and the internet by violent extremist movements worldwide. Both al-Shabaab in Somalia and East Africa and Boko Haram in Nigeria and the Lake Chad region have made extensive use of new media for propaganda, recruitment, fundraising, funds transfer, issuing threats, monitoring enemies, and ideological debate. Over time, however, use of the internet and social media have increasingly become liabilities for extremist groups because the new technologies have:

- Exposed extremist leaders to security risks and targeting by counterinsurgency forces;
- Revealed deep internal schisms within the organizations;
- Made it impossible for extremist leaders to control their groups' images and messaging;
- Provided platforms for coverage of intra-group violence, such as al-Shabaab's bloody 2013 purge; and
- Proven unreliable as communications vehicles because social media providers such as Twitter increasingly act quickly to shut down extremist accounts.

These factors led one scholar and specialist on the Horn of Africa, Ken Menkhaus, to conclude that "New communication technologies have hurt al-Shabaab as much as they have helped it."¹ As a result, violent extremist groups increasingly have an ambivalent relationship with new communications technologies, valuing them for communications globally, but seeking to ban or control them within their organizations and within territories under their administration.

A POSSIBLE WAY AHEAD

Despite the widespread and rapid progress that African countries have made in taking advantage of the ICT revolution, there is still a great deal more to be done. A 2016 report by GSM Intelligence based on data through 2015 stated that nearly 600 million people in Africa were not yet within reach of high-speed mobile internet connectivity and depended on 2G networks for their connectivity. Perhaps even more noteworthy, 320 million people in sub-Saharan Africa and 140 million on North Africa were covered by mobile broadband but did not use it. GSMA Intelligence conducted a survey that included interviews with approximately 1,000 people in 13 African countries. Respondents put forth four primary reasons for their failure to use the internet when it was available:

- A lack of awareness and of locally relevant content was the most important barrier to adoption in North Africa and the second biggest barrier in sub-Saharan Africa.
- A lack of digital skills was identified as the biggest barrier in sub-Saharan Africa and the second biggest in North Africa.
- Mobile services remain unaffordable for many, given the low levels of income in Africa.
- A significant gender gap exists in internet usage: women have far lower access to the internet than men.

Through their programs of engagement with and assistance to the countries of Africa, the International Community (IC) may play significant roles in reducing these and other barriers:

¹ Menkhaus, Ken "Al-Shabaab and Social Media: A Double-Edged Sword," *Brown Journal of World Affairs* XX (Spring/Summer 2014), Issue II: 323.

- Above all, Western governments may support African governments to promote the protection of the right of freedom of expression on online media. This right was affirmed by the UN Human Rights Council in its resolution of June 27, 2016.
- Investments in technology education, particularly of girls and women, may provide millions of Africans with the skills needed for participation in the internet economy.
- Through internet-based courses, Western universities may offer to African students ICT training not available at brick-and-mortar institutions of higher learning in Africa.
- Western media and production companies may partner with their African analogues to create locally relevant content for internet and social media applications. These partnerships would meet the demands of the African markets and could also prove profitable to both Western and African businesses.

In addition, the governments and private sectors in countries of the IC should not neglect opportunities to reach out to African audiences through the internet and social media. These powerful communications tools are underutilized as vehicles for the transmission of values such as democracy, the rule of law, and free enterprise. As the supporting nations and those on the continent of Africa grow closer together through trade, industry and migration, shared values will become ever more important.

SOURCES

- Adegoke, Yinka. "Social Media Has Become the Media in Africa." *Quartz Africa*, February 26, 2017. <https://qz.com/919213/social-media-has-become-the-media-in-africa/>.
- Adegoke, Yinka. "Why Social Media Is the Only Media in Africa." World Economic Forum, March 6, 2017. <https://www.weforum.org/agenda/2017/03/why-social-media-is-the-only-media-in-africa>.
- Biryabarema, Elias. "Uganda Imposes Tax on Social Media Use." *Reuters*, June 5, 2018. <https://www.reuters.com/article/us-uganda-internet/uganda-imposes-tax-on-social-media-use-idUSKCN1IW2IK>
- Burchard, Stephanie. "Leaving Nothing to Chance: Social Media and the 2016 Republic of Congo Elections." *Africa Watch*, March 24, 2016. <https://www.ida.org/idamedia/Corporate/Files/Publications/AfricaWatch/africawatch-March-24-2016-vol10.pdf>.
- Camara, Sanna. "Gambia: Social Media Overwhelms a 20-Year Dictator." *World Policy*, December 9, 2016. <https://worldpolicy.org/2016/12/09/gambia-social-media-overwhelms-a-20-year-dictator/>.
- Cheeseman, Nic. "The Uses and Abuses of Social Media in Africa." *Democracy in Africa*, May 7, 2017. <http://democracyin africa.org/uses-abuses-social-media-africa/>.
- Chidi, Amaechi M., and Ihediwa Nkemjika Chimee. "Social Media and Political Change in the 21st Century: The African Experience." *Glocalism: Journal of Culture, Politics and Innovation*, Issue 2016, 1. <http://www.glocalismjournal.net/issues/networks-and-new-media/articles/social-media-and-political-change-in-the-21st-century-the-african-experience.kl#T4>.
- Christensen, Clayton. "Key Concepts: Disruptive Innovation," 2018. <http://www.claytonchristensen.com/key-concepts/>.
- Cross, Charlotte. "African Governments Versus Social Media: Why the Uneasy Relationship?" *The Conversation*, March 6, 2017. <https://theconversation.com/african-governments-versus-social-media-why-the-uneasy-relationship-73292>.
- Dafoe, Allan, and Jason Lyall. "From Cell Phones to Conflict? Reflections on the Emerging ICT–Political Conflict Research Agenda." *Journal of Peace Research* 52 (3) (2015): 401–13. <http://journals.sagepub.com/doi/10.1177/0022343314563653>.
- Dixon, Robyn. "Kenyan Chief's Twitter Feed Helps Round Up Stolen Cows and Lost Phones." *Los Angeles Times*, September 1, 2015. <http://www.latimes.com/world/great-reads/la-fg-c1-kenya-twitter-20150901-story.html>
- Essoungou, André-Michel. "Africa's Social Media Revolution." *BizCommunity*, December 13, 2010. <http://www.bizcommunity.africa/Article/410/16/55280.html>.
- Groden, Claire. "These Countries Have the World's Worst Internet Access." *Fortune*, October 6, 2015. <http://fortune.com/2015/10/06/worst-internet-access/>.
- Grossman, Guy, Macartan Humphreys, and Gabriella Sacramone-Lutz. "Information Technology and Political Engagement: Mixed Evidence from Uganda." 2016. https://www.researchgate.net/publication/303818782_Information_Technology_and_Political_Engagement_Mixed_Evidence_from_Uganda
- GSMA. "The Mobile Economy: Africa 2016." GSM Association, 2016. <https://www.gsma.com/mobileeconomy/africa/>.
- GSMA. "The Mobile Economy: Sub-Saharan Africa 2017." GSM Association, 2017. <https://www.gsma.com/mobileeconomy/sub-saharan-africa-2017/>.

- Human Rights Council, United Nations General Assembly. “The Promotion, Protection, and Enjoyment of Human Rights on the Internet.” Oral Revisions as of 30 June, A/HRC/32/L.20, June 27, 2016.
- Jeffrey, Simon. “Ushahidi: Crowdmapping Collective That Exposed Kenyan Election Killings.” *The Guardian*, April 7, 2011. <https://www.theguardian.com/news/blog/2011/apr/07/ushahidi-crowdmap-kenya-violence-hague>.
- Kalyango Jr., and Benjamin Adu-Kumi. “Impact of Social Media on Political Mobilization in East and West Africa.” Paper presented at the 6th Annual Forum, Saudi Association for Media and Communication, King Saud University, Riyadh, April 15–16, 2012. <http://www.globalmediajournal.com/open-access/impact-of-social-media-on-political-mobilization-in-east-and-west-africa.pdf>.
- Katie, Tim. “Understanding Eritrea’s Exceptionally Limited Internet Access.” *ICTworks*, August 1, 2014. <https://www.ictworks.org/understanding-eritreas-exceptionally-limited-internet-access/#.WyfiBqDJGUm>.
- Kende, Michael *Promoting the African Internet Economy*, Internet Society, 2017, <https://www.internetsociety.org/resources/doc/2017/africa-internet-economy/>
- LT. “ZICTA Claims They Can Read Your WhatsApp Messages and Disable any Communication Device.” *Lucastimes.com*, June 5, 2018. <https://www.lusakatimes.com/2017/04/20/zicta-claims-can-read-whatsup-messages-disable-communication-device/>.
- Lucini, Barbara Arese. “Connected Society: Consumer Barriers to Mobile Internet Adoption in Africa.” *GSM Association*, 2016. <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/07/Consumer-Barriers-to-mobile-internet-adoption-in-Africa.pdf>.
- Maasho, Aaron. “Ethiopia Opens Up Telecoms, Airline to Private, Foreign Investors.” *Reuters*, June 5, 2018. <https://www.reuters.com/article/us-ethiopia-privatisation/ethiopia-opens-up-telecoms-airline-to-private-foreign-investors-idUSKCN1J12JJ>.
- Margolin, Madison. “Inside Eritrea: The World’s Most Censored Country.” *Motherboard, Vice News*, July 20, 2016. https://motherboard.vice.com/en_us/article/gv5dqx/inside-eritrea-the-worlds-most-censored-country.
- McGrath, Chloë. “What Everyone’s Getting Wrong About Zimbabwe’s #ThisFlag Movement.” *Foreign Policy*, July 21, 2016. <http://foreignpolicy.com/2016/07/21/what-everyones-getting-wrong-about-zimbabwes-thisflag-movement/>.
- Menkhaus, Ken “Al-Shabaab and Social Media: A Double-Edged Sword.” *Brown Journal of World Affairs*, Spring/Summer 2014, vol. XX, Issue II, 323.
- Mensah, Isaac Kofi. “Overview of E-government Adoption and Implementation in Ghana.” *International Scholarly and Scientific Research & Innovation* 10 (1) (2016): 61–72. <https://waset.org/publications/10003316/overview-of-e-government-adoption-and-implementation-in-ghana>.
- Miller, Jayne. “The Evolution of Submarine Cable Connectivity in Africa.” *TeleGeography* (blog), February 22, 2017. <https://blog.telegeography.com/the-evolution-of-submarine-cable-connectivity-in-africa>.
- Mourdoukoutas, Eleni. “Africa: The Hashtag Revolution Gaining Ground.” *AllAfrica*, April 6, 2018. <http://allafrica.com/stories/201804160285.html>.
- Néwanakilala, Fumbuka. “Tanzania Orders All Unregistered Bloggers to Take Down Their Sites.” *Reuters*, June 11, 2018. <https://preview.tinyurl.com/ycwmne75>.
- Noelle, Eva. “Social Media and its Influence on Democratization in Africa.” *International Policy Digest*, August 11, 2016. <https://intpolicydigest.org/2016/08/11/social-media-influence-democratization-africa/>.

- Novitske, Lexi, and Dale Mathias. "From Africa to the United States, the Revolution Begins Online." *The Hill*, May 24, 2018. <http://thehill.com/opinion/technology/381833-from-africa-to-the-united-states-the-revolution-begins-online>.
- Nunes, Antonio. "How New Undersea Cable Will Boost Africa's Connectivity and Growth." *BusinessDay*, November 9, 2018. <https://www.businesslive.co.za/bd/opinion/2017-11-09-how-new-undersea-cable-will-boost-africas-connectivity-and-growth/>.
- Portland Communications. "Politics and the Twitter Revolution." Portland Communications, n.d. Accessed June 2018, <https://portland-communications.com/publications/politics-and-the-twitter-revolution/>.
- Reed, Matthew. "Africa Market Outlook 2018: Moving from Communications Services to Digital Services." Ovum, 2017. http://images.intelligence.informa.com/Web/InformaUKLimited/%7Bb7aac08e-08af-44dc-92c2-70c78cc8e8ea%7D_Africa-Market-Outlook-2018.pdf.
- Shapshak, Toby. "Facebook Has 170 Million Africa Users, Mostly on Mobile." *Forbes*, April 5, 2017. <https://www.forbes.com/sites/tobyshapshak/2017/04/05/facebook-has-170m-african-users-mostly-on-mobile/#58dda49553dc>.
- Ward, George F. "Disruptive Innovation in Africa—Competing Against Non-Consumption" IDA Document D-4839. Alexandria, VA: Institute for Defense Analyses, February 14, 2013. <https://www.ida.org/idamedia/Corporate/Files/Publications/Africa/D-4839.pdf>.
- Wille, John, and Catherine Masinde. "Home-Grown Technology Firms Help Drive eGovernment Expansion in East Africa." *Private sector Development* (blog), *World Bank*, June 6, 2018. <http://blogs.worldbank.org/psd/home-grown-technology-firms-help-drive-egovernment-expansion-east-africa>.
- Zenn, Jacob. "Electronic Jihad in Nigeria: How Boko Haram Is Using Social Media." *Terrorism Monitor* 15, Issue 23 (December 9, 2017). <https://jamestown.org/program/electronic-jihad-nigeria-boko-haram-using-social-media/>.

Websites

- <https://www.usshahidi.com/about>
- <https://www.corruptionwatch.org.za/report-corruption/>
- <https://www.shineyoureye.org/search/>