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COVID-19 and the View from Africa

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Abstract: In Africa, refusal of COVID-19 and other vaccines is widespread for different reasons, including disbelief in the existence of the virus itself and faith in traditional remedies. In sub-Saharan countries, refusal is often made worse by opposition to vaccines by the religious establishments. This is a pressing problem, as Africa has the highest vaccine-avoidable mortality rate for children under the age of five in the world. Dialogue between those wishing to promote vaccines and those who resist them is essential if the situation is to be improved. This article argues that Western and other aid agencies seeking to promote vaccination programs need to develop a dialogue with resisters, and in this process to embrace and commend the ancient African philosophical tradition of *Ubuntu*, incorporating it into these programs as a way to overcome such entrenched resistance. The paper concludes with concrete recommendations for how to accomplish this goal.

Keywords: COVID-19; Sub-Saharan Africa; Christianity; Islam; Ubuntu; vaccination refusal; vaccine campaigns; colonialism

1. Introduction

Across the world, the COVID-19 pandemic has elicited responses from all formal religions. From the point of view of public health officials and politicians trying to mobilize an effective counter to the pandemic, these responses have at times been anomalous. Secular authorities trying to deal with the pandemic have often found religious responses to be a mixed blessing. In general, the ruling bodies of all the major religions have fallen in with the policies advocated by their own governments, only to find that, sometimes, as in Britain, India, Brazil and the United States, parishioners go their own way to defy the official and public pronouncements of their church leaders and the state. While many people have duly followed government guidelines as recommended by their religious leaders, those same people are often urged by co-religionists to ignore governmental attempts to impose upon them controlling and perceived arbitrary policies, such as the prohibition or truncating of community gatherings, restrictions on the methods of administering the sacrament, communal singing, or even total lockdowns. This tension has resulted in and contributed to inadequate or failed attempts to contain the pandemic in those regions of the world facing the most pressing public health crises. In this article, we explore the assertion that better communication–including a more diligent attempt to make global ambitions cohere with local norms–represents the most viable chance of reaching those most resistant to mitigation efforts, particularly efforts to implement successful vaccine campaigns.

There are numerous reasons why people refuse vaccines. Refusal often starts with vaccine hesitancy (VH), which has been defined as "a delay in acceptance . . . of vaccines despite availability of vaccine services", a state which has been identified by the World Health Organization (WHO) as being one of the ten top obstacles to the success of health initiatives globally (World Health Organization 2019). VH manifests itself irrespective of political boundaries, race, ethnicity and gender, social organization, and level of national development. If left unaddressed, it can progress to vaccine refusal (VR) (Mangal et al.

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Citation: Davies, Tim, Kenneth Matengu, and Judith E. Hall. 2023. COVID-19 and the View from Africa. *Religions* 14: 589. https://doi.org/10.3390/rel14050589

Academic Editors: Andrew Flescher and Joel Zimbelman

Received: 17 October 2022
Revised: 21 March 2023
Accepted: 21 March 2023
Published: 29 April 2023

2014; Dubé et al. 2014; Byström et al. 2020). In the countries of the developed world, there is a long history of scandals involving drug companies. These incidents have generated significant skepticism among the citizens not only of drug companies, but also of the medical establishment engaged in clinical trials, vaccination campaigns and related activities. Government suspicion is also pervasive, and political institutions and their agents are often seen to be in collusion with the quintessentially capitalistic and Western pharmaceutical industry (Rao and Andrade 2011; Luthy et al. 2012; McIntosh et al. 2016; Jack 2008; Basham and Luik 2012; Jefferson 1998).

In the developing world there is also resistance to such medical interventions. In some settings the negative sentiments and suspicions are shared with citizens of developed nations, but often these attitudes are motivated as well by additional stimuli. These include the beliefs by many people that ancient folk remedies are superior to imported drugs; that drugs imported from the developed world are designed to harm or even kill people; that a certain amount of illness in childhood is good for strengthening the constitution (a view shared by some in the developed world); and that there are good reasons to distrust local medical facilities and personnel. Africa has among the world's highest levels of VH and VR, much of it precipitated by religious leaders who often reject the authority of Western science, medicine, and those who advocate for them. The tragedy of this attitude plays out in some grim statistics: Africa has the highest vaccine-treatable mortality rates for children under the age of 5 suffering from infectious diseases in the world, a figure that accounts for an alarming 40% of the total mortality rate for that age-group, thus making the matter one of great urgency (Bangura et al. 2020).

In this paper, we examine the reasons for the high incidence of VH and VR in the developing world with a focus on sub-Saharan Africa, consider the role that religion plays in this hesitation and refusal, and advance some concrete policy suggestions to improve the situation. We seek to demonstrate that although VR has many underlying causes, and while the conditions giving rise to a need for vaccination programs correspondingly vary greatly from one country to another, common factors can be identified in the reasons that top-down vaccination program planning does not work as effectively as strategies which go out of their way to reflexively look at the culture and context in which such strategies are meant to be implemented.

2. Vaccine Resistance in the Developed World versus Vaccine Resistance in Africa and the Legacy of Colonialism

When the first wave of COVID-19 hit Britain in early 2020, clerical responses were generally measured. The leaders of the Muslim community, the Church of England, the Hindu faith, and the Jewish diaspora all advised their adherents to follow the government's public health guidelines according to which government did not mandate the closing of places of worship, but left the decision on how to proceed to national organizations and local clergy. Government policy supported *prima facie* the practice of worshiping privately at home, reducing the risk of exposing oneself or others to infection, but allowing communities to make judgment calls about worship and attendance policy. (The Guardian 2021). By contrast, the leader of the Roman Catholic Church in Britain, Cardinal Vincent Nichols, despite broad support for mitigation efforts on the part of Roman Catholic leadership, opposed any limits on attending services. Cardinal Nichols claimed that there was no evidence that such a measure would control or restrict the spread of infection. As the progress of the pandemic advanced and vaccine development and deployment took center stage, many Catholics objected to those vaccines that may have used fetal stem cells in their development, despite a later statement from the Pope that objections on this ground were unfounded and that the Curia fully embraced vaccines (Ellis 2022).

India's government responded with alacrity to the pandemic's onslaught, progressively embracing border controls, social distancing and ultimately lockdown. The eventual vaccination rollout was severely hindered by high VR in many parts of the country, spurred mainly by beliefs in the power of local deities and the convictions that "folk remedies"

were superior to vaccines. In many Hindu districts there remains a strong belief that the products of the cow (particularly its urine and feces) are sufficient, when consumed or used as an emollient, to ward off all infections (Daria and Islam 2021). In one remote area, villagers refused the vaccine because the local deity had expressed, via the mouthpiece of a "possessed" woman, disapproval of the vaccine. In another area VR was manifest in the widely held belief that anyone who worked outside in the sun was immune (Jaswal 2021). Attempts to enforce lockdown also resulted in raised communal tensions between Hindus and Muslims (Naqvi and Upmanyu 2022).

The United States provides an interesting case study in the complexities, confusion, and inconsistencies surrounding vaccine policy and ambivalence of vaccine acceptance. On the one hand, the leaders of virtually all major religions in the United States endorse COVID-19 vaccination, including Catholics, Protestants, Mormons, Buddhists, Jews, and Muslims. According to Pope Francis, receiving the vaccine was 'the moral choice because it is about your life (and) the lives of others' (Ellis op.cit.). The only American religious denominations known to officially oppose COVID-19 vaccination are the Dutch Reformed Church and Christian Scientists, whose members object on the ground that it interferes with divine providence (Wingfield 2021). In spite of a fairly unified voice and ethos in support of vaccination, the United States, for its part, has led the world in chaotic responses to the pandemic. This noted, the US federal government "offered surprisingly little effective response to the pandemic", something exacerbated by the failure of the Trump administration to take the advice of infectious disease experts. When the Biden administration came to power "infections and deaths [had heavily impacted the entire country]. A vaccination program had been started, but was poorly coordinated, resulting in far fewer vaccinations delivered . . . than the initial goal" (Elflein 2022). Add to this the high resistance among evangelical republican Christians to taking any protective measures against infection, including when gathered together in congregation under anti-mask and -vaccine preachers—'*You will not wear masks in this church. I'm telling you right now, do not get vaccinated*' (Pastor 2021)—and you have one explanation for the United States having among the world's highest COVID-19 fatality numbers (Locke 2021; Mansfield 2017; Smith 2016; Hall et al. 2010).

Bolsonaro's Brazil, led by a demagogue in many ways similar to Trump in his disregard for scientific evidence, has suffered from a similar, almost mirror-like trajectory of arrogance and negation of duty in its leader, making Brazil second only to the USA in the global death-toll (the third highest is India) (Kibuuka and Gordon 2020). To be sure, certainly in the early going phases of the pandemic, and arguably still, the countries with the least excuse to shun science have had the most spurious results, and their leaders are in no position to preach. If four of the world's greatest, most economically advanced, functioning democracies have a fractured response to such a situation, how can we expect other countries to fare any better? In some ways, democracy can be its own worst enemy in the battle to gain vaccine acceptance. Religious freedom and the devolvement of power, especially in federated and parliamentary countries such as the United States, Great Britain and India, has given the proponents of VR a free hand to do their worst. Likewise, countries such as Russia, China and Japan—highly conformist societies with rigid power structures and social hierarchies—have also had to deal with a history of vaccine refusal, and they have not yet managed, for all their power, to suppress dissent (Galpin 2021; Cooper 2022; Yoda and Katsuyama 2021). It seems that VR is an ever-present factor in all types of society.

In this light, it is useful to set up a contrast between two contexts of VR, one where power and advantage counterintuitively work against nations with resources, and another where a relative absence of power and influence, perhaps less counterintuitively, provide a kind of narrative, if not justification, for refusing the vestiges of paternalism and colonialism, even those parts of colonialism which contain good. Sadly, many African countries contribute to a reality that Africa almost exclusively dominates the club of the world's least-vaccinated polities (Chakamba 2021). Two important studies, for example, show that confidence in vaccines was lowest in the world in the Democratic Republic

of Congo (DRC) (Ditekemena et al. 2021; Kabamba et al. 2020). At the same time, it is somewhat specious to make direct comparisons between Africa and the developed world, as nowhere in the developed world have governments refused on principle to implement a vaccination program for COVID-19 (whether by incorporating vaccine mandates or merely by committing sufficient resources to making vaccines accessible.) By contrast, four African countries, Tanzania, Eritrea, Burundi and Madagascar, have done both of these things (though all but Eritrea had, by 9 December 2021, decided to accept COVID-19 vaccines after all) (Chakamba op.cit.).

Tanzania refused them because, in the opinion of the Tanzanian Ministry of Health, the efficacy of the vaccines on offer had not been fully verified (Makoni 2021), doubling down to assert that the developed world's drug companies would likely use Tanzanians as "guinea pigs" (Chakamba, op.cit.). Eritrea rejected vaccines on the grounds that it did not want to become a "dumping ground" for vaccines unwanted in the West (Zere 2020). Burundi claimed that its hygiene measures were sufficient to control the outbreak (Ayandele et al. 2021). Madagascar rejected vaccine programs on the grounds that vaccine efficacy had not been proven, and that the many side-effects vitiated vaccine effectiveness (Oduor 2020). Among African countries, it is routinely believed that Western, developed, "white" countries—not only the old colonial powers (Britain, France, Portugal, Belgium, Germany and Italy), but also post- or neo-colonial powers (particularly the United States)—have used Africa as a laboratory for new drugs, and Africans as guinea-pigs (Hotez 2018). For these historically relevant reasons, centered around a shared memory of colonialism, Africa was already a hotspot of resistance even before the vaccination campaigns got underway.

Whether one interprets such resistance as "ignorant", or more as an understandable reflection of being turned off by outside, top-down (even if "benevolent") paternalism, there is, either way, a problem in need of solving, but one that cannot be solved without a fresh and dialogical approach. In the same way that African-American communities were resistant to admonitions on the part of clinicians and public health officials to vaccinate when Pfizer and Moderna first announced their "miracle remedies", living in the wake of such human-subject atrocities as Tuskegee, African nations, particular those whose independence was more recent, were not so eager to take orders again from those who had betrayed them in the past. It will be helpful to separate and examine some of the components of a paternalism, perhaps well intended, which contribute to VR in the African context.

3. Factors in African Vaccine Resistance

While, as we have seen, the nature of VH and VR in Sub-Saharan Africa is fueled by a legitimate impulse to resist the continuing threat of colonialism, whether that threat is real or merely feared, this impulse is motivated by discreet and important components. First, there lingers a suspicion of all medical protocols, of which a vaccination program is one example. This is a direct consequence of activity on the part of Western, and often white, actors in the post-Colonial era whose own interests continue to govern their decision making. Second, resistance to vaccination programs derives from a suspicion which extends beyond policy making in general to medical facilities and personnel themselves, leading to a distrust of the places and people who would facilitate a vaccine program. Third, and quite understandably, access to medical care, including vaccines, is always more challenging in the developing world than elsewhere. Less exposure to something also leads to less comfort with it. Fourth, there are religious and political misgivings insiders harbor which often manifest as conspiracy theories about Western motivations for intervention. Finally, there are larger questions about worldview: in places in the world which are not so science centric, we should at least ask, is a vaccination program the best way to address a pandemic, or is something else? Because vaccines work, does this mean they ought to be the go-to weapon against the pandemic? It behooves us now to take a look at all of these factors in a little more detail.

3.1. Suspicion of Post-Imperial White Activity (Part One)

It is certainly true that while many motives for VR across Africa are based upon nothing more than unfounded suspicion, there is no shortage of documented episodes of abuse on the part of white, Western actors coming to Africa in the post-Colonial era whose interests do not align with those of African peoples. Such abuses consist both of flagrant violations of the principles of ethical research, and, more specifically, of a failure to respect the African subjects employed for research projects. Conspicuous and well publicized examples of this have occurred from the second half of the twentieth century on. In 1954, the French drug Lomidine, a treatment for sleeping sickness which had not been properly tested by either its manufacturer or the medical establishment, was responsible for the deaths of at least 32 inhabitants from the Gribi district of Cameroon (Lachenal and Tousignant 2017). Washington (2007) cites instances of recent bad, even criminal, practice on the part of white, European medical personnel in different parts of Africa. A white American doctor was convicted of murder after killing three black American patients with lethal injections of potassium, and is suspected of causing the deaths of 60 other people, many of them in Zimbabwe and Zambia during the 1980s and 1990s. In Zimbabwe, in 1995, a Scottish an anesthesiologist working in Zimbabwe was accused of five murders and convicted in the deaths of two infant patients whom he injected with lethal doses of morphine. In South Africa in 2000 a white South African doctor was fired for using excessive, lethal chemotherapy on black patients. These doctors may not have always had murder in mind when they committed their crimes, but they were white, often foreign actors wantonly, if sometimes unwittingly, sacrificing the assurance of the well-being of Africans under their care for an abstraction in the form of the "pursuit of scientific advancement".

3.2. Suspicion of Existing Medical Facilities and Personnel

In many African countries, medical facilities are skeletal, under-staffed and almost always under-resourced. Clinicians are often viewed with suspicion, figures to be avoided, sometimes treated with barely concealed hostility. In many parts of Africa, "the (local) clinic is the lowest stratum in a hierarchy of health services . . . " (Nxumalo et al. 2016). Compounding this impression, unfortunately, is the reality that such clinics are often the last places to receive funding, so that " . . . unintegrated and poorly resourced services inadvertently create barriers for poor households . . . " and " . . . impact on access and quality of care, and hence on the clients' trust that the health system will be able to assist" (ibid.).

A study in Harare found that there was a fair level of knowledge about the causative factors for cervical cancer (in large part because of effective radio broadcasting), but that only a small percentage of women would be able to utilize available services, mainly because of a lack of confidence in local services. As Lily Kumbani and colleagues note: "You walk into a rural health facility and you ask nurses about cervical cancer or cancer in general but they have no clue of what it is . . . " (Kumbani et al. 2013). Health workers who, through no fault of their own, are subjected to expressions of dissatisfaction from their clients are likely to become defensive or hostile, thus further worsening the cycle of inability–mistrust between caregivers and clients. The following testimony is typical of many:

> "We need a team leader who will do home visits with us. The (one) that we have has never done any . . . We only see her at the end of the month to check on our books. We have incidents that . . . need her attention but she tells us that she is busy . . . We do not know whether we are doing things correctly because there is no one to guide us . . . ". (ibid.)

Such complaints are both well reflected and documented in reports emerging out of Malawi, Kenya and Tanzania and South Africa, where women opt for traditional birth attendants, rather than the conventional maternal and child health services, due to concerns

of competence deficiency in health staff, and to feelings of having been disrespected and undermined in health facilities. Consider the following accounts:

> "I think always of a sentence of this woman who lost her baby. She said that she lost her baby because of the midwife. The woman described the way she was treated, I was not proud of my profession . . . "
>
> 'One day, we listened on a tape to a husband's interview. I can always remember his words, 'we came with a baby alive in the womb of my wife and we left with our dead baby in a carton box'. There was a big silence in the room" . . .
>
> "(The midwife said) yes if a person is troublesome, we beat her up. We are very annoyed with some who exaggerate and cry when giving birth" (Kumbane op.cit.: Essendi et al. 2011)

Regardless of the extent to which the clinicians and support staff charged with seeing through the successful delivery of these babies are actually at fault, there is at the very least a profound loss of trust with regard to care rendered on behalf of women's health, particularly in the area of childbirth, which is one of the most intimate areas of clinical care. Naturally, a collective memory of these experiences is likely to inform developing attitudes towards trusting externally introduced vaccination programs in these regions of Africa.

Logistical challenges and shortages of personnel do not help matters. In her article on Western and folk medicine in Kenya, Howland (2020) notes that there is one traditional healer for every 500 people in Kenya, and a single medical doctor for every 400,000. Such a troubling ratio of carers to cared-for leads to a simple truism: medicine will work best when it is administered by known and trusted practitioners. Examples abound in the literature of how important it is to trust those administering to one's health care needs. In Kenya, according to Howland, many Kenyans do not trust doctors. The one they see in a hospital is, as likely as not, unfamiliar with the health issues of the patient's district and unlikely to form a bond of trust because that doctor is not bound, in the large urban hospitals in which they are working, to see that patient again after an initial consultation. In many settings, the doctor and patient may not even speak the same language. A local healer in the developing world, by contrast, will be known to native patients and will see them time and again, developing a bond likely to last a lifetime. (Research from the developed world has shown that communities respond in exactly the same way when there is a choice between being seen by a known and trusted practitioner or by a visiting, mobile clinic, so this appears to be a universal human dynamic (Wardle et al. 2012).) Thus, trust in a local, non-medical healer, whose traditional methods and materials may not cohere with those of the medical establishment, is more likely to be sought out by local people than any given modern medical facility.

Suspicion of visiting vaccination teams is also apparent across the developing world as well as elsewhere, and it behooves us to keep in mind that, wherever they surface, government-organized vaccination campaigns are, among other things, political projects which express state power and involve taxing, policing, and conscription, all of which arouse anxiety . . . " (Greenough 1995). In the developing world, however, the immediate spur of resistance is different. It is the question not only of "What is in this vaccine?" which raises eyebrows, but also of the question, "why are vaccination campaigns so well-funded and available while other health facilities, such as clinics for basic health care, are not?" (Closser 2010; Savulescu et al. 2021) The success of the Global Polio Eradication Initiative (GPEI) since 1988 is one of the great achievements of modern medicine (Gonzalez-Silva and Rabinovich 2021; Aylward and Tangermann 2011). Yet, no-one asks the local populations of developing countries what they want in terms of health care. There are arguments that coercion can and should be used to enforce the acceptance of vaccine programs (Savulescu et al., op.cit.), as well as some arguments against (Pennings and Symons 2012). But there are special obstacles in rural locations in the developing world. The systematic neglect of local folk belief systems, alongside a militant local cleric telling you that vaccinations

"stop you from having children", or "interfere with God's will", combine in a cocktail of ingredients for vehement vaccination refusal. Closser and colleagues report:

> "in Kumbotso (in Kano state, Nigeria) and SITE Town (in Karachi, Pakistan), whose crumbling health systems' almost only functional activity was to implement polio vaccination campaigns on a near-monthly basis, refusals were common and vehement. One major contributing factor in both places is the relative *lack of availability of international aid funds for basic health services compared to disease-specific interventions* (author's italics) like polio eradication . . . 'Not even a month has gone by since the last campaign, and now it has started again. Why?'". (Closser et al. op.cit.)

Clearly, there is a disconnect between foreign wisdom and local custom, manifesting as a distrust which impedes effective care at the most concrete and crucial ground level of medical intervention.

3.3. Difficulty of Access

Africa is vast, and all sub-Saharan African countries have poor road and rail infrastructure, making it difficult for people in isolated rural settlements, and in the outskirts of large informal townships, to access medical facilities. Intra-urban bus and train fares may be too expensive for the poorest people to reach central hospitals and clinics (Kumbani op.cit.). Paradoxically, improvements in major roads, such as metaling of larger trunk routes, can lead to increased isolation of the rural poor, as vehicle owners tend to keep their vehicles exclusively for the best roads, leaving far-flung rural settlements with even less transport than before (Porter 2012; Francis and Edmeston 2022). Efforts to get vaccines from medical bases in larger towns and cities out to rural towns and villages may be undone by failures in the cold-chain preservation system (Pabst and Taylor 1988). These factors and others combine to make basic access of goods and services, particularly within the area of health care, a challenge. This, in turn, feeds into a general impression that even if one is receptive to vaccination, one will have to rely on other methods for protecting oneself against the hardships of a pandemic.

3.4. Religious and Politcal Factors

"Mass vaccination campaigns (may) provoke resistance based less on secular concern than on religious belief: some will always assume that God offers better terms than the Ministry of Health, a credo that turns acquiescence in vaccination into heresy" (Greenough op.cit.). There are, as we have seen, functional reasons for the low rate of vaccination in many African countries, but the principal cognitive reason is deep suspicion of the motives of the vaccinators, a suspicion fed by religious leaders who, in the developed world, are overwhelmingly behind vaccination programs, but in sub-Saharan Africa are generally against them. The result is that most African countries have not one particular reason for VH/R, but rather harbor a combination of factors both functional and cognitive, a mix readily exploited by religious leaders who are hostile to vaccination in principle.

Nigeria, the most populous country in Africa, boycotted the polio vaccination campaign of 2003. According to Jegede (2007), Nigeria had the highest incidence of polio in the world, accounting for 45% of cases worldwide and 80% of African cases in 2003 (ibid.). Local uptake of the polio vaccine had always been poor, so Nigeria would have appeared to be a ripe candidate for the campaign. However, the leaders of the Muslim states of Northern Nigeria were convinced that the Western powers supplying the vaccines were united in a conspiracy against Islam, and had adulterated the vaccines with HIV, anti-fertility drugs and other pathogens. (A similar set of beliefs occurred in Pakistan after it became well known that the United States used the pretext of a vaccination campaign to find and kill Osama bin Laden) (Etokidem et al. 2021; Rezaei 2021). This tied in with a belief that a previous birth-control campaign was being continued covertly, using the polio vaccine as a method of delivery. Suspicion of this was not restricted to the Muslim areas. In a country with skeletal medical provision at best, the sudden appearance of an aggressive

polio campaign was viewed with profound suspicion in circumstances where any measures suggestive of birth control went against dominant socio-cultural mores (Sullivan et al. 2019; Orisaremi and Alubo 2012; Kunnuji et al. 2017; OlaOlorun et al. 2014; Oyediran 2006). It has been assumed that the cultural and religious differences between the Muslim north and Christian south account for the poor uptake of vaccine programs generally in Nigeria (ibid), but this is not necessarily always the case. In 2012 another anti-polio campaign was attempted. This one foundered not upon political-religious divisions, but on the ancient beliefs that either polio did not matter, or that it was sent as a scourge from God (Michael et al. 2014). In the meantime, a strain of Wild Polio Virus (WPV) spread from Nigeria to other sub-Saharan countries, including Sudan and Botswana, which previously were polio-free (Jegede 2007).

Independent laboratory tests appeared to show that tetanus vaccines sent to Kenya in 2014 by the WHO were adulterated with Human Chorionic Gonadotropin (hCG), a contraceptive agent, leading Catholic Bishops to claim that this was part of a covert campaign on the part of the WHO to reduce Kenya's population (Oller et al. 2017). Similar accusations were made against a contemporaneous anti-polio campaign (Njeru et al. 2016). As a result of this belief, albeit one not fully substantiated, vaccine refusal in Kenya rose from 6% in November 2014 to 12% in August 2015 (ibid.; Ghinai et al. 2013).

It is worth noting that Tanzania's policy of COVID-19 vaccine refusal, instituted under the previous president, John Magufuli, has been reversed since the accession in March 2021 of the current incumbent, Salia Suluhu, and that semi-autonomous Zanzibar has also now agreed to accept it (Mwai 2021). Results, though, have been patchy. Skepticism in Tanzania remains high. In September 2021, several months after Suluhu's accession to power, only an estimated 0.5% of the population of 58 million (i.e., about 300,000) had come forward for the vaccine (Makoni 2021). Much VH is due to the "traditional" resistance urged by religious leaders, who deny the existence of the virus and urge trust in God to protect against infection (ibid.; Makoye 2021). Tanzania also has low compliance with HPV screening as part of the battle against cervical cancer, mainly because of a lack of confidence in provision for diagnosis and treatment (Urasa and Darj 2011). As Heyerdahl and Pugliese-Garcia note:

> "Despite universal provision, evidence suggests relatively low vaccination coverage in Zambia' (Babaniyi et al. 2013; Heyerdahl et al. 2019), with the result that, despite there being provision for universal coverage of vaccinations in Zambia since the 1970s, during 2013–2014 there was only a 60% vaccination take-up rate. A systematic study showed that the principal obstacles to full vaccine coverage in Zambia were a belief in traditional remedies, general aversion to injections and distance from medical centres". (ibid.: Heyerdahl et al. 2019)

In Zimbabwe, research has shown that the rise of the Apostolic church movement has had a deleterious effect on vaccination and other modern health practices, due to the emphasis from its religious leaders on relying on Prophet-driven cures obtained via prayer, and the conviction that to seek medical help is to disrespect God and the Bible. Ha and Salama observe that "[a]postolic sect members in Zimbabwe have been associated with higher maternal mortality . . . , [as] apostolicism promotes high fertility, early marriage, non-use of contraceptives and low or non-use of hospital care. It causes delays in recognizing danger signs, deciding to seek care, reaching and receiving appropriate health care" (Ha et al. 2014; Dodzo et al. 2016).

A study in South Africa unearthed similar responses to those in Zambia, Tanzania and Zimbabwe, including poor communications, parental resistance, anti-immunization policies and staffing problems, as well as the disinformation propagated by various religious factions (Machingaidze and Wiysonge 2021). DRC has one of the lowest rates of vaccine acceptance of any kind, sharing with Madagascar the world's lowest level of immunization rates for measles in 2019, partly because of the general dislocation caused by a simmering civil war, but mainly because of a distrust of medicines generally, and of vaccines in particular (Alfonso et al. 2019; Global Conflict Tracker 2021). In 2018 DRC declared its

tenth outbreak of Ebola virus, but despite the virulence of this disease, and the offer of vaccinations, uptake was very low, due largely to disbelief in either the existence of the virus or of the effectiveness of the vaccine, or of both (Vinck et al. 2019).

In Benin, as Foun and Haddard note:

> "Despite the efforts of health authorities, vaccination coverage of targeted child populations is still poor in many regions . . . The faithful perceive vaccinating children against their parents' will to be a violation of the rights of both children and parents . . . According to them, prayer is the only means of obtaining God's protection against illness . . . Church members who disobey instructions and have their children vaccinated provoke their pastor's anger and discontent. One pastor, in explaining this situation, said, 'as soon as I find out this has happened, I punish these followers before the divine wrath comes down on them, because they are disobeying God'". (Fourn et al. 2009)

Resistance to all vaccines in these and other African countries has transferred to a similar disposition towards COVID-19 vaccines. In each of these examples, authority and credibility reside with local leaders. The combination of distrust of global, and often Western efforts, and the failure on the part of global leaders to convey their messages in vocabulary likely to be understood and embraced in local settings, has led to the unnecessary and devastating spread of infectious diseases across the African continent.

3.5. Suspicion of Post-Imperial White Activity (Part Two)

This brings us to the consideration of another practical and cultural factor in addressing pandemic control in the developed versus the developing world: are vaccinations in the first place the only, or even best, way to respond to the health threat posed by the pandemic? Do vaccination programs merely serve to feed the capitalist machine in developed countries by exploiting the needs of Africans? Do they, despite other benefits, perpetuate colonialism by another name? In this case, are religious leaders right to oppose vaccination? We have already seen how prominent and influential Christian and Muslim clerics in Nigeria and Kenya are militantly anti-vaccine. As Kaunda (2021) points out, "most churches in Africa today function with a neoliberal capitalist theology", which is, in fact, a kind of "Christocapitalism" because of its appropriation of church spaces in which Jesus Christ (capital good) and believers (consumers) are commodified in such a way that frames much of African Christianity as one which give rise to an alien culture of greed, individualism, and materialism. Christocapitalism, then, can be construed as a kind of "prosperity theology", through which the church's interactions with God are characterized by Christian monopolization and fundamentalist view of society that is not truly advocating for African religionists. As Kaunda observes, "some pastors deploy symbolic violence to threaten their congregants: 'if you don't give your tithes and offering, you'll be cursed. The windows of heaven will completely shut, and God will send a devourer to devour your finances, your relationships, your health and everything in your life'".

In this worldview, Christianity becomes subsumed in the wants and needs of Western capitalist paradigms, something which could explain the appeal to the large number of Africans boycotting COVID-19 vaccinations, especially in contexts where Islam is more native to populations than Christianity. In 9 out of 15 sub-Saharan countries surveyed, Muslim populations have significantly lower full immunization coverage than Christians, and Muslim women are less urbanized, poorer and less well educated than their Christian counterparts (believers in Folk religions compared unfavorably with the adherents of both religions) (Costa et al. 2020). Costa and colleagues note that "Greater involvement of Muslim leaders in vaccine promotion has proven to be effective in earlier studies", but this immediately begs the question of whether or not involvement of Christian leaders is less significant in breaking down VH/R than it is with Muslim leaders, and if so, why?

There are close parallels between Muslim and Christian behavior and belief when dealing with a pandemic. As Hilmy and Niam (2020) point out, in Islam there are for the most part three principles upon which Muslims base their responses to a plague: "(1) a

plague is a heavenly blessing and when Muslims die due to a plague they are considered martyrs while a plague is a punishment for non-Muslims; (2) Muslims shall not enter a plague-affected land (or) leave plague infested regions; and (3) a plague cannot be contagious since all diseases come from Allah". These three principles are a result of the Muslim response to the Tha'un 'Amwas plague of c 638-9CE in Syria, and came to be established as the normative grounds for the Muslim community in its response to a plague. Muslims in general, according to Hilmy and Niam, tend to "be more theologically fatalistic compared to their counterparts in Judaism and Christianity. While ... the Jewish and Christian population believed the theory of contagion, most Muslims did not. As a result, Muslims were not urged to flee from plague-infected lands on the grounds that it was not contagious but a heavenly blessing ... People with viewpoints that deviated from established orthodoxy were judged to be heretics".

Conversely, Christians tend to believe the opposite, namely, that one has to flee from plague-inflicted land because a plague is contagious. However, the realities of the behavior of Muslims in the real world, and the application of such beliefs to the point of *reductio ad absurdum*, show that theological discourse did not and does not rule without dispute. Even dating back to the great Amwas plague, "Muslims fled from the scene of outbreaks quite as much as Christians, and the idea that Divine rage was behind the Wuhan outbreak is rather undone by the fact that quite as many Muslim countries have been stricken with C-19 as infidel ones (ibid.)". In fact, there is little indication that modern Muslim governments and organizations have taken any different course to dealing with the pandemic than any other types of society. If anything, arguably Christian societies, or the more militant or evangelical sections of them, have displayed greater affinity for the idea of disease being a tool in the Hand of God than any other kind.

Thus, we can see that common threads appear in all societies where vaccination is concerned. Beliefs everywhere persist, quite apart from religious factors, that vaccination is not only unnecessary, but also harmful. These common threads exist in the face of scientific proof that vaccinations work and are not harmful. The situation is made worse where religious opposition to accepting Western assistance with implementing vaccination programs is added to a pre-existing reluctance based upon mistrust of Big Pharma and the other instruments of the capitalistic medical establishment. We may conclude that vaccination programs intended to serve as go-to responses to the health threat posed by the pandemic will need to be taken up in tandem with other approaches that are not as vulnerable to being seen as part of Western exploitation of African resources or Western disregard for African mores and beliefs.

4. *Ubuntu* as a Solution for Addressing Problems of Messaging with Vaccine Hesitancy and Refusal

The threat of Christocapitalism, independent of the extent to which it is in fact pervasive in an African setting, invokes a deep historical memory, warning of religious traditions in which a Judeo-Christian character sanctions individual liberty and self-reliance over the needs of the body politic:

> "The prophets were not social revolutionaries. Rather, they were religious conservatives deeply committed to the divinely established constitution of their nation, the body of laws believed by the people to have been delivered at Sinai by their God, Jahweh ... [T]hey were ordinary mortals equipped with keen social and political insight, able to discern how constitutional violations would cause social divisions, the loss of national strength, and, ultimately foreign conquest and domination ... The Book of Numbers (33:54) depicts a division of the land taking place at the time of the Israelites' entry into it from Jordan in which holdings were given to each of the twelve tribes according to their size (and then) distributed by lot to each kin group ... Once distributed, land became an unalienable sacred inheritance". (Green 2019)

Following from this Biblical foundation, in modern times, Jeffrey Stout offers the following through reference to Mill:

> " . . . Western liberal societies (embrace) the two key theses of John Stuart Mill's *On Liberty*: (1) our conduct can be divided into self-regarding and other-regarding acts; (2) while other-regarding actions are to be regulated by the principle of harm, self-regarding actions, ' . . . *the part which merely concerns himself, his independence is, of right, absolute. Over himself, over his own body and mind, the individual is sovereign*'(author's italics). According to this way of thinking, risky behaviour in the middle of a pandemic (should be allowed) . . . Mandatory face-masking is considered an aggressive and dangerous extension of automobile-seatbelt and motorcycle-helmet legislation" (Nussbaum 2003). "Jeffrey Stout . . . describes Emersonian perfectionism as '*an ethics of virtue or self-cultivation that is always in the process of projecting a higher conception of self to be achieved and leaving one's achieved self . . . behind*'". (author's italics) (Stout 2004)

Colonial powers which adhered to this "Every-Man-for-Himself-And-The-Devil-Take-The-Hindmost" approach to dealing with reform in post-colonial Africa were correspondingly not seen to take the autochthonous population's interests first. It is hard, if you are a white, European or North American, well-meaning person, not to think of a sequence of events, that goes: "Black Africa (Poor) + White European/American Powers (Rich) = Whites Go to Africa to help Poor Black Disease-Ridden Africans and Give Them What They Need". It is the baffling question of Why-Do-They-Not-Want-What-We-Offer? that trips up the well-meaning proselyte. But, under the self-asserting noise of benevolent white neo-colonialism, there is, and always has been, a quiet African voice repeating one simple word: "Ubuntu". *Ubuntu*, as defined by Bishop Tutu, pertains to the "the solitary human being [who] is a contradiction in terms", because that person is never one by oneself. (Tutu 2011) It is the alternative to an individualism that will not work as a successful ideological unit or norm of motivation so easily in an African setting.

We may examine vaccine hesitancy in sub-Saharan Africa in light of this understanding of Ubuntu, according to which "people depend on one another for the full realization of their humanity". As Bell and Metz clarify:

> "The word . . . originates in the Bantu languages and traces (back to a) precolonial life that was characterized by the following: people lived in small oral societies in which they could know everyone else in their group; shared rituals had elevated significance; livelihood revolved around the land, held in common and allocated according to need or clan membership; helping family had especial priority, but there was moral obligation to aid the community and indeed strangers . . . wedding and procreating were duties; sources of wisdom, the elderly were believed to persist after death, so that continued interaction was possible; people also identified with non-human animals and the land, spiritually imbuing them". (Bell and Metz 2011)

As one widely circulated, almost Cartesian, formulation puts it: "I am because we are, and since we are, therefore I am" . . . (ibid.). Vaccination programs, as introduced by Western actors, never seemed to be about a *people*, but rather about the fate of particular individuals poised to become vaccinated. Such messaging does not translate well to a metaphysical account of human existence which asserts that individual wellbeing is reciprocally tied to that of the community, making responsibility to self and others mutually and morally binding. (Nussbaum op.cit.: Ewuoso and Hall 2019). The imposition of colonialism disrupts traditional structures and belief-systems of sub-Saharan African life which trade on notions of interdependence and communal welfare.

> "Ubuntu means humanness—treating other people with kindness, compassion, respect and care (and) is well captured in the Zulu adage which says '*Ubuntu ngomuntu ngabantu*'—a person is a person because of other persons. Hence, failure

> to act humanely towards other people is thus considered as a lack of humanness or lack of Ubuntu". (Murove and Harris 2014)

That vaccinations were presented in terms of "self-interest" rather than "communal well-being" might all by itself account for the mal-adaption of vaccination programs to sub-Saharan African environments.

Akpa-Inyang and Chima (2021), likewise, demonstrate that the Western-European concept of libertarianism, and even notions of a rights-based autonomy which emphasize individual liberties, may conflict with African cultural values and norms. "African communitarian ethics", they write, "focuses on the interests of the collective whole or community, rather than rugged individualism. Hence, collective decision-making processes take precedence over individual autonomy or consent. This apparent conflict may impact informed consent practice during biomedical research in African communities". More precisely, Ndofirepi and Shanyanana (2016) note that

> " . . . Values in traditional African communities have persistently been condemned for holding back modernisation . . . because, in such collectivistic social arrangements, parents typically promote relatedness and interdependence in their children, stemming from a close relationship with, and strong connection to, the family. This orientation to the larger group encourages values such as respect and obedience. In contrast, parents in individualistic (e.g., Western) cultures generally encourage children to develop into independent, autonomous individuals who have less strong links to the larger groups. In such cultures, the values of personal choice, intrinsic motivation, self-esteem and self-maximisation are stressed".

How does this African body of belief translate into VH/R? Little has been researched in this area (Metz 2018), but the causative chain of beliefs leading to actions or non-actions is clear. In matters of life, the African guided by the philosophy of *Ukama*, the twin virtue of *Ubuntu*, is expected to find answers, knowledge, wisdom, reassurance and validation in the family.

Approaches by strangers promoting unheard-of nostrums for reasons unknown from an alien world are not likely to be very successful. Longstanding beliefs that Western medicines are either unnecessary or harmful, folk-memories of genocidal and racist activity (Grawe 2019), rumors of Western drug companies using Africa as a drug test-bed, or adulterating vaccines with anti-fertility drugs, in a context in which the elders of peoples adhere to the principles of *Ubuntu and Ukama*, are unlikely to promote support for initiatives such as vaccination drives. Conversely, a successful program will emphasize that local leaders prefer to keep to their own people and pay substantive tribute to ancient beliefs that historically have informed their way of life. To an extent, these native values are dismissed today by the successors of Africans' colonial oppressors.

5. Conclusions

In the ancient Polish folk tale of the Glass Mountain, a beautiful young princess is trapped by a sorcerer in a glass mountain. A young man tries to scale the mountain in order to release the princess and win her love. But the glass is slippery, and for every step up he takes, he slides back down two. So, cleverly, he turns about and climbs it backwards, gaining double elevation with each upward-downward step, until he reaches the princess and releases her (Duggan and Haase 2016).

In an article on polio campaigns in the developing world, Closser (2010) makes the important but counter-intuitive observation that vaccination campaigns were more likely to be successful if they were done less, because such campaigns were regarded as aggressive interventions by a state and funded by companies (and foreign governments) which might not have the best interests of their people at heart. They were also a reminder of how the state, and the wealthy providers of such campaigns, would rather spend money on such alien intrusions than on health centers and clinics that could address all the other issues

faced every day by poor people with scarce to no access to medical assistance. As we have seen, one of the most commonly mentioned complaints about vaccination programs is "if they can be financed, why can't health centers which are designed to address basic, day to day needs also be financed"? Populations in the developing world deal with typhus, measles and polio, and no end of other infectious diseases that are not part of the medical scourges that routinely afflict the developed world. Without a fundamental reallocation of finances and resources, any future vaccination projects, however well intentioned, may be doomed to failure because they may be seen to be in bad (budgetary) faith.

In any case, no progress will be made on the matter until those most obdurate in their resistance are brought around to the view that, maybe, vaccinations are beneficial after all. Maybe the money spent on specialist vaccination programs would be better spent on building local clinics. Such a reallocation of resources could obviate the necessity for specialized "campaigns" against measles, polio, Ebola and COVID-19 because all those things—approved by elders, religious leaders and other respected members of the community, and thereby approved by the community—could be dealt with, routinely, by the local clinic and its doctors and nurses, all of whom would be known and trusted as part of the local community. This noted, some practical recommendations might be proffered for the sake of implementing better messaging:

1. Familiarity with and responsiveness to the concept of *Ubuntu* by all vaccination personnel, so that the wider mentality of sub-Saharan African populations can be understood and meaningfully engaged.
2. A willingness and ability to engage with local elders (and, on a national level, religious leaders) in order to convince them that vaccinations are beneficial.
3. Advanced warning of the arrival of visiting vaccination health-teams, incorporating a good level of accurate information for the target audience so that everyone knows what is coming and why.
4. Recruitment of local community leaders, who will be able to deliver all necessary information about the materials, methods and benefits of vaccines to everyone in the community, and in language that they can comprehend.
5. Alternative media options for those who are not literate with regard to all published written information.
6. Time carved out for people to absorb the information delivered and arrive at a decision as to whether or not the vaccine is a good thing.
7. Sustained and comprehensible education via the internet which effectively counters misinformation from the same source.
8. Transportation for people living unfeasibly large distances from health-stations, or the delivery of the service to them.

In case it might be thought that such recommendations are unachievable, Rwanda proves that they are not. In 2015, it had a 98% vaccination rate for its children (Bao et al. 2018). Rwanda is no richer than many African countries (in 2020, its GDP was 10.33 bn USD, against Malawi's 11.96 and Mozambique's 14.02) (World Bank 2020), but it shows that functioning health care systems are possible. There are several reasons for this. First, as Bao and colleagues points out, at the local level, health workers sensitize communities "on the importance of vaccinations and . . . health surveillance duties". Second,

> "an integrated health management information system guides vaccination procurement and distribution to support vaccine delivery at the local level. Third, at the governmental level, the vaccination programme is driven by strong political will to prioritise health. Fourth, implementation is sufficiently decentralised to the district and village level to tailor appropriate approaches for the local population . . . (author's italics). Finally, the Rwandan health system benefits from strong relationships with development partners and cross-over effects from global health initiatives, particularly in developing capacity for supply chain and cold chain management' (Bao et al. op.cit.). The success of this approach is

> a result of utilising the ancient Rwandan philosophy of Imihigo, which is very closely-related to Ubuntu in its outlook and practice. (Bao et al. op.cit.)

If Rwanda can do it, surely other African countries can follow suit.

We have seen that, in many instances, the religious establishments of any given country may be supportive of government initiatives to control the spread of diseases such as COVID-19. However, this is usually in societies where the interests of government and religious establishment cohere in their intentions towards their citizenry, and where the citizenry are generally well disposed towards both government and religious establishments. In other words, it most easily takes place in countries where there is a broad consensus (usually based upon high levels of education and embedded prosperity across the broad elements of society) between rulers and the ruled. Thus, in Britain, the Scandinavian countries and much of Europe, the role of the church echoes the aims and beliefs of the governments concerned. However, such consensus-based activity is largely passive. In such societies, religious leaders often do not so much express an opinion, much less get in the government's way. In other countries, where there is no such consensus, such as many of the countries of Africa and parts of highly federated polities such as India, and even the United States, religion can act as a negative force, disrupting efforts to control and cure diseases and ignoring or debunking scientific reason and verified fact.

In such cases, authorities intent on vaccinating the population must do one of two things to gain any measure of success. They must either suppress religious organizations and activists, or they must win them over. Given the realities of power-structures and the nature of societies in countries where religion acts as an intransigent barrier to vaccinations, suppression is neither practicable nor desirable. Highly conformist societies, with rigid power structures and social hierarchies, such as China and Japan, have also had to deal with a history of vaccine refusal, and they have not yet managed, for all their power, to suppress dissent. This leaves persuasion. The example of Rwanda shows that a properly organized, community-based structure can overcome refractory religious opposition to vaccines by incorporating them into a society where people find themselves involved in community decisions about such matters, where their voices and views are heard, and where the good sense of creating and financially supporting vaccine programs can finally be made acceptable. Until recognition is given to the observed fact that negative religious sentiments are reinforced by the perceived history of interference on the part of the developed world in the welfare of Africans, nothing is going to change.

Currently, many vaccination outreach initiatives to Africa find themselves similar to the questing lover on the Glass Mountain. Perhaps the order of things should be changed. The man in the legend reversed his approach and doubled his rate of progress. Maybe the medical establishment of the West, and the governments through which they craft their message and make their pitch in Africa, should do the same.

Author Contributions: Methodology, J.E.H.; Formal analysis, K.M.; Data curation, T.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

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