The Necessity of Suspicion: Treading with Caution through a Nigerian Medical Landscape

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Abstract

The Covid-19 pandemic came to magnify issues that were already an intrinsic part of the Nigerian medical landscape. Growing out of historical processes, uncertainty, ambiguity, doubt, vigilance, and suspicion have become intensely manifest characteristics of everyday engagements in Nigeria. In their search for cures, protection, and health, people have learnt to always keep open a critical and sceptical eye – to never assume that things are what they appear to be – to continuously presume that ulterior and less benevolent motives might be in play. Suspicion – as a vigilant and sceptical mode of interacting with the world – has become intrinsic to the pursuit of safe ways forward. By entering the Nigerian medical landscape in the wake of the coronavirus, this article unravels how suspicion through historical processes has become an inherent and necessary, as well as sound, aspect of navigating the emergent Nigerian medical landscape.

Keywords: Anthropology, Covid-19, medicine, Nigeria, poison, suspicion, uncertainty

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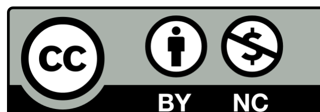

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About the Author
Ulrika Trovalla holds a PhD in Cultural Anthropology. She currently works as a researcher at the Department of Cultural Anthropology and Ethnology and as a coordinator of the Forum for Africa Studies, Uppsala University. A long-standing focus of her research is uncertainty and unpredictability as predicaments of human life and how materiality becomes part of peoples' struggles to understand and decipher the world at hand. Her work brings to the forefront the ways in which people's efforts to predict or divine the future and viable ways forward, as well as the past and the present, seldom reach any final conclusion or clear-cut answers. Her research is an acknowledgment of life as intrinsically ambiguous, emphasizing the way in which the world often becomes known through suspicions rather than solid facts.

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Heightened Uncertainties

On 27th February 2020, Nigeria had its first confirmed case of Covid-19. Just hours later, an atmosphere of panic overwhelmed the message service WhatsApp, as citizens increasingly felt that a veil of obscurity was hiding the global spread and whereabouts of the invisible virus. The virus could literally be anywhere without anybody being any the wiser. Widely shared messages warned: "The virus is closer to us than we think" (Romm 2020). In the mounting fear of how the invisible virus was spreading through the country through unaware human bodies, a commentator elaborated: "If the tests are carried out in all the nooks and crannies of Nigeria, you will be surprised about the number of people that would test positive to the virus" (Bilesanmi 2020).

In April, reports began coming in about a growing number of deaths occurring in Northern Nigeria. Gravediggers reported that they were burying over a dozen bodies a day of people who had died from what authorities referred to as "mysterious deaths" (AFP/Omni 2020). In an interview, a Nigerian politician opened by narrating a story of how one of his old teachers had died in circumstances "that no one is able to explain". He went on to clarify:

> When there is a pattern of deaths like this, any responsible government, whether local, state or federal, must quickly move to investigate because the deaths have become so rampant; from morning to evening, they are burying corpses. (Bilesanmi 2020)

At the beginning of May, a local Covid-19 team reported that the "coronavirus was most likely to be blamed for the mysterious mass deaths" (AFP/Omni 2020).[1]

These were times when questions rather than answers were multiplying and suspicions rather than facts characterized people's understanding of the world. With the arrival of the novel coronavirus in Nigeria, just as happened globally, the world emerged as a highly ambiguous and uncertain affair. It was very difficult to solidify bits and pieces of information into matters of fact – to know the world – and with any certainty to be able to decipher potential threats ahead. An intensified vigilance against being targeted by a concealed malevolence took the stage, while caution and suspicion increasingly became essential modes of survival. In this vein, the Covid-19 pandemic came to magnify issues that were already an intrinsic part of the Nigerian medical landscape.

Growing out of historical processes, uncertainty, ambiguity, doubt, alertness, and suspicion have become intensely manifest characteristics of everyday engagements in Nigeria. In their search for cures, protection, and health, people have learnt to always keep open a critical and sceptical eye – to never assume that things are what they appear to be – to continuously presume that ulterior and less benevolent motives might be in play. As Julie Soleil Archambault has described, people have found themselves in a permanent state of "epistemological uncertainty tied to pervasive suspicion; one that begs endless questions", which, "in turn, fuels and is fuelled by a deep sense that truth is elusive and that all is not what it seems" (Archambault 2017, 15). People have come to relentlessly question whether it is medicine or poison they are consuming, whether medical professionals are trying to harm or heal them, whether they are being exploited for somebody else's benefit, whether ulterior motives exist behind medical interventions, and so on. Suspicion – as a vigilant and sceptical mode of interacting with the world (see Newell 2019, 320; Orock 2019, 566; Trovalla and Trovalla 2022, 140;

[1] The team leader explained: "Even if the mass deaths were initially related to other ailments, coronavirus is presently the major cause of the mass deaths in Kano" (AFP/Omni 2020).

West and Sanders 2003, 7)[2] – has become intrinsic to the pursuit of safe ways forward. By entering the Nigerian medical landscape in the wake of the coronavirus, this article unravels how suspicion has become an inherent and necessary, as well as sound, aspect of navigating the emergent Nigerian medical landscape.

Ambiguous Practices and Scientific Uncertainties

As the coronavirus quickly spread — merely through human contact — to almost all corners of the world, the novel Covid-19 pandemic came to teach people throughout the world how deeply interconnected we are, not only through commercial dependency chains but also through our bodies. We gained a realization of a bodily global closeness and connectedness, as well as a revelation that this connection was not necessarily benign. All over the globe, the pandemic redefined people's bodies as potential containers of the coronavirus. New fears and suspicions toward other bodies became an intrinsic part of everyday life, materialized through such practices as lockdowns, social distancing, the wearing of facemasks, and the use of hand sanitisers, which constantly reminded people of the possibility that the virus, and potential death, could be residing in any body.

In Nigeria, the coronavirus was initially seen as something that entered the nation through the airports, via the bodily vessels of wealthy travellers who moved across the globe (Augoye 2020).[3] Imaginings of how the movements of the rich and powerful brought the virus from the airports into the general population continuously amplified fears of the possible omnipresence of the novel coronavirus. Peoples' bodies and movements, and the spaces where bodies potentially met, came in a very clear way to be redefined and infused with new fears and suspicions. At the same time, the government rolled out new practices – in the form of fumigations and lockdowns – across the Nigerian nation, resulting in a cascade of new questions and a steady stream of ambiguous answers, all of which highlighted the uncertainty of the present (cf. Thiongane 2020).

At the beginning of April, the governor of Plateau State (in central Nigeria) commenced a seven-day statewide lockdown and the fumigation of streets, markets, and public places. He urged inhabitants to stay at home to guarantee the success of the fumigation (Ikwe 2020). He stated: "Although no case has been recorded yet in Plateau State as at today, we cannot relax. We have to remain vigilant and proactive. That is why we announced a total lockdown of the state" (Ikwe 2020). As the state was locked down for fumigation despite any known cases, people started asking questions. A tailor in the city of Jos posed the rhetorical question: "What is the essence of fumigating since no case of the Covid-19 has been recorded in the state?" (Gupiya 2020). While pointing out that one could not even know whether, in fact, any cases existed in Jos or not, since the government was doing no testing, one of the state's doctors, an epidemiologist, concluded:

> Other nations had used fumigation as a way of slowing down the transmission of this disease and I believe the state government is 'copying and pasting' this process which I believe has no basis. … I therefore feel that this effort of fumigating the state even though with good intentions might just be an effort in wasting soap and water on the streets. (Jurit 2020)

In an opinion piece, another Nigerian doctor wrote: "But fumigating the state? What does it even mean? How did they come up with this

[2] For a more extended discussion around suspicion, see the introduction to this special issue.

[3] While suspicions spiralled globally concerning bodies that might carry the virus, specific bodies came to be targeted as particularly suspicious (See Al-Amin 2020; Davidson 2020).

crazy idea? What exactly is the purpose of this fumigation?" (Bott 2020). He went on to explain what he thought about the fumigation practice:

> We know that the corona virus can live on surfaces for 3–5 days. This means that even without fumigation, the virus will die anyway. This means a lockdown lasting one week is more than adequate to rid public places of the virus. …. What is the logic behind fumigating roads, please? If there are contaminated surfaces, won't those surfaces be in offices, banking halls, hospitals, homes, churches, mosques, eateries, and other such places? If we really want to fumigate, shouldn't we target those places? … For a state that has not recorded any Covid-19 case yet, what exactly are we fumigating? (Bott 2020)

The state's traders, on the other hand, who for their survival depended on being able to take to the streets to sell, suspected that the rich and powerful were using the practice of locking down the state for fumigation as a way of making the not-yet-infected poor masses suffer. A trader explained:

> It's like the government is against the poor man. Could it be that because top government officials and high-ranking politicians are mostly the victims of the Coronavirus that they have decided to vent their anger by coming with such directives to deal with the common man? (Gupiya 2020).

Lockdowns and fumigations heightened people's suspicions. What was the real purpose behind them? What were they concealing? What kind of actions did they serve to block? Questions multiplied as people tried to understand what was going on behind the scenes. In April, in the midst of worldwide lockdowns, the global news headlines reported that telecommunication towers and other equipment thought to be connected to 5G wireless technology had been targeted and set on fire in the United Kingdom, Netherlands, Italy, Belgium, and Cyprus. The torching of installations was a reaction to people's suspicion that it was this new, superfast technology that had brought on the pandemic. One cornerstone of this theory was that the city of Wuhan in China, where the first cases of Covid-19 were reported, was also pioneering in the expansion of 5G technology. Along with the rolling out of the network in the city, according to the reasoning, the coronavirus was also disseminated, and as the network spread over the world, so did the virus. Motivated by the 5G theory, which was broadcast through social media, people under lockdown went out to fight the pandemic through the use of fire (see Cerulus 2020; Chan et al. 2020; Hamilton 2020; Parveen and Waterson 2020).

As people were trying to understand and give meaning to the pandemic, millenarianism and apocalyptic thoughts concerning the connections between 5G and Covid-19 quickly spread around the globe, tuning in to already common suspicions toward "emergent surveillance technologies" and "governmental abuse of power" (Sturm and Albrecht 2021). In Nigeria, different fears around 5G connected to both the spread of Covid-19 and future vaccines against Covid-19. People suspected that the implementation of 5G was part of advanced plans to track people, decrease the global population, and gain control of the world economy, either by China, Bill Gates, or the Antichrist (Gagliardone et al. 2013, 8, 10, 13; Wonodi et al. 2022, 2116). On April 8, 2020, Chris Oyakhilome, a Nigerian pastor and influencer who founded the Nigerian mega-church Christ Embassy in 1987, delivered a sermon that quickly achieved several thousand views on YouTube (Ndinojuo 2020, 102, 105). As different versions of the sermon also entered Facebook, its spread exploded

and, in mid-April, the ten most-shared versions alone had reached over 43.6 million people (Bruns et al. 2020, 22). Oyakhilome had preached that 5G technology was a tool for spreading the coronavirus pandemic and that Covid-19, in turn, was being used to bring about a mass vaccination campaign geared towards controlling the human race and restructuring the known world (Augoye 2020; Bruns et al. 2020, 22; Egbunike 2020; Ndinojuo 2020).

The Antichrist was, in Oyakhilome's words, using a "military grade level of connectivity, 5G" to spread the coronavirus and make people sick. This illness would scare people into taking the vaccine: a vaccine that would transform the human race and bring about the "NWO" — the New World Order (Oyakhilome 2020a). A few days after his initial 5G sermon, Oyakhilome published yet another video, where he clarified the purpose of 5G technology and the vaccine. It was all part of "the final union between man and machines". As God had created man in the name of Jesus, Satan was in the process of creating his own novel man, who would be part machine and part human. Through the vaccine, people would be transformed into descendants of Satan; a new breed of human beings who would be able to independently connect and communicate through 5G technology (Oyakhilome 2020b).

For Oyakhilome, the lockdowns in Nigeria were not intended to protect people from the coronavirus but to make sure that the federal government could install 5G behind people's backs (Augoye 2020). He said: "You'll find that while you're in your house, they're planting the structure. They would not want to be seen or affected by traffic or by protest. The cleanest way is to keep you in your house" (Augoye 2020). On the same theme, he questioned the motivations behind the idea of social distancing. He considered that the idea of distancing was not related to avoiding viral infection; instead,

> [t]hat is the easiest way to prevent protests. This is in the playbook. It's there, it's part of the agenda. So when people think that they can infect themselves, they stay away from each other. This is what social distancing is about. So we don't communicate. (Augoye 2020)

Oyakhilome was not alone; other Nigerian religious leaders posed similar suspicions. David Oyedepo from Living Faith Worldwide questioned the reasons behind churches being under lockdown, and called it a "demonic attack". He stated: "I can smell a rat. The forces of darkness are influencing people at various levels because the growth of the church is the greatest headache of the devil" (Egbunike 2020; see also Ndinojuo 2020, 103–104). In late March, a video started to circulate on social media in which crowds were shouting: "The malam said: 'There is no corona!' We also say: 'There is no corona!'" (Hoechner 2020). They were referring to sermons of Shaykh Sani Yahaya Jingir, a Muslim scholar. Shaykh Jingir declared that the pandemic was just one of many attempts by the West to circumscribe Islamic practices. His argument was given increasing weight as pilgrimages to Mecca were stopped, Nigeria's states banned congregational prayers, and states were put under lockdown and closed their borders. He was not alone in his fears; from wandering street preachers to musicians, a great variety of people followed in his footsteps and publicly voiced similar suspicions (Hoechner 2020).

All over the globe the lockdowns, just as in Nigeria, raised many suspicions (Dettmer 2021; Shackle 2021). Oyakhilome himself kept coming back to the fact that the validity of his suspicions was underscored by the ambiguity of statements and the unscientific voices of official sources. He narrated:

> You cannot hide from a virus by staying in your house. Not after they told us it can live for four days

> on a dry surface. If it can live for four days on a dry surface, that means it can be borne of wind. That means it is airborne. If it is airborne, you can't hide in your house. The bundle of contradictions is insulting to our intelligence. It's like they forget what they said the previous day, they forget what they said the week before. Then they come up with something else. If you put all they've been saying together, they just don't measure up. They are very unscientific. It's unbelievable that in a world of so much knowledge, this type of deception can actually take place. Listen, I'm not creating a conspiracy theory, I'm saying there is a conspiracy. I'm not theorizing. A theory is something that is not yet proven, so this is not a theory, it's a proven reality. (Augoye 2020)

These were times when many contradictory messages were out there. Globally, it was acknowledged over and over again how little was known about the novel virus – its origin, how it moved around the globe, how it entered and affected bodies, how it mutated, and the efficacy of potential cures. "It is a virus that has tricked us many times and it will trick us again. It does not behave as we thought,"[4] one disillusioned epidemiologist stated (*Svt nyheter* 2020). The scientific uncertainties were endless, and the answers that solidified into facts were very few. In relation to theories around Covid-19 in Nigeria, a media and communication scholar noted:

> Nothing fans the flames of conspiracies theories [more] than during uncertainties occasioned like those we are witnessing. This occurrence is exceptionally dire due to the paucity of reliable scientific unanimity on the spread, containment, and long-term social and economic effects of Covid-19 on the society. With the world at odds on how best to tackle the pandemic, conspiracy theorists advanced different origins, management, and reasons for its spread. (Ndinojuo 2020, 99; see also Hassan 2020; Padayachee and Toit 2020)

Studying the global spread of conspiracy theories, researchers similarly deduced that because of the way 'the mystery disease' and its spread were clad in uncertainties, it was only natural that a corresponding 'infodemic' followed in its footsteps (Bruns et al. 2020, 12–13; cf. Department of Global Communications 2020). It was a time when numerous scientists, with many questions and few answers, along with such globally influential voices as presidents, religious leaders, and artists – were putting forward their interpretations of reality, and terms like 'fake news' and 'alternative facts' were becoming part of the common vocabulary.[5] As contradictory narratives multiplied and it appeared almost impossible to solidify anything into conclusive facts, a suspicious and sceptical mode became an ever-increasing part of everyday life worldwide.

[4] My translation.

[5] In March 2020, Donald Trump, then president of the United States of America, declared that the Food and Drug Administration (FDA) had approved chloroquine for the treatment of Covid-19. He described chloroquine as "very powerful". The US FDA was quick to deny that it had approved the drug for use against Covid-19. As a common malaria treatment, chloroquine is readily available in Nigeria, and the reactions after Trump's endorsements were immediate: a rush for chloroquine followed, together with a price hike. While the Ministry of Health issued a warning that there was no "hard evidence that chloroquine is effective in prevention or management of coronavirus infection", reports of people having overdosed on that drug were coming in (Busari and Adebayo 2020). With people being hospitalised, the chloroquine issue was defined as "health misinformation" (Hassan 2020).

'Experimental Subjects'

What were the contents of a potential Covid-19 vaccine? Would it be safe, or tainted by ulterior motives? For Oyakhilome, the lockdowns were all part of an extensive plan of the Antichrist to inoculate the population with the maliciously engineered Covid-19 vaccine. He was not alone in raising suspicions towards potential future vaccines. A survey conducted in 19 countries in June 2020, asking people whether they were likely to take a Covid-19 vaccine that had been proven safe and effective, showed that Nigerian respondents were much less likely than other respondents to answer yes (Lazarus et al. 2020; Ratzan et al. 2020).

In December 2020, as Covid-19 vaccines were granted emergency approval in Europe and the United States, other voices raised concerns. As clinical trials on these vaccines had not been done on the Nigerian population, Nigerian researchers warned against taking these vaccines since there was no way of knowing what they would do to the Nigerian body and what could potentially be long-term side effects. Professor Emeje, a molecular pharmaceutical researcher, asked: "Who told us these vaccines we are running to beg for will be efficacious in Nigerians? Was Nigeria a centre for the clinical trials?" (Moshood 2020). Professor Omilabu, a director at the Centre for Human and Zoonotic Virology, explained: "There is something in our body that is preventing COVID-19 from having the kind of effects it is having in Europe and America. … If we derail that balance with the vaccine, it may spell doom for us" (Moshood 2020).

As Africa had lower reported death rates, people questioned why the West insisted on bringing the vaccine here, but also how and why the production of the vaccine had gone so quickly (Wonodi et al. 2022, 2119). A lot of the suspicions surrounding the Covid-19 vaccine came to connect to Bill Gates and his suspected part in an elaborate conspiracy that was using the vaccine not only for personal profit, but to track people and decrease the global population. The vaccine came to be construed as part of an attack on Africa by Gates and the West and was referred to in terms of being "lethal and toxic to depopulate Africa" (Gagliardone et al. 2021, 10, 13; see also Wonodi et al. 2022, 2117). A Nigerian citizen summed up people's intense feelings of vulnerability in relation to the vaccine with his question: "Is the vaccine to cure, prevent or even kill, we don't know?" (Wonodi et al. 2022, 2119).

As people struggled to decipher the world that was unfolding around them, suspicions materialized and tapped into old power structures, antagonistic relationships, wrongdoings, atrocities, evils, and fears. At the beginning of April 2020, when the French doctor Jean-Paul Mira, head of the intensive care unit at the Cochin Hospital in Paris, made the suggestion on French television that Africa would be the perfect place for trials of a potential Covid-19 vaccine, it increased the ambiguity and suspicion that were directed towards practices surrounding Covid-19 vaccines (Busari and Wojazer 2020; Wong 2020). He declared:

> If I could be provocative, shouldn't we do this study in Africa where there are no masks, treatment, or intensive care, a little bit like we did in certain AIDS studies or with prostitutes? We tried things on prostitutes because they are highly exposed and do not protect themselves. (Wong 2020)

The other doctor present during the program, Camille Locht, a research director at the French National Institute of Health and Medical Research (Inserm), responded: "You are right. We are thinking of a parallel study in Africa to use this same kind of approach with the BCG placebos" (Wong 2020), a tuberculosis vaccination they argued protected children against respiratory infections like Covid-19.

> There was an outcry in France and across the world at large against any European countries and scientists using Africans as their 'lab rats' (Busari and Wojazer 2020; Mabonga 2020; Otinga 2020; Thiongane 2020). An organization working with young Africans in diaspora in France declared that African people "are not laboratory rats on which one can try out pharmaceutical products without any guarantee for their safety!" (Busari and Wojazer 2020). The director-general of the World Health Organization, Tedros Adhanom Ghebreyesus, called the statements of the two doctors a "hangover from a colonial mentality" (Busari and Wojazer 2020). In Kenya, Senator Moses Wetangu'la appealed to all African leaders to "resist any attempt to use our people as guinea pigs" (Mabonga 2020). Leading football players spoke of this in outrage. Ivorian player Didier Drogba declared: "Africa isn't a testing lab. I would like to vividly denounce those demeaning, false and most of all deeply racist words" (Wong 2020). Senegalese striker Demba Ba wrote: "Welcome to the West, where white people believe themselves to be so superior that racism and debility become commonplace" (Wong 2020).

The two doctors' conversations echoed old practices of the West of using the African continent as its medical laboratory and heightened the suspicions around potential future vaccines. Along with European empire building and colonial endeavours, tropical medicine emerged as a subfield within medicine in the 1880s and 1890s. It was a time when 'racial science' influenced the practitioners of tropical medicine (Neill 2012, 5), and it was through 'experimental methods' that it was assumed the purportedly less-developed African societies would be transformed and modernized. In this vein, "development came to be seen as an experiment, and Africa as a laboratory" (Bonneuil 2000, 280), an ideology that came to play an important part in shaping the future of tropical medicine (Bonneuil 2000, 258). Deborah Neill describes how vulnerable colonial populations were forced into drug-therapy trials when the desire of the colonial powers to develop cures took prominence (2012, 179–181). Helen Tilley similarly notes that if the colonial medical officials "had to deceive, coerce, manipulate, or even threaten in order to achieve their therapeutic or investigative goals, they sometimes would" (2016, 747).

Tilley underscores that by examining the ethical dimensions of colonial medical practices in research and treatment campaigns, we expose the ethics that surround present international health interventions. She writes: "[H]arms produced during the colonial period bring to light various lessons for the present since these patterns linger and continue to affect people's perceptions and practices" (2016, 743). The past is echoed in Western research practices on the African continent in the tension between treatment and research (Neill 2012, 3–4, 181). As the public healthcare infrastructure has been dismantled on the African continent, people have in many ways been excluded from the flow of modernity; for many, medical trials have become the only path open to receiving the type of biomedical healthcare that is available in the West. In their search for the medicine that they need, people have, in this way, found themselves reintegrated into the international healthcare system "as experimental subjects" (Nguyen 2011, 441–442). As legal scholar Remigius Nwabueze puts it: "[P]overty and disease have combined to produce abundant research subjects. Cheap and readily available research subjects facilitate the conduct of clinical trials" (2016, 112; see also Okonta 2014, 190).

From colonial medical practices emerged deeply engrained fears of medical campaigns, practices, and medicines originating in the West, which still echo in contemporary experiences of international health interventions on the African continent (Tilley 2016, 749). The French doctors' suggestion tapped into experiences of previous trials, ongoing trials, and fears that people on the continent would, in future trials, once again turn into the world's guinea pigs (Thiongane 2020). In Nigeria, the suggestion that potential Covid-19 vaccines should be tested on African populations tapped into very specific experiences of international medical trials and campaigns. In 1996, during an epidemic of meningococcal meningitis in Kano State in Northern Nigeria, the US multinational pharmaceutical company Pfizer saw an opportunity to try out its experimental antibiotic drug Trovan. Pfizer recruited 200 affected children for this trial. While half of the children were given Trovan, the other half were given Ceftriaxone, a standard treatment for meningitis. The study was concluded in three weeks, and, while the epidemic continued, the Pfizer team returned to America. Five children who were given Trovan and six who were given Ceftriaxone died. Besides the 11 children who died, others were reported to have been left deformed for life (see Ezeome and Simon 2010, 1–2; Obadare 2005, 278; Okonta 2014, 189; Renne 2010, 107–108; Wise 2001, 194).

Pfizer received a lot of criticism for its ethical conduct during the trial. It was accused of having obtained neither proper ethical clearance from the Nigerian authorities nor proper consent from the children's parents (Okonta 2014, 189; Ezeome and Simon 2010, 2; Wise 2001, 194). It was questioned for not informing the parents about the potential side effects of the drugs (Wise 2001, 194), that Trovan was an experimental drug, that the children were part of an experimental drug trial, and that approved treatment was available for free at the same hospital (Lenzer 2007, 1181, 2011, 387; Okonta 2014, 189). It was also accused of using too low a dose of Ceftriaxone. In the end, Pfizer was taken to court for "causing harm to the children in both arms of the trial" under the allegation "that a number of the children either died or were left deaf, mute, or brain damaged" (Lenzer 2007, 1181).

The US Food and Drug Administration (FDA) never approved Trovan for treating meningitis, and in 1999 it issued a warning that Trovan could cause not only severe liver toxicity but also death. The FDA severely constrained the potential uses of the drug, and the drug was banned in Europe (Ezeome and Simon 2010, 7; Lenzer 2007, 1181, 2011, 387; Wise 2001, 194). In 2011, a settlement was reached between Pfizer and families of children who had been part of the trial (Lenzer 2011, 387). In Northern Nigeria, the experience of the Pfizer trial has shaped people's perceptions of the international pharmaceutical industry and Western medical interventions in a profound way. Formed already through people's encounters with colonial medicine, a permanent underlying suspicion has become prevalent in people's engagements with Western medical interventions (Hoechner 2020; Obadare 2005, 275–278) – a suspicion that in 2003 was triggered in relation to another vaccine.

This happened during the World Health Organization (WHO)'s vaccination campaign, 'Kick Polio out of Africa' (Ghinai et al. 2013, 1144; Obadare 2005, 278; Renne 2010, 108–109; Yahya 2007, 203). While people started to question whether the oral polio vaccine administered to Nigerian children was safe, a very heated dispute emerged about the potentially deliberate and targeted harmfulness of the polio vaccine. During the controversy, old colonial 'metropole/periphery' tropes came into play and spawned 'new fissures', which materialized in a very deep-seated fear among people that forces were out there that, in fact, wanted them eliminated (Obadare 2005, 275, 278). Suspicions were raised that the vaccine had been adulterated to reduce the mainly Muslim population in Northern Nigeria. As the conflict intensified, citizens and community

leaders in Northern Nigeria were positioned on one side of the heated discussion, with the WHO, the United Nations Children's Fund, and Nigeria's federal authorities on the other (Obadare 2005, 265–266; Yahya 2007, 185, 188). With the deepened conflict, vaccinations were brought to a standstill, whilst a series of investigations were conducted by different parties into the vaccine's safety and its possible contamination (Renne 2006, 1861f; Yahya 2007, 185–186, 191).

At the peak of the conflict, Dr. Ibrahim Datti Ahmed, the secretary general of the Supreme Council for Sharia in Nigeria, declared:

> We believe that modern-day Hitlers have deliberately adulterated the oral polio vaccines with anti-fertility drugs and contaminated them with certain viruses which are known to cause HIV/AIDS. (Obadare 2005, 275; Yahya 2007, 188).

Parents refused to give the vaccine to their children (Renne 2006, 1866), and voiced their fears:

> No, I don't allow the people to do polio vaccination for my children in the house because there is a problem in it, such as that European people want us to reduce our numbers, to stop us from giving birth. And we are looking for medicine in the hospital to give to our children and we can't get it but this one, they are following us to our houses to give it. I don't trust this polio vaccine. (Renne 2006, 1862)

> No, I don't allow my children to have the vaccine because I don't trust the vaccine. Because they said they are going to do it free of charge. And if we go to the hospital, we have to buy medicine and it is costly there. But this one is free of charge. In the hospital, your child can die or your brother can die if you don't have money. (Renne 2006, 1862)

The door-to-door policy gave birth to suspicions. While people were going to the hospitals without being able to attain the most basic medicines to treat minor illnesses, health workers carrying free polio vaccines were targeting and following healthy people all the way into their homes. While basic medicines were outside the reach of the average citizen, the Nigerian government and international organizations spent vast amounts of money giving out polio vaccines without charge. People questioned for whom and with what ulterior motives the enormous focus, energy, and money were spent on widely distributing the polio vaccine for free when, in reality, it was diseases such as measles and malaria that the communities' children were suffering from (Raufu 2003; Renne 2006, 1857, 1866; Renne 2010, 5–6; Yahya 2007, 202).

A Nigerian senior development advisor remarked that the idea behind the international polio strategy was that it should be run like a "booster service" next to a "well-functioning basic health care system" (Yahya 2007, 201). However, in Nigeria, the endemic shortcomings of the primary healthcare system instead came to "magnify the door-to-door polio campaign" and quite literally undermined the credibility and legitimacy of the campaign (Yahya 2007, 201–202). While Western donors saw the polio eradication campaign as a cost-effective venture, for the communities in the north of Nigeria, it underlined a lived reality where primary healthcare is characterized by intrinsic lack, and it raised questions of what the real motives were behind Western health intervention (Renne 2006, 1857–1858).

Medicine or Poison?

During the 1960s and 1970s, Nigeria's public health sector went through a rapid expansion, during which the numbers of health workers, hospital beds, medical centres, and training schools multiplied. Medical services were free, as was food for hospitalized patients (Alubo 1990b, 307; Alubo 2001, 314). While in the newly independent African states of the 1960s, many of people's hopes in relation to the growing medical infrastructure were being realized, their outlook had taken a very different turn by the mid-1970s. Due to increasing debt loads, accompanied by the Structural Adjustment Programmes of the International Monetary Fund (IMF) and the World Bank (WB), the growth previously experienced was dramatically reversed. As the young sovereign states were required to make big cutbacks in public spending and remove subsidies, the public health service was fast being dismantled (Alubo 1990a, 639–640, 642).

Things changed rapidly, and during the 1980s, Nigerian public hospitals found themselves in a state of crisis characterized by a pervasive scarcity of basic medical equipment and drugs – 'out of stock' hospitals were reduced to 'consulting clinics' (Alubo 1986, 473, 1990a, 642). Poor citizens, with the introduction of user fees, were increasingly excluded from health services (Alubo 1990a, 644); medical staff, in turn, went for months without being paid (Alubo 1986, 473). In 1984, the Nigerian Association of Resident Doctors declared: "our hospitals are no longer consulting clinics but now mortuaries where the sick are helplessly passing away into irretrievable eternity[;] the situation is alarming" (Alubo 1986, 473).

At the same time as the distinction between hospitals and mortuaries was increasingly feeling blurred, it also became harder and harder to distinguish between what was medicine and what was poison. Nigerian researchers concluded: "The era 1985–2000 in Nigeria has heralded the regime of faking and quackery, counterfeit drugs, quack doctors, illegal chemist shops and hospitals" (Erhun et al. 2001, 23). There emerged a booming trade in counterfeit drugs.[6] While drugs were available from several parallel systems – hospitals, pharmacies, other medical representatives, and wandering and illegal dealers – all of these systems, with the hospitals as a possible exception, were involved in illegal dispensing and sales without proper prescriptions. It is estimated that 60–70% of the drugs were counterfeit or did not possess their declared potency (Alubo 1994, 97–98) – 'fake' drugs outnumbered 'genuine' drugs (Erhun et al. 2001, 23). Writing on the large Nigerian drug industry and the ubiquitous presence of poisonous and counterfeit drugs, Ogoh Alubo summarized the industry with the phrase "death for sale" (1994, 102) – a sale that was reshaping the emergent Nigerian medical landscape.

In 1990, over a period of 5 months, Nigeria became the stage for an outbreak of a 'mysterious disease' of 'unknown etiology' during which 109 children died. A Nigerian government report noted that the diseases primarily attacked children under 4 and that the mortality rate was close to 100% (Alubo 1994, 97, 99–100). The report described how it started

[6] While other African countries have been hit by a thriving circulation of what are interchangeably referred to as 'substandard', 'falsified', 'counterfeit', and 'fake' medicines (Aminu et al. 2017, 145–146; see also Aminu and Gwarzo 2017), in Nigeria, Africa's most populous country, there is a proliferate distribution of counterfeit drugs that surpasses that of most countries (Erhun et al. 2001, 23).What are referred to as substandard and counterfeit drugs can involve labelling products so they look like high-priced brands; relabelling expired drugs; drugs not containing the active ingredients declared on the packet, or too little of them; drugs containing toxic ingredients; or drugs that are not registered with the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC), established in 1993 to regulate the Nigerian drug market (Erhun et al. 2001, 23, 25; Akinyandenu 2013, 2572).

> with fever, vomiting and diarhoea which were usually treated for malaria at the OPD (Out Patients Department) or at home and in most cases, the patient has a period of convalescence with a relapse of fever, this time with Anuria (complete suppression of urinary secretion) … just before the children die they would swell up (particularly abdomen, face and the limbs), bleed from the mouth and anus, usually become dyspnoic (laboured breathing). (Alubo 1994, 99)

Later, investigators concluded that poisonous paracetamol, produced at a government pharmacy and a hospital and administrated to children at different hospitals, had caused these deaths. Paracetamol, a painkiller used against fever and pain, had been produced especially for children in the form of a syrup. This extensive poisoning case emerged as part of a pattern of drug poisonings that were all revealed at hospitals with the best facilities and skills to unravel the reasons behind the mysterious deaths. However, most drugs purchased in Nigeria at the time were sold outside hospital facilities. In effect, there was no way of knowing how many persons had died from these or other poisonous drugs (Alubo 1994, 99–102). Alubo concluded: "What is known about 'death for sale' in Nigeria can, therefore, be hardly more than a tip of the iceberg" (1994, 102).

In 2008, Nigeria was again hit by a big scandal when children died after consuming another syrup targeting children – My Pikin, a teething medicine. The medicine had been contaminated with diethylene glycol, which producers had added to the medicine instead of the harmless but more expensive substance propylene glycol (see Aminu et al. 2017, 147; Daily Independent 2008; Daily Trust 2008; Ogundipe 2008; Vanguard 2008). The author of a news article headed "Re-branding a Fake Product?" wrote: "[I]t is only because the cruel makers of My Pikin were able to deceive the populace with a genuine-looking product, nicely packaged, bottled and branded that parents were deceived into buying poison" (Adamu 2009). Another article, headed "My Pikin: A Fatal Attraction", depicted in a very telling manner the very heartfelt vulnerability and helplessness that buyers experience when they have no way of distinguishing between what is fake and what is genuine, nor between what is poison and what is medicine:

> The feeling one gets as one holds a bottle of My Pikin Baby Teething Mixture does not arouse suspicion or doubt. Even if its clear, liquid content looks deceptively innocuous, the light brown white-capped 100ml bottle is certainly attractive. On its yellow and orange label is the picture of a happy mother with her smiling baby.
>
> The pack bears all the relevant dosage instructions, warnings, manufacturer's address and level of contents. The batch number, manufacturing/expiry dates as well as the NAFDAC[7] registration number are clearly marked.
>
> Not only does the brand come highly recommended, it is sold at registered and accredited drug outlets manned by qualified and experienced personnel. On the whole, the label bears all the pointers of a quality and genuine product, and one could be pardoned for concluding it is harmless. (Ogundipe 2008)

In a similar and telling manner, writing on counterfeit drugs being distributed across the African continent, three researchers from different departments of pharmaceutics stated:

[7] NAFDAC stands for the Nigerian National Agency for Food and Drug Administration and Control.

> The culprits can perfectly imitate packaging and labelling of genuine products in such a way that when viewed with naked eyes it is almost impossible to recognize it as a counterfeit product. They usually make it to resemble real patented and branded drug products which had been manufactured by a legitimate licensed pharmaceutical company, but it will contain nothing than malicious constituents, and sometimes may even contain toxic substances. (Aminu and Gwarzo 2017, 64–65)

It has become increasingly hard for Nigerian citizens to distinguish between what is medicine and what in actuality is poison. Trying to decipher the content and find clues, people put a lot of effort into investigating the container, its labels and packaging. Do they look genuine, what is their quality, and what are the characteristics and style of the print? However, as it is very hard to draw any solid conclusions, the ambiguity often remains and, therefore, also the suspicion that it might potentially not be medicine – but poison.

The Necessity of Suspicion

In 2009, writing on his father's death in an opinion piece, Ikechukwu Amaechi mourned that when he entered the emergency ward he could not help weeping for his Nigeria. It was an emergency room left without medical equipment and where no medical attention was offered. He concluded that Nigeria was a country where people were looking the other way when citizens were dying and where big men and women went to any other country than Nigeria to get healthcare (Amaechi 2009). What a drug, a health worker, or a hospital actually does has become more and more blurred. With a growing feeling and experience that medical matters are neither what they are supposed to be nor what they appear to be, suspicion has increasingly become part of navigating the Nigerian healthcare system (Akinyandenu 2013, 257; Alubo 1990b, 314). In the search for safe ways forward, suspicion has not only become the prevailing but, also the healthiest or wisest (Newell 2019, 320) way of approaching the emergent Nigerian medical landscape.

The coronavirus came to magnify and highlight what was already there. When, clothed in all its ambiguity and uncertainty, the novel coronavirus, together with the practices, signs, and materialities attached to it, moved in on Nigeria, it tuned into a medical landscape that, through decades of tribulations, was already saturated with ambiguities, uncertainties, and suspicions. It encountered a vigilant population who, after years of conditioning, were ready to scrutinize all the novel signs that were emerging. When people dissected the ambiguous signs tied to the coronavirus – social distancing, lockdowns, fumigation, masks, mysterious deaths, contagious bodies, 5G, vaccines, etc. – their most distressing readings ultimately came to resonate with an increasingly profound fear that the world as we know it might very soon come to an end (Hoechner 2020; see also Wonodi et al. 2022, 2116–2117).

References

Adamu, Zulfikar Aliyu. 2009. "Re-branding a Fake Product?" *Daily Trust*, 06/06/2009. https://allafrica.com/stories/200908170749.html.

AFP/Omni. 2020. "Virus Caused 'Mystery' Mass Deaths in North Nigeria: Investigators." *AFP/Omni*, 04/05/2020. http://afp.omni.se/virus-caused-mystery-mass-deaths-in-north-nigeria-investigators/a/70vmjo.

Akinyandenu, Olusegun. 2013. "Counterfeit Drugs in Nigeria: A Threat to Public Health." *African Journal of Pharmacy and Pharmacology* 7, no. 36: 2571–2576.

Al-Amin, Muhammad. 2020. "Coronavirus Fears over Children in Northern Nigeria." *Deutsche Welle*, 28/04/2020. https://www.dw.com/en/coronavirus-fears-over-children-in-northern-nigeria/a-53263607.

Alubo, Ogoh. 1986. "The Political Economy of Doctors' Strikes in Nigeria: A Marxist interpretation." *Social Science & Medicine* 22, no. 4: 467–77.

Alubo, Ogoh. 1990a. "Debt Crisis, Health and Health Services in Africa." *Social Science & Medicine* 31, no. 6: 639–48.

Alubo, Ogoh. 1990b. "Doctoring as Business: A Study of Entrepreneurial Medicine in Nigeria." *Medical Anthropology* 12, no. 3: 305–24.

Alubo, Ogoh. 1994. "Death for Sale: A Study of Drug Poisoning and Deaths in Nigeria." *Social Science & Medicine* 38, no. 1: 97–103.

Alubo, Ogoh. 2001. "The Promise and Limits of Private Medicine: Health Policy Dilemmas in Nigeria." *Health Policy Plan* 16, no. 3: 313–321.

Amaechi, Ikechukwu. 2009. "Good People, Great Nation?" *Daily Independent*, 19/04/2009. http://allafrica.com/stories/200904140275.html.

Aminu, Nafiu, and Mahmud Gwarzo. 2017. "The Imminent Threats of Counterfeit Drugs to Quality Health Care Delivery in Africa: Updates on Consequences and Way Forward." *Asian Journal of Pharmaceutical and Clinical Research* 10, no. 7: 63–67.

Aminu, Nafiu, Abubakar Sha'aban, Abdulhakim Abubakar, and Mahmud S. Gwarzo.. 2017. "Unveiling the Peril of Substandard and Falsified Medicines to Public Health and Safety in Africa: Need for All-Out War to End the Menace." *Medicine Access @ Point of Care* 1, no. 1: e145–54.

Archambault, Julie Soleil. 2017. *Mobile Secrets: Youth, Intimacy, and the Politics of Pretense in Mozambique*. Chicago, IL: University of Chicago Press.

Augoye, Jayne. 2020. "5G Controversy: Ashimolowo, Oyemade, Adeyemi Counter Oyakhilome's Claims." *Premium Times*, 09/04/2020. https://www.premiumtimesng.com/

news/top-news/386899-5g-controversy-ashimolowo-oyemade-adeyemi-counter-oyakhilomes-claims.html.

Bilesanmi, Olalekan. 2020. "Kano Mystery Deaths: Residents Bury Corpses with Bare Hands—Galadima." *Vanguard*, 04/05/2020. https://www.vanguardngr.com/2020/05/kano-mystery-deaths-residents-bury-corpses-with-bare-hands-galadima/.

Bonneuil, Christophe. 2000. "Development as Experiment: Science and State Building in Late Colonial and Postcolonial Africa, 1930–1970." *Osiris* 15: 258–81.

Bott, Daniel. 2020. "Fumigation of Plateau State Is Useless, Risky, Wasteful Venture." *African Drum: The Voice of Africa*, 04/2020. https:/ /africandrumonline.blogspot.com/2020/04/fumigation-of-plateau-state-is-useless.html.

Bruns, Axel, Stephen Harrington, and Edward Hurcombe. 2020. "'Corona? 5G? or Both?': The Dynamics of COVID-19/5G Conspiracy Theories on Facebook." *Media International Australia* 177, no. 1: 12–29.

Busari, Stephanie, and Bukola Adebayo. 2020. "Nigeria Records Chloroquine Poisoning after Trump Endorses It for Coronavirus Treatment." *CNN*, 23/03/2020. https://edition.cnn.com/2020/03/23/africa/chloroquine-trump-nigeria-intl/index.html.

Busari, Stephanie, and Barbara Wojazer. 2020. "French Doctors' Proposal to Test Covid-19 Treatment in Africa Slammed as 'Colonial Mentality'." *CNN*, 07/04/2020. https://edition.cnn.com/2020/04/07/africa/french-doctors-africa-covid-19-intl/index.html.

Cerulus, Laurens. 2020. "How Anti-5G Anger Sparked a Wave of Arson Attacks." *Politico*, 29/04/2020. https://www.politico.eu/article/coronavirus-5g-arson-attacks-online-theories/.

Chan, Kelvin, Beatrice Dupuy, and Arijeta Lajka. 2020. "Conspiracy Theorists Burn 5G Towers Claiming Link to Virus." *AP News*, 21/04/2020. https://apnews.com/article/health-ap-top-news-wireless-technology-international-news-virus-outbreak-4ac3679b6f39e8bd2561c1c8eeafd855.

Daily Independent. 2008. "The Killer Baby Teething Mixture." 27/11/2008. https://allafrica.com/stories/200811280689.html.

Daily Trust. 2008. "My Pikin." 07/12/2008.

Davidson, Helen. 2020. "Global Report: Virus Has Unleashed a 'Tsunami of Hate' across World, Says UN Chief." *The Guardian*, 08/05/2020. https://www.theguardian.com/world/2020/may/08/global-report-china-open-to-cooperate-with-who-on-virus-origin-as-trump-repeats-lab-claim.

Department of Global Communications. 2020. "UN Tackles 'Infodemic' of Misinformation and Cybercrime in COVID-19 Crisis." United Nations, 31/03/2020.https://www.un.org/en/un-coronavirus-communications-team/un-tackling-%E2%80%98infodemic%E2%80%99-misinformation-and-cybercrime-covid-19.

Dettmer, Jamie. 2021. "Lockdown Protests Snowball as Europe's Libertarians Fret About Freedom." *Voice of America*, 09/04/2021. https://www.voanews.com/covid-19-pandemic/lockdown-protests-snowball-europes-libertarians-fret-about-freedom.

Egbunike, Nwachukwu. 2020. "Nigerian Pastor Spreads COVID-19 Conspiracies and Disinformation." *Global Voices*, 15/05/2020. https://globalvoices.org/2020/05/15/nigerian-pastor-spreads-covid-19-conspiracies-and-disinformation/.

Erhun, W. O., O. O. Babalola, and M. O. Erhun. 2001. "Drug Regulation and Control in Nigeria: The Challenge of Counterfeit Drugs." *Journal of Health & Population in Developing Countries* 4, no. 2: 23–34.

Ezeome, Emmanuel R., and Christian Simon. 2010. "Ethical Problems in Conducting Research in Acute Epidemics: The Pfizer Meningitis Study in Nigeria as an Illustration." *Developing World Bioethics* 10, no. 1: 1–10.

Gagliardone, Iginio, Stephanie Diepeveen, Kyle Findlay, Samuel Olaniran, Matti Pohjonen, and Edwin Tallam. 2021. "Demystifying the COVID-19 Infodemic: Conspiracies, Context, and the Agency of Users." *Social Media+ Society* 7, no. 3: 1–16.

Ghinai, Isaac, Chris Willott, Ibrahim Dadari, and Heidi J. Larson. 2013. "Listening to the Rumours: What the Northern Nigeria Polio Vaccine Boycott Can Tell Us Ten Years On." *Global Public Health* 8, no. 10: 1138–1150.

Gupiya, Dickson. 2020. "COVID-19: Total Lockdown on Plateau State for Fumigation Is an Exaggeration, Say Traders, Artisans." *African Drum: The Voice of Africa*, 08/04/2020. https://africandrumonline.blogspot.com/2020/04/covid-19-total-lockdown-on-plateau.html.

Hamilton, Isobel Asher. 2020. "77 Cell Phone Towers Have Been Set on Fire So Far Due to a Weird Coronavirus 5G Conspiracy Theory." *Business Insider*, 06/0\5/2020. https://www.businessinsider.com/77-phone-masts-fire-coronavirus-5g-conspiracy-theory-2020-5.

Hassan, Idayat. 2020. "The Other COVID-19 Pandemic: Fake News." *African Arguments*, 03/2020. https://africanarguments.org/2020/03/the-other-covid-19-pandemic-fake-news/.

Hoechner, Hannah. 2020. "In Northern Nigeria, Distrust Jeopardises the Response to Coronavirus." *The Conversation,* 15/04/2020. https://theconversation.com/in-northern-nigeria-distrust-jeopardises-the-response-to-coronavirus-135347.

Ikwe, Hope. 2020. "COVID 19: Plateau Begins Week-Long Statewide Fumigation." *Business A.M.* 10/04/2020. https://www.businessamlive.com/covid-19-plateau-begins-week-long-statewide-fumigation/.

Jurit, Raymond. 2020. "Lockdown on Plateau State for Fumigation: Wasting Soap and Water on the Streets" *African Drum: The Voice of Africa*, 04/2020. https://africandrumonline.blogspot.com/2020/04/lockdown-on-plateau-state-for.html.

Lazarus, Jeffrey V., Scott C. Ratzan, Adam Palayew, Lawrence O. Gostin, Heidi J. Larson, Kenneth Rabin, Spencer Kimball, and Ayman El-Mohandes. 2020. "A Global Survey of Potential Acceptance of a COVID-19 Vaccine." *Nature Medicine* 27, no. 2: 225–28.

Lenzer, Jeanne. 2007. "Nigeria Files Criminal Charges against Pfizer." *British Medical Journal* 334, no. 7605: 1181.

Lenzer, Jeanne. 2011. "Pfizer Settles with Victims of Nigerian Antibiotic Trial." *British Medical Journal* 343, no. 7820: 387.

LeVine, Mark, and Maria Frederika Malmström. 2019. "Understanding the Materiality of Suspicion: Affective Politics in Mena Cities." In *Handbook for Cities in the Middle East*, edited by H. Yacobi and M. Nasasra, 136–152. London: Routledge.

Mabonga, Masolo. 2020. "Resist: Senator Wetangu'la Calls on African Leaders to Reject COVID-19 Vaccine Test on Continent." *Tuko*, 03/04/2020. https://www.tuko.co.ke/349783-resist-senator-wetangula-calls-african-leaders-reject-covid-19-vaccine-test-continent.html.

Moshood, Yusuff. 2020. "Why FG May Not Rush to Give Nigerians COVID-19 Vaccines: Scientists." *Punch*, 27/12/2020. https://healthwise.punchng.com/why-fg-may-not-rush-to-give-nigerians-covid-19-vaccine-scientists/.

Ndinojuo, Ben-Collins Emeka. 2020. "5G, Religion, and Misconceptions in Communication during Covid-19 in Nigeria." *Jurnal The Messenger* 12, no. 2: 97–110.

Neill, Deborah Joy. 2012. *Networks in Tropical Medicine: Internationalism, Colonialism, and the Rise of a Medical Specialty, 1890–1930*. Stanford, CA: Stanford University Press.

Newell, Sasha. 2019. "Ethnography in a Shell Game: Turtles All the Way Down in Abidjan." *Cultural Anthropology* 34, no. 3: 299–327.

Nguyen, Vinh-Kim. 2011. 'Trial Communities: HIV and Therapeutic Citizenship in West Africa." In *Evidence, Ethos and Experiment*, edited by P. W. Geissler and C. Molyneux, 429–444. New York: Berghahn Books.

Nwabueze, Remigius N. 2016. *Legal and Ethical Regulation of Biomedical Research in Developing Countries*. London: Routledge.

Obadare, Ebenezer. 2005. "A Crisis of Trust: History, Politics, Religion and the Polio Controversy in Northern Nigeria." *Patterns of Prejudice* 39, no. 3: 265–284.

Ogundipe, Sola. 2008. "Nigeria: My Pikin—A Fatal Attraction." *Vanguard*, 02/12/2008. http://allafrica.com/stories/200812020469.html.

Okonta, Patrick I. 2014. "Ethics of Clinical Trials in Nigeria." *Nigerian Medical Journal: Journal of the Nigeria Medical Association* 55, no. 3: 188–194.

Orock, Rogers. 2019. "Rumours in War: Boko Haram and the Politics of Suspicion in French–Cameroon Relations." *The Journal of Modern African Studies* 57, no. 4: 563–587.

Otinga, Rene. 2020. "Africa Is No Testing Lab: Drogba Among Football Stars Angry over Proposal to Test COVID-19 Vaccine in Africa." *Tuko*, 03/04/2020. https://www.tuko.co.ke/sports/349731-african-footballers-outraged-french-doctors-coronavirus-cure-tested-africa/

Oyakhilome, Chris. 2020a. "Pastor Chris Oyakhilome Explains Relationship between Coronavirus, 5G, Antichrist's Plan." YouTube, posted 04/04/2020. https://www.youtube.com/watch?v=xeBF-b6xwF4&feature=youtu.be. Accessed November 18, 2020. [Video no longer available.]

Oyakhilome, Chris. 2020b. "Pastor Chris: 5G Is LOVELY but ..." YouTube, posted 08/04/2020. https://www.youtube.com/watch?v=lXnLwtAS6Fk.

Padayachee, Neelaveni, and Lisa Claire du Toit. 2020. "Debunking 9 Popular Myths Doing the Rounds in Africa about the Coronavirus." *The Conversation*, 13/04/2020. https://theconversation.com/debunking-9-popular-myths-doing-the-rounds-in-africa-about-the-coronavirus-135580.

Parveen, Nazia, and Jim Waterson. 2020. "UK Phone Masts Attacked amid 5G-Coronavirus Conspiracy Theory." *Guardian,* 04/04/2020. https://www.theguardian.com/uk-news/2020/apr/04/uk-phone-masts-attacked-amid-5g-coronavirus-conspiracy-theory.

Ratzan, Scott C., et al. 2020. "COVID-19: A Global Survey Shows Worrying Signs of Vaccine Hesitancy." *The Conversation*, 28/10/2020. https://theconversation.com/covid-19-a-global-survey-shows-worrying-signs-of-vaccine-hesitancy-148845.

Raufu, Abiodun. 2003. "Polio Vaccine Plans May Run into Problems in Nigeria." *British Medical Journal* 327, no. 7410: 380.

Renne, Elisha. 2006. "Perspectives on polio and immunization in Northern Nigeria." *Social Science & Medicine* 63, no. 7: 1857–1869.

Renne, Elisha P. 2010. *The Politics of Polio in Northern Nigeria*. Bloomington: Indiana University Press.

Romm, Tony. 2020. "Fake Cures and Other Coronavirus Conspiracy Theories Are flooding WhatsApp, Leaving Governments and Users with a 'Sense Of Panic'." *Washington Post*, 02/03/2020. https://www.washingtonpost.com/technology/2020/03/02/whatsapp-coronavirus-misinformation/.

Shackle, Samira. 2021. "Among the Covid Sceptics: 'We Are Being Manipulated, without a Shadow of a Doubt'." *Guardian*, 08/04/2021. https://www.theguardian.com/news/2021/apr/08/among-covid-sceptics-we-are-being-manipulated-anti-lockdown.

Sturm, Tristan, and Tom Albrecht. 2021. "Constituent Covid-19 Apocalypses: Contagious Conspiracism, 5G, and Viral Vaccinations." *Anthropology & Medicine* 28, no. 1: 122–139.

Svt Nyheter. 2020. "Giesecke Självkritisk: 'Ett Virus Som Lurat Oss Många Gånger'." 03/12/2020. https://www.svt.se/nyheter/inrikes/giesecke-sjalvkritisk-ett-virus-som-lurat-oss-manga-ganger.

Thiongane, Oumy. 2020. "COVID-19 Pandemic Preparedness and Response in West Africa: An Anthropological Lens." *Somatosphere*, 10/05/2020. http://somatosphere.net/forumpost/covid19-pandemic-preparedness-response-westafrica/.

Tilley, Helen. 2016. "Medicine, Empires, and Ethics in Colonial Africa." *AMA Journal of Ethics* 18, no. 7: 743–753.

Trovalla, Eric, and Ulrika Trovalla. 2022. "Lateral Futurity: The Nigerian State as Infrastructural Enigma." In *Everyday State and Democracy in Africa: Ethnographic Encounters*, edited by W. Adebanwi, 139–167. Athens: Ohio University Press.

Vanguard. 2008. "Nigeria: Again, Fake Drugs." 02/12/2008. http://allafrica.com/stories/200812020466.html.

West, Harry G., and Todd Sanders. 2003. "Power Revealed and Concealed." In *Transparency and Conspiracy: Ethnographies of Suspicion in the New World Order*, edited by H. G. West and T. Sanders, 1–37. Durham, NC: Duke University Press.

Wise, Jacqui. 2001. "Pfizer Accused of Testing New Drug without Ethical Approval." *British Medical Journal* 322, no. 7280: 194.

Wonodi, Chizoba, Chisom Obi-Jeff, Funmilayo Adewumi, Somto Chloe Keluo-Udeke, Rachel Gur-Arie, Carleigh Krubiner, Elana Felice Jaffe, Tobi Bamiduro, Ruth Karron, and Ruth Faden. 2022. "Conspiracy theories and misinformation about COVID-19 in Nigeria: Implications for vaccine demand generation communications." *Vaccine* 40, no. 13: 2114–2121.

Wong, Wilson. 2020. "French Doctor Apologizes for Comments on Testing a COVID-19 Vaccine in Africa, Prompting Outrage on Social Media." *NBC News*, 07/04/2020. https://www.nbcnews.com/news/nbcblk/french-doctor-apologizes-comments-testing-covid-19-vaccine-africa-prompting-n1177991.

Yahya, Maryam. 2007. "Polio Vaccines: 'No Thank You!' Barriers to Polio Eradication in Northern Nigeria." *African Affairs* 106, no. 423: 185–204.

Unless otherwise noted, all links were last accessed on 18 September 2022.