

Article

Ubuntu Philosophy and Mandatory Measles Vaccinations for Children

Ruach Sarangarajan *  and Cornelius Ewuoso 

Steve Biko Centre for Bioethics, University of Witwatersrand, Johannesburg 2193, South Africa

* Correspondence: ruachsarang@gmail.com

Abstract: This is a primarily normative paper that draws on the thinking about friendliness grounded in an Afro-communitarian (Ubuntu) philosophy to argue for measles vaccine mandates for children below 6 years old under the assumptions that measles vaccines are safe for children in this age group, are widely available, and that children in this age-group experiences two-tiered vulnerability. Suppose the ethic of friendliness grounded in this Afro-communitarian philosophy requires us to be friendly to those who are friendly and unfriendly to a proportional degree to those who fail to be friendly. In that case, we are justified in mandating parents and guardians to vaccinate their children. Studies must research the concrete forms that measles vaccine mandates can take in African contexts.

Keywords: measles; vaccine mandates; friendliness; Afro-communitarianism; Ubuntu philosophy



Citation: Sarangarajan, Ruach, and Cornelius Ewuoso. 2022. Ubuntu Philosophy and Mandatory Measles Vaccinations for Children. *Religions* 13: 1184. <https://doi.org/10.3390/rel13121184>

Academic Editors: Charles Taliaferro and Paul Reasoner

Received: 4 October 2022

Accepted: 1 December 2022

Published: 5 December 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Measles is caused by a viral infection with high virulence. It presents with symptoms including high fever, runny nose, cough, and conjunctivitis and eventually leads to a rash that gradually spreads to the extremities ([World Health Organisation 2019](#)). The adverse effects of measles on vulnerable populations such as (unvaccinated) children and individuals with a weakened immune system or one not yet fully developed (individuals that are malnourished or have conditions such as HIV / AIDS) include severe diarrhoea, blindness, encephalitis, hearing loss, severe respiratory infections such as pneumonia, and death ([CDC 2022](#)).

Concerning children, their vulnerability is two-tiered ([Giesinger 2019](#)). First, unvaccinated children under 6 years have situational vulnerability since they are at the highest risk of measles infection and its complications ([World Health Organisation 2019](#)). Equally, they are less able to avoid harm as the decision to vaccinate lies with the caregiver ([Hadjipanayis et al. 2020](#)). Children under 6 years old make up 85.58% of 2019 measles cases ([Wang et al. 2022](#)). Subsequently, children under 6 years old play one of the most prominent roles in measles virus transmission. In fact, a study conducted in China found that the mean R-value (a variable summarising the transmissibility of measles) for the age group 0–6 years in 2014 was 1.16 and decreased from 7 years onward ([Chong et al. 2018](#)). The corresponding R-value for all other age groups from 7–45 years in 2014 were all under 0.5. ([Chong et al. 2018](#)). These values demonstrate that measles transmissibility for the age group 0–6 years is the highest and decreases with age after 6 years old. Suppose children under 6 years old contribute the most to measles outbreaks. In that case, stopping measles in children below 6 years will positively impact the global effort to reduce measles.

Second, children under 6 years old are debatably the most vulnerable population group because they are almost entirely reliant on others to take care of their needs, including their well-being, and do not have a choice as to who their carers will be or the level of care they would be given ([Giesinger 2019](#)). These children have an innate vulnerability in being less autonomous since they do not fully understand vaccinations to consent. Thus, they wholly rely on others to make health decisions for their best interests ([Giesinger 2019](#)). This two-tiered vulnerability calls for greater protection of children.

Children can be afforded extra protection through governmental policies aimed solely at ensuring their protection and well-being (since adults can take advantage of their vulnerability or neglect their needs). Some of these policies are in the form of health mandates, such as vaccine mandates, directed at ensuring the protection of children regardless of the independent health decisions the caregivers or parents would like to make ([World Health Organisation 2022](#)). Specifically, this paper draws on an underexplored philosophy in the Global South to argue for measles vaccine mandates for children below 6 years old to protect them. Mandates may be enforced by having certain conditions attached. For example, certain vaccines, such as poliomyelitis, tetanus, and hepatitis B, are pre-requisite to working in healthcare settings or for school entry ([Vanderslott and Marks 2021](#)). Vaccinations or immunity from previous infection affords a population indirect protection by contributing toward herd immunity ([World Health Organisation 2020a](#)). Given the role this population group (children under 6 years old) can play in reducing measles transmission, we ought to consider measles vaccine mandates for them.

There are many other reasons to justify measles vaccine mandates for children below 6 years of age in the global effort to limit measles transmission. First, vaccination is the best-known preventative health measure against measles since no antiviral treatment exists once a measles infection has occurred ([World Health Organisation 2019](#)). However, despite the safety, efficaciousness, and wide availability of the MMR (measles, mumps and rubella) vaccine due to low costs, measles mortality was greater than 140,000 in 2018—mostly among children ([World Health Organisation 2019](#)). Second, stopping measles transmission amongst children will be critical in realizing the main objectives of the proposed Global Vaccine Plan (GVP) by the World Health Organization (WHO) to meet two main goals: (i) greater than 90% global measles vaccine coverage and (ii) reduction of the yearly measles incidence to 5 cases per a million ([World Health Organisation 2019](#)). The main objective, “to eliminate measles in four regions by 2015 and five regions by 2020”, was not met and was revised to be met by 2023 ([World Health Organisation 2020b](#)). The revision recognizes 95% measles vaccine coverage for effective herd immunity ([World Health Organisation 2020b](#)). Vaccine mandates for children under 6 years old are critical to reaching this GVP objective since the measles incidence cases would decrease by at least 85%.

Many arguments for measles vaccine mandates are substantiated by dominant theories and approaches in the West. Precisely, these justifications are necessarily grounded by beneficence and non-maleficence principles ([Rus and Grosej 2021](#)). Firstly, vaccine intake can enhance efforts aimed at reaching herd immunity. Secondly, research shows that the MMR vaccine saves millions of lives annually ([Gans and Maldonado 2021](#)). Utilitarian benefit–risk analyses find that the earlier a child is vaccinated and the higher the vaccine coverage in children, the better the outcome of decreasing the risk of measles outbreaks ([Hadjipanayis et al. 2020](#)). Vaccine mandates have increased vaccine uptake in the population to which the mandates apply ([Lee and Robinson 2016](#)). Suppose the benefits of vaccine mandates (the prevention of measles-related mortalities) outweigh the harms of violating individual freedoms. In that case, vaccine mandates ought to be implemented ([Hadjipanayis et al. 2020](#)).

The Swedish Communitarian perspective appreciates that achieving herd immunity requires a collective effort of parents vaccinating their children in encouraged solidarity as a necessary measure of justice ([Krantz et al. 2004](#)). No study we know has explored *measles* vaccine mandates from the Afro-communitarian perspective. In the formation of vaccine mandate policies in Africa, the inclusion of the African perspective matters, (i) for epistemic justice, and (ii) will respond to the call to inform health practices through dominant approaches and moral theories dominant in the continent. This paper contributes to the proceedings by demonstrating how a key value (friendliness) rooted in the African Ubuntu philosophy can ground measles vaccine mandates for children under the age of 6 years. Unlike dominant moral theories in the West, such as Deontology and Utilitarianism, which tend to be objective and individualistic, this paper provides a subjective and relational perspective through Ubuntu philosophy, offering a novel and appropriate perspective

of vaccine mandates. To achieve the above, this article provides a brief overview of moral norms that emerge from dominant formulations of Ubuntu in the first section. In the second sub-section, the paper will then describe the principle of friendliness that arises from this philosophy and discuss various conceptions of friendliness outside of African moral theories as well as within African philosophical thought to differentiate the interpretation of friendliness the argument in this paper employs. We also acknowledge that other conceptions of friendliness in Ubuntu might not support vaccine mandates, and we specify the conception that we utilize in this paper which can support measles vaccine mandates (Cordeiro-Rodrigues 2018). In the following sub-section, the paper will apply key norms of a conception of friendliness to which Ubuntu philosophy gives rise, to justify measles vaccine mandates for children below 6 years old. In applying these norms to measles vaccine mandates, this paper also demonstrates how friendliness principles support the public health importance of these mandates in the second sub-section. In the third section, the paper will address potential objections to our key claims. Specifically, we will address potential criticisms of the relevance of Ubuntu ethic as an African philosophy in the debate of vaccine mandates for children. Furthermore, we will respond to criticisms of the concept of friendliness we utilise in our argument and how we have applied this principle to vaccine mandates. We also discuss an exception in the application of the friendliness principle where we further clarify what is meant by unfriendliness. Lastly, we address the criticism that placing the burden of mass immunity on children is unjustified.

Notably, there is currently a huge following of the anti-vaccination movement. Critics of vaccine mandates may claim that mandates disrespect rational persons' autonomy and unjustly violate parents' rights to make health decisions for their children (Durbach 2004). Some parents feel vaccination goes against religious (Reed 2018) or personal beliefs. Equally worth pointing out is the misinformation that the MMR vaccine increases the risk of autism (Qian et al. 2020). The paper addresses some of these potential criticisms against measles vaccine mandates for children under 6 years and against using Ubuntu philosophy to ground these mandates.

2. Overview of Ubuntu Philosophy

This section describes the relevant aspect of Ubuntu philosophy. From the outset, it is essential to state that all African philosophers do not necessarily believe the formulation we provide to be true of Ubuntu. For example, one formulation of this philosophy considers the philosophy as enjoining individuals to exhibit certain virtues. This is view of African philosophers such as Kwasi Wiredu. Equally, the formulation on which this study draws does not exhaust the philosophy itself. A systematic review will be required for such a task. This section focuses on the formulation relevant for its objectives.

Ubuntu is the Nguni term which means humanness (Metz 2007), and to exhibit Ubuntu is to live a human way of life sincerely or to display human excellence, while to lack Ubuntu is to be devoid of human excellence (Metz 2016). The more an individual showcases human excellence, the more of an Ubuntu they become, that is, the more of a human they become (Ewuoso and Hall 2019). Since displaying Ubuntu entails developing one's humanness, moral status, personhood, and dignity are found in doing so. Hence, the maxim *a person is a person through other persons* (Ewuoso and Hall 2019). It is said that to lack Ubuntu is, then, not to be a person but to be an animal. This means the individual fails to display what is most valuable about human nature (Ramose 1999).

The existence of several formulations of Ubuntu implies that there are many ideas regarding how to showcase humanity. Suppose one formulation of Ubuntu is that it enjoins individuals to exhibit certain virtues. In that case, the right way to showcase humanity is to act virtuously. Specifically, it implies being hospitable and honest, amongst other virtues. However, many scholars of Ubuntu, as supported by this systematic review, believe that relating communally is the appropriate way to showcase humanity. In fact, Augustine Shutte (2001, p. 30) states, "our deepest [ethical imperative] is to become more fully human by entering more ... deeply into community [or harmony] with others".

Equally, consider the following remark by Desmond Tutu (1999), “Harmony, friendliness, community are great goods. Social harmony is, for us, the *summum bonum*—the greatest good. Anything that subverts or undermines this sought-after good is to be avoided like the plague. Anger, resentment, lust for revenge, even success through aggressive competitiveness, are corrosive of this good”.

Communal relationship tends to entail a combination of identifying with others and exhibiting solidarity. To identify with others is to share a way of life with them, whilst exhibiting solidarity often entails acting with goodwill. Precisely, to identify with each other, people must perceive themselves as part of a group. Subsequently, in thinking of themselves as ‘we’, people would feel ashamed or feel proud of each other’s actions, collaborate in communal projects and coordinate to achieve the common good (Metz 2019b). Exhibiting solidarity entails participating in caring and considerate manners, to behave in a way that would be fairly presumed to benefit others. The motive or attitude of this behaviour is of caring for the well-being of others (Metz 2019b). This ethical imperative of Ubuntu gives rise to the following principle of right of action:

An action is right just insofar as it is a way of living harmoniously or prizing communal relationships, ones in which people identify with each other and exhibit solidarity with one another; otherwise, an action is wrong. (Metz 2017)

The display of Ubuntu is achieved by promoting and respecting the value of harmonious relationships and community with others above most else. It is important to note that this above interpretation of Ubuntu as an ethical philosophy is a broad one and represents one common conception of how to showcase humanity; that is, it is a combination of exhibiting solidarity and identifying with others. Accordingly, many other things can be said about this philosophy. Nonetheless, we provide this broad overview to inform other scholars and readers who might not have a knowledge or full understanding of the Afro-communitarian ethic of Ubuntu and what it entails. One scholar describes the combination of exhibiting solidarity and identifying with others as friendliness. This is our prime focus. Specifically, we draw on this formulation to justify our thesis, after having provided further explanation on friendliness in the next section.

2.1. Friendliness and Ubuntu Philosophy

To reiterate, friendliness is how one African moral philosopher, Thaddeus Metz, describes (Metz 2011) the combination of both displaying solidarity and identifying with someone (or communal relationships). Notice that this view does not exhaust the many ways Ubuntu has been interpreted. Specifically, friendliness is, then, to respect people who possess the ability to harmoniously commune with others (Metz 2012b). Accordingly, unfriendliness is a failure to relate communally, that is, to share a way of life with others or act with goodwill. It is to act in one’s interests and, in so doing, fail to act for the good of others (Metz 2011).

How Africans conceptualize friendliness ought to be differentiated from how others understand the same. What the preceding implies is that the concept of friendliness is not unique to the African philosophy of Ubuntu. But, the intuitions that inform the conception of friendliness in the Global South match the moral intuitions (such as communal relationships) that are more dominant there and have not come to the continent from elsewhere. For example, Aristotle defines friendship as a relationship of benefit that traverses all denominations, ages, and statuses. As Aristotle explains, “[T]he young need it to keep from error. The old need it to care for them and support the actions that fail because of weakness. And those in their prime need it to do [re]fine actions; for when ‘two go together . . .’ they are more capable of understanding and acting” (Aristotle 1999). In Aristotelian philosophy, there are three types of friendships: of utility, of pleasure, of the good (UKEssays 2018). Friendships of utility exist when the relationship has merely instrumental value with no sense of care between people but usually a facile relationship of business (UKEssays 2018). Friendships of pleasure exist between people who enjoy each other’s company, but usually, these relationships terminate once the common pleasurable activity no longer

brings participants enjoyment when shared (UKEssays 2018). Friendships of the good are commonly understood in English as a true friendship, one in which friends care for each other, and this friendship is maintained for so long as the participants' shared characters are preserved (UKEssays 2018). Aristotle's friendship of the good seems the closest depiction of the sense of 'friendship' in Ubuntu philosophy, where one shares a way of life with others and sympathizes with and cares for them for their sake. Aristotle believed that good friendships constitute a good life (much like African ethics). But, while the three main virtues Aristotle advocates to live a good life (temperance, continence, and toughness) are indeed praiseworthy characteristics, they tend to be *self-regarding* and individualistic, unlike Ubuntu norms (solidarity and identifying with others), which are *other-regarding* and relational (Metz 2012c).

Converse to Aristotelian philosophy, which prizes friendships to bolster justice, Utilitarians prize impartiality as a form of justice (UKEssays 2018). Utilitarian values are embedded in impartial and calculated perceptions where values such as friendships and love are not prioritized and may even be diminished by decisions directed by Utilitarian norms (Prevos 2005). Specifically, Act-Utilitarianism could ground friendly acts, but only on a superficial level where motives and reasons are at odds, which Michael Stocker terms moral schizophrenia (Stocker 1976). Moral schizophrenia can only be overcome if the reason and motivation for the actions align with one another. This moral schizophrenia occurs because there is a dissonance between the motivation to act, which is out of friendship, and the reason for which is the consequential goodness of the act. This superficial reason ultimately undermines the essence of friendship itself (Stocker 1976). Similarly, Rule-Utilitarianism and Deontology (both moral theories which are bound by a set of rules or principles) find right actions from superficial reasons (to increase the good and out of duty, respectively). They are not necessarily guided by maintenance of the friendship even though the motive may be (Helm 2021). Suppose the rule that motivates the action is to benefit friends, that is, to advance their good in some way. In that case, friendship would still be undermined by the unsentimental rule (Utilitarian) or duty (Deontological) to act since it is not for the friend's sake. Instead, it is because that rule promotes goodness or because one has a duty to abide by them (Stocker 1976). In other words, it is because advancing the good of the *friend* promotes overall well-being. All the above courses of action for the motivation of friendship are guided by objective reasoning. These reasonings behind the actions demonstrate an unsentimental detachment which starkly contrasts with the potential sentiment of the motivation to benefit friends.

Contrastingly, Ubuntu philosophy overcomes this dissonance between motivations and reasons by providing a subjective reasoning of maintaining harmonious relationships or friendships with the motivation to act for the benefit of communal good or for the concern of friends, that is, to act for their sake. Ubuntu ties together goodness and friendship in a way that does not cause moral schizophrenia, which Utilitarianism and Deontology fail to do. In Utilitarianism, prizing impartiality with an objective perspective fails to acknowledge the true value of friendships since friendships sometimes require partiality and require one to act for the sake of a friend and not just for the good outcomes of that act. Concepts such as love and care, which are essential aspects of preserving friendships, are not valued in this ethic. In contrast, Ubuntu philosophy prizes friendships with a subjective perspective and promotes aspects such as care and love, two essential proponents in maintaining friendships. Similarly, Deontology also fails to account for the value of friendships due to impersonal actions being ruled by a set of duties or moral rules. Acting by these duties forgoes the motivation of caring for a friend or acting for the friend's sake. Instead, it is merely to fulfil a moral obligation which posits a superficial value of friendships.

The preceding gives rise to an African ethic of friendliness that states that we ought to be friendly to those who have been friendly and unfriendly in a proportional way to those who have been unfriendly. Generally, unfriendliness should be avoided. However, it (unfriendliness) may be necessary to end proportional unfriendliness or protect victims of comparable unfriendliness (Metz 2011).

But what does it mean to value friendliness and to respect one's capacity for friendliness? Ubuntu philosophy, then, does not consider an action wrong solely if it harms others, such as from a Utilitarian perspective or if it violates a person's autonomy like a Kantian Deontological notion, but instead insofar as it "fail[s] to respect friendship or the capacity for it" (Metz 2011). From this view, if exercising one's right to freedom of autonomy displays unfriendliness, it is ethically justified to violate the individual's right, if only to protect the victim(s) of the individual's comparable unfriendliness. Since respecting an individual's capacity for friendship entails locating one's interactions in the way in which that individual has exercised it, being unfriendly to the above-mentioned unfriendly individual is acting with the motivation to restore their capacity for friendship or to end unfriendliness on their part. So, this conception of the ethic of friendliness grounded in Ubuntu that we utilize prioritizes ending unfriendliness over promoting friendliness in the instance that one must choose between the two (Ewuoso and Hall 2019). We acknowledge that this is only one interpretation of how friendliness can be conceived and of how it can be applied as an ethical principle. Consequently, some may dispute this interpretation since they agree with the premise that unfriendliness is always a morally wrong act without exception (Cordeiro-Rodrigues 2018). However, we maintain that showcasing corresponding unfriendliness to an individual is only ethically permissible if it is in effort to restore communal capacity to the individual's victim of the primary unfriendliness (Ewuoso 2021). Specifically, we assert the moral wrongness is located in the individual's unfriendly act of disrespecting the victim's capacity to commune harmoniously with others. Showing corresponding unfriendliness, if only in an effort to end the primary unfriendliness and restore the victim's capacity to commune, is preventing or terminating the morally wrong act (Ewuoso and Hall 2019). In subsequent sections, we explore the concrete implications of the Ubuntu ethics of friendliness for measles vaccine mandates.

2.2. Measles Vaccine Mandates and Friendliness

The norm that requires us to be friendly to those who have been friendly and unfriendly in a comparable way to those who have been unfriendly may imply that forms of coercion are justified (Ewuoso 2021). The reader would be correct to observe that coercion, manipulation, and force are forms of unfriendliness. Vaccine mandates are equally other forms of unfriendliness. Unfriendliness is not always immoral (Chasi 2017). Vaccine hesitancy and refusal undermine the global effort to end—within this context—measles transmission and achieve herd immunity and are forms of unfriendliness. Suppose herd immunity would protect the whole population from measles infections. Suppose herd immunity is required for the 90% measles vaccine coverage and vaccinating children below 6 years old is critical to realizing this goal. In that case, refusing to vaccinate children under 6 years old is unfriendly. In doing this, individuals undermine the common good by refusing to collaborate on the 90% measles vaccine coverage project. Specifically, those who do not live harmoniously with others by choosing not to collaborate in the communal project neither identify with others nor exhibit solidarity. They fail to reciprocate friendliness to those who have showcased friendliness. That is, they act in an unfriendly manner toward those who voluntarily vaccinate to collaborate harmoniously by contributing to the communal project of 90% measles vaccination coverage. In this way, they act in ways which are less than human. By being unfriendly (through forced vaccination) to those who have refused to vaccinate, one acts in ways that will likely restore their humanity and is proportional to the unfriendliness on their part (Ewuoso 2021). It is proportional because we do only what is necessary to counter comparative unfriendliness on their part.

There are many justifications for refusing measles vaccination. Some individuals refuse measles vaccines for their children because measles vaccine mandates unjustly violate individual parents'/guardians' rights to freedom of choice (Durbach 2004). We argue that the reason behind this claim typifies an attitude of unfriendliness because it undermines communal efforts to reach herd immunity and indirectly brings harm to vulnerable populations. Notably, the reader should notice that an individual's exercise

of freedom may be restricted (against their will) to prevent harm to others (Baum 1998). Given the two-tiered vulnerabilities of children, which we explained above, we are justified in compelling parents and guardians to act in specific ways to prevent harm to children (at least from the point of view of friendliness which we articulate in this paper) (Chasi 2017). Preventing harm to vulnerable populations is not an unjust violation of individual rights but rather an appropriate response by concerned individuals to protect the humanity of those who cannot make this decision alone. Firstly, refusing to vaccinate children under 6 years undermines our collective effort to stop measles transmission. Herd immunity will play a key role in realizing this goal. Additionally, herd immunity requires 95% measles vaccine coverage, implying that those who refuse vaccination threaten our and their lives. In doing so, they are being unfriendly to those who have been friendly in vaccinating against measles for the common good.

Furthermore, there are already vulnerable individuals who cannot vaccinate against measles due to existing health impediments, regardless of their will to collaborate in the communal project. These vulnerable people do not have a choice as to whether they would like to vaccinate against measles, and this dilemma already impedes the goal of herd immunity. So, every able body needs to vaccinate against measles if we are to reach this goal successfully. Refusal to vaccinate against measles for an egocentric impetus of individual freedom is selfish and demonstrates an unwillingness to share a way of life with others. Individuals who fail to vaccinate their children against measles fail to identify with others in the community. This aversion to relate communally is an exhibition of unfriendliness on their part.

Secondly, whilst freedom is a good thing in some contexts, it is unethical to exercise freedoms that violate the well-being of others. Coercive means such as mandates are proportional means of protecting the well-being of those who are vulnerable and could be harmed by individuals who exercise their freedom to refuse measles vaccines for their children. These mandates are not set in place to be unfair to those whose rights are limited but rather to bring systemic justice to those who require extra protection from measles or cannot afford to vaccinate due to health conditions. While we agree that mandates restrict individual rights in some way, this is a reasonable, appropriate, and necessary response that seeks justice for those most in need, the vulnerable populations. Herein, at least from the point of view of the African thinking about friendliness, the benefit of herd immunity is not to afford protection to selfish individuals who jeopardize communal efforts by refusing measles vaccines on the grounds of their rights. The benefit is intended for those who would intend to collaborate by being vaccinated but may be unable to participate solely because of their health status. The more significant duty of care is for those with a greater need (Metz 2019a). The refusal of measles vaccines on the grounds of exercising individual rights showcases acting in one's interests, failing to act for the good of others, and, subsequently, failing to exhibit solidarity, which is a classic form of unfriendliness.

Another main reason people refuse to vaccinate children under the age of 6 years against measles is that vaccine mandates undermine an individual's respect for autonomy, and these parents have a duty to make health decisions on their children's behalf. This reasoning is similar to the preceding in that this impetus stems from an individualistic and subjective perspective. The previous reason is grounded in rights-based ethics, where parents have the right to make health decisions for their children with the corresponding responsibility of making these decisions in their child's best interests. However, the impetus for this claim is grounded in Kant's Theory of Deontology, where parents have a duty to make health decisions for their children and the health system and personnel have a duty to respect these informed decisions made freely and voluntarily by the parents. These individuals act in their interests by refusing to vaccinate their children against measles. In doing so, they fail to share a way of life with others or exhibit solidarity to others. They refuse measles vaccination for their children merely because they have the freedom to choose so without considering vulnerable individuals at a higher risk of measles infection who cannot vaccinate against measles due to health conditions. They fail to

exhibit solidarity in their failure to act for the good of others by undermining the goal of herd immunity against measles and efforts to reduce measles transmissions.

Furthermore, these individuals demonstrate that they are incapable of identifying with others since their decision to refuse measles vaccinations for their children is based on self-interest and not the interest of the greater good of the community. In doing so, these individuals are showing unfriendliness even towards those who are friendly. Individuals who vaccinate their children against measles participate in the goal of protecting the community's health and showcasing friendliness, under the assumptions that vaccination remains the best means of preventing measles transmission and children below 6 years old are critical for realizing the 90% measles vaccine coverage. Notice that the preceding statement does not imply that vaccines are absolutely safe, implying that no adverse effect has been recorded. And, there are parents who have heard of cases where a child had a severe adverse reaction to a vaccine and refuse vaccination for their child for the sake of protecting the welfare of the child. Rather, statistics tend to support that these adverse effects are rare, and in most cases, measles vaccines are likely safe for children. Suppose this is true. In that case, individuals who refuse to vaccinate children under the age of 6 against measles are exhibiting unfriendliness by refusing to share a way of life with others and failing to act with goodwill.

Some individuals claim measles vaccinations for their children go against their personal or religious beliefs and that vaccine mandates violate their right to practice their religious beliefs. We argue that subjecting one's child to harmful religious practices or personal beliefs in refusing measles vaccinations is not ethically justifiable. Many countries have established laws to protect children from their parents' harmful religious or personal beliefs. Specifically, (the Republic of South Africa, the Children's Act 38 of 2005 (s12, 1(a)) aims to prevent children from being subjected to any cultural, social, or religious practices which may be detrimental to their well-being. Though the relationship between ethics and religion is complex and religion can form the foundation of ethical beliefs, nonetheless, ethics ought to, and can, guide religious beliefs. Suppose there are religious norms that undermine the public good. In that case, there is an obligation to identify and eliminate those norms. At its core, religion seeks ways for individuals to interact well in society. Non-vaccinated children risk infection and measles complications, including sickness and death. Sick individuals can hardly interact well with others. In this regard, it seems intuitive that vaccinating children will advance religious goals by increasing children's opportunities to interact well in society. A refusal to vaccinate undermines the goal of religion to increase opportunities for both their children and other vulnerable populations in the community to interact. Suppose, as we have argued, that acts of unfriendliness should be met with corresponding unfriendliness to end unfriendliness. In that case, we are justified in limiting practices, including religious ones, that undermine the well-being of others.

Several means may be used to force children to vaccinate. As an example, unvaccinated children may be prevented from entering schools. This would be a corresponding unfriendly act and would effectively end the unfriendliness of parents refusing to vaccinate their children for any reason other than if a child's health condition does not allow it.

3. Potential Objections

3.1. Relevance of the African Thinking of Friendliness

In this section and subsequent ones, we explore various objections to the claim we make in previous sections. Precisely, a critic could challenge the relevance of the African thinking about friendliness which the study advances to argue for measles vaccine mandates for children below 6 years old, contending that other ways of conceptualizing friendship would do a better job and are likely to be more appropriate for public health decisions. For example, Utilitarianism is not necessarily doomed by its emphasis on maximizing the good. This theory seems to be a better fit for preventing public health catastrophes (owing to measles transmissions). Notably, *public health* is, by nature, utilitarian (Petrini 2010). Suppose the goal of the measles vaccine mandates, which this paper defends, is to

contribute towards the GVP of 90% vaccination coverage and significantly reduce measles transmission. In that case, this is a public health discourse that requires population-level utility approaches. Utilitarianism appears to be a better moral approach than the Afro-communitarianism that the study advances. Additionally, public health ethics often require that we impartially act to maximize the well-being of all. But, a theory that urges one to be friendly to those who have been friendly will be inherently partial since it would likely prioritize friends' goods over those of foes. Specifically, the basis of the measles vaccine mandates from the Afro-communitarian perspective is less committed to the good of those who act in an unfriendly manner. When one enjoins the vaccine mandate from the perspective we endorse, it is not because we do not desire the well-being of those who have acted in an unfriendly manner but because they have failed to reciprocate friendliness. A *quid pro quo* philosophy is less altruistic and ultimately self-interested. From a *quid pro quo* perspective, everyone is a mere instrument to whom we have no obligation unless we can benefit from them.

In response, we acknowledge that public health (as well as epidemic and cost-effective decision-making) discourses tend to be dominated by maximization theories such as Utilitarianism. The reader would notice that we have not claimed in this article that Afro-communitarianism is the best theory for realizing its objectives. First, suppose the goal is to *maximize* well-being. In that case, Utilitarianism may be a more suitable theory. However, maximization theories are notably incapable of accounting for individual rights. Under a maximization theory, we are justified in violating individual rights even when they have not been unfriendly. In other words, maximization theories consider the good to be realized and less about the means to realize such good. However, the Afro-communitarianism that we draw on overcomes this problem through its principle of proportionality and its description of when unfriendliness may be used—precisely, when this is *necessary* to counter *comparative* unfriendliness.

Second, we acknowledge that the theory that states we ought to be friendly to those who have been friendly and unfriendly to those who have been unfriendly in a proportional way, in some way, promotes a philosophy of reciprocity. But, we do not think this is problematic since positive reciprocity (that does not limit the exchange of comparable actions that positively impact actors to only when they can gain from acting) rather than negative reciprocity is what the philosophy promotes. Contrarily, negative reciprocity limits action to only when one can gain from the other (Caliendo et al. 2012).

Finally, the thinking about friendliness grounded in the Afro-communitarian approach is more contextually appropriate for epistemic justice. The continuous domination of maximization theories in public discourses undermines the capacity of other knowledge systems to be acknowledged as equal contributors to these discourses. There are many reasons why this may be problematic. For public health discourses in an African context, it would imply that these mostly foreign theories (to the region) would have disproportionate influence over how these discourses are shaped and the policies that arise from them. This will have counterintuitive effects since individuals are more likely to accept policies that align with their values (Bardi and Schwartz 2003). Thus, in consideration of measles vaccine mandates, particularly for African contexts, it is necessary for such discourse to be *primarily* shaped by dominant African values, cultures, knowledge systems, and perspectives. Notice that this does not imply that the Afro-communitarian perspective is superior to Utilitarianism; instead, it is a more appropriate context-specific theory in some cases. In doing so, public health policies in Africa using an Afro-communitarian perspective respect the dominant cultural views of the country and would be more readily accepted by the public. Public participation would be more easily encouraged and regulations more easily understood by applying views and values to public policy that align with the culture of the people.

What the concern for epistemic justice indicates is that ethics used to inform, influence, and reform public health policies and regulations ought to be in alignment with the dominant values instilled in the people being regulated to prevent counterintuitive consequences

or backlash by the public. It is also necessary for epistemic justice that African people are governed by an African perspective since it is the dominant ethical view. What we defend above is not the same as saying that public health policies in Africa *ought not* to be informed by theories foreign to the region. Instead, we claim that foreign theories should not be the primary theories underlying these policies.

3.2. Critiques on the Application of Ubuntu Friendliness to Vaccinate Mandates

Another potential contention is that the unfriendly act is not people refusing to vaccinate children under 6 years old against measles. Specifically, the unfriendly act is, in fact, the establishment of measles vaccine mandates since it is a form of coercion (Cordeiro-Rodrigues 2018). In this case, the corresponding unfriendly act as a response to coercion would then be to refuse to vaccinate children against measles and home-school their children instead to restore the humanity of public health policymakers. While we agree that mandates are a form of unfriendliness because they entail coercion, we argue that it is morally justified. We also argue that the primary unfriendliness lies in the refusal to vaccinate children because the wrong action exhibited is two-fold. Furthermore, the response to the primary unfriendliness calls for unfriendliness in a corresponding measure to attempt to prevent the wrong action.

There are three actions a parent could take in response to measles vaccine mandates. Parents could exhibit solidarity and identify with others by voluntarily vaccinating their children against measles. According to Ubuntu, this is a right action, and these children would not be prevented from entering school. The second course of action is to identify with others by sharing a way of life with others but to exhibit a weakened solidarity. This means that the parents might not necessarily want to vaccinate their children voluntarily, but they do so anyway because it is in the best interests of their child to be able to attend school and to protect their well-being. They are still sharing a way of life with others by cooperatively participating with others in vaccination, although the rationale behind it may not necessarily come from caring for the well-being of others or exhibiting goodwill. The third course of action is to refuse to participate cooperatively in ensuring one's children are vaccinated against measles. The moral wrongness of this action is two-fold. As outlined in previous sections of this paper, according to Ubuntu's principles, this is a wrong action because these individuals do not exhibit solidarity or identify with others. Because these individuals are also exhibiting unfriendliness by acting in a selfish and individualistic manner, the moral wrongness of their action is more heavily weighted. These children would be prevented from attending school and may have to be home-schooled instead. These parents' refusal to vaccinate their children is the primary display of unfriendliness, and the restriction of preventing children from attending school is, then, the corresponding unfriendliness as a response to greater unfriendliness. What this means is that the corresponding response is appropriate in measure and is not as extreme a measure as isolating or exiling unvaccinated individuals from the community, for example, in an effort to protect the rest of the community. An extreme response such as the above-mentioned is seen as too extreme in that there is no opportunity for unvaccinated individuals to restore their humanity, and it inhibits their ability to commune. The less extreme proposed response to unfriendliness is, then, not to exclude individuals from the community but to restrict school-attendance, which is a more appropriate response because it corresponds in measure to the primary unfriendliness in that the rationale behind it is sound. It is an effort to not only protect other children who do attend school (who may not be able to vaccinate due to health conditions or whose double-dose vaccine is not completely effective), but it is also an attempt to restore humanity by providing a choice without robbing unfriendly individuals of their ability to commune. It would be counterintuitive to demonstrate corresponding unfriendliness such that it inhibits their ability to commune because the reason for showing unfriendliness to those who are unfriendly is to attempt to restore their capacity for friendliness and to end their unfriendliness and not out of a vindictive attitude. Therefore, if parents want to make decisions for their children's best

interests (in sending them to school and protecting their health), the consequences of the restriction in the mandate should help parents to choose a right action for the sake of their children corresponding to the second course of action. While this is a form of coercion, it is morally justified as a measured response to a comparative moral wrong.

The proposed corresponding unfriendly response might also lead one to wonder what might happen if a large proportion of the community refused to vaccinate their children from measles and, consequently, a large number of children would be prevented from attending school. There has been an increased following of the anti-vaccination movement in recent years, and it is becoming more pertinent to consider this increasingly likely possibility. These parents would have to find other ways to educate their children by home-schooling, for example, and in doing so, they would interact less with children who cannot vaccinate or vaccinate fully due to health reasons. Of course, it is possible that this form of education may also put these unvaccinated children at a bit of a performance disadvantage in comparison, and it would be considerably tragic that a large proportion of children be restricted in this manner. The inevitable consequence (both academically and health-wise) of the parents' choice to not vaccinate their children is deliberately enforced to hopefully discourage further increases in the anti-vaccination (specifically anti-MMR) following. Although, we do concede this proposed restrictive response may not be fully effective in the future if anti-vaccination does gain a proportionately higher following regardless of the known consequences; the unfriendly response, then, may need to be appropriately revised.

3.3. Moral Permissibility of Responding to Ignorance with Unfriendliness

One might contend that parents' failure to vaccinate their children against measles due to ignorance is not an instance of unfriendliness. If this is true, it would not be morally permissible to respond to this failure of vaccination with corresponding unfriendliness. We acknowledge and agree that an act out of ignorance would not be considered an unfriendly one. An unfriendly act would need to be one that is deliberately unwilling and refusing to share a way of life with others or to not care about others in the community. However firstly, we need to discuss what could be meant by ignorance. A parent may either not be aware of the MMR vaccine, the purpose of the vaccine, and its benefits. Because of the lack of awareness of the benefits of the vaccine, the parent may overlook vaccinating their children. Regardless of the restrictions of school-attendance put in place, these parents may choose not to vaccinate their children if they do not understand the significance of vaccinations. Another instance may be a parent who is fully aware of the MMR vaccine and its potential benefits for their children but still chooses not to vaccinate their child for any uncertain reason, but only because the parent is not fully aware of the implications of doing so. This parent may not be aware of the danger their unvaccinated children may pose to other children who are fully vaccinated, but whose double dose has been ineffective, or to children who cannot be vaccinated due to other health risks. Furthermore, this parent may not be aware of the vaccine mandate and that their children would be prevented from attending school if they remain unvaccinated.

In both these instances, responding with an unfriendly act of merely preventing their children from attending school would not be an appropriate response. This is because an unfriendly response would not be an adequate response to an act that cannot be considered as unfriendly. There is nothing morally wrong with being ignorant. It is only morally permissible to show unfriendliness to individuals who are preventing others from communing harmoniously through acts where the individual does not identify with others or exhibit solidarity with others. This corresponding unfriendly act should help the individual to identify with others or exhibit solidarity with others. An appropriate way to help these individuals—who act out based on ignorance—to be able to identify with others and exhibit solidarity with others is to educate them about the MMR vaccine and its benefits for both their children and for others around them living in the community. Education would make

these individuals aware of how to showcase friendliness by vaccinating their children and in doing so, would increase their capacity to commune harmoniously with others.

3.4. *Placing the Burden of Herd Immunity on Children*

Another critic may argue that it is unjustified to place the burden of the goal of herd immunity on children or to mandate them to receive vaccination (Bester 2017). This is for many reasons. Measles vaccine mandates fail to respect children and are not supported by the theory we advance. Specifically, suppose the basis for measles vaccine mandates is that individuals have failed to be unfriendly. In that case, children below 6 years old ought not to be coerced since they can hardly be friendly or unfriendly. In many formulations of the philosophy we draw on, they lack the capacity to act in one of these ways (Metz 2012a). Second, when we implement vaccine mandates for children below 6 years old, we thereby make important life-long decisions about how the lives of these children would go. Such a decision ought not to be taken without their active participation.

The reader would be correct to observe that the preceding criticism is summed up in the question, “is it permissible to make life-changing decisions about how the life of *non-consenting* children will go?” This question is important since children lack the legal capacity to consent, and we have not explored how we ought to relate with those who can neither be friendly nor unfriendly. From the friendliness perspective, suppose children in this group lack the moral status to act genuinely in friendly ways. In that case, we do not violate their rights or dignity through measles vaccine mandates. In the philosophy this paper draws on, individuals have dignity by virtue of friendliness or capacity for it (Ewuoso and Hall 2019). As previously stated, this does not mean we ought to treat them however we want. Suppose what matters in this philosophy is friendliness. In that case, the African philosophy suggests that we should protect, foster, and increase children’s capacity for the same. This would imply that we are justified in implementing measles vaccine mandates for them. Suppose the burden of disease is substantial among children in this age group; vaccination remains the best means of preventing and/or limiting complications associated with the disease and increasing their capacity for friendliness. Measles vaccines are widely available and accessible, and non-vaccination will undermine not only their health but other vulnerable individuals who cannot be vaccinated owing to existing health conditions (Opel et al. 2021). In fact, it is the case that children under 6 years are at the highest risk of measles complications and measles-related death (World Health Organisation 2019). Furthermore, children play a significant role in measles transmission due to their greater risk of measles infection (Chong et al. 2018). Considering that children under 6 years old are the most significant contributors to the spread of measles, ensuring this age group is fully vaccinated will contribute greatly to GVP goals (more so than ensuring adults have full vaccination coverage).

Furthermore, children of that age group are the most vulnerable to measles infection, both innately and contextually. It is imperative that the weakest or those most in need of aid should be given extra care in the form of measles vaccines. The MMR vaccine has been proven to be safe, effective, and widely accessible (World Health Organisation 2019). The preceding indicates that the burden of measles vaccine mandates on children would be unjustified if the success rate of vaccines were low or if the vaccine had significantly adverse side effects. However, neither of these statements is true.

4. Conclusions

To summarize, this primarily normative paper has drawn on the thinking about a certain conception of friendliness from an Afro-communitarian (Ubuntu) philosophy. We also responded to some potential counter-arguments on the relevance of Ubuntu ethics in the discussion of the topic of measles vaccine mandates for children, the concept, and application of friendliness to vaccine mandates for children as well as possible exceptions to the principle. Our thesis is that measles vaccine mandates for children below 6 years are morally justified under the assumptions that measles vaccines are safe for children below

6 years old (and who play a critical role in measles transmission), are widely available, and that children in this age-group experience two-tiered vulnerability. Although we focus on measles vaccine mandates, we generally believe that the justification we provide here for measles vaccine mandates can also apply to COVID-19 vaccine mandates for children.

Studies are required to research the concrete forms that measles vaccine mandates can take in African contexts. Studies are also required to research whether questions regarding access to measles vaccines persist, where, and what more may be done to address such issues. This is necessary to ensure that no child is left behind in the fight against measles infection and that measles vaccine mandates are instated in such a way that it does not discriminate and in a way that is just.

Author Contributions: R.S. wrote the first draft of the article. The article was subsequently revised, enhanced, and new references added by C.E. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: We are grateful to the reviewers for their comments, feedback and for suggesting ways to improve this article.

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

References

- Aristotle. 1999. *Nicomachean Ethics*. In *Nicomachean Ethics*. Translated by William David Ross. Kitchener: Batoche Books, p. 127. Available online: <https://socialsciences.mcmaster.ca/econ/ugcm/3ll3/aristotle/Ethics.pdf> (accessed on 31 August 2022).
- Bardi, Anat, and Shalom Hillel Schwartz. 2003. Values and Behavior: Strength and Structure of Relations. *Personality and Social Psychology Bulletin* 29: 1207–20. [CrossRef] [PubMed]
- Baum, Bruce. 1998. J. S. Mill on Freedom and Power. *Polity* 31: 187–216. [CrossRef]
- Bester, Johan Christiaan. 2017. Measles Vaccination is Best for Children: The Argument for Relying on Herd Immunity Fails. *Journal of Bioethical Inquiry* 14: 375–84. [CrossRef] [PubMed]
- Caliendo, Marco, Frank Fossen, and Alexander Kritikos. 2012. Trust, Positive Reciprocity, and Negative Reciprocity: Do These Traits Impact Entrepreneurial Dynamics? *Journal of Economic Psychology* 33: 394–409. [CrossRef]
- Centers for Disease Control and Prevention. 2022. Complications of Measles. Centers for Disease Control and Prevention, June 15. Available online: <https://www.cdc.gov/measles/symptoms/complications.html> (accessed on 9 July 2022).
- Chasi, Colin Tinei. 2017. Tutuist Ubuntu and Just War. *Politikon* 45: 232–44. [CrossRef]
- Chong, Ka Chun, Pei Hu, Steven Lau, Katherine Min Jia, Wenjia Liang, Maggie Haitian Wang, Benny Chung Ying Zee, Riyang Sun, and Huizhen Zheng. 2018. Monitoring the Age-Specificity of Measles Transmissions during 2009–16 in Southern China. *PLoS ONE* 13: e0205339. [CrossRef]
- Cordeiro-Rodrigues, Luis. 2018. Towards a Tutuist Ethics of War: Ubuntu, Forgiveness and Reconciliation. *Politikon* 45: 426–35. [CrossRef]
- Durbach, Nadja. 2004. *Bodily Matters*. Durham: Duke University Press. Available online: <https://www.dukeupress.edu/bodily-matters> (accessed on 24 June 2022).
- Ewuoso, Cornelius, and Sue Hall. 2019. Core Aspects of Ubuntu: A Systematic Review. *South African Journal of Bioethics and Law* 12: 93–103. [CrossRef]
- Ewuoso, Cornelius. 2021. Patient Confidentiality, the Duty to Protect, and Psychotherapeutic Care: Perspectives from the Philosophy of Ubuntu. *Theoretical Medicine and Bioethics* 42: 41–59. [CrossRef]
- Gans, Hayley, and Yvonne Maldonado. 2021. Measles: Epidemiology and Transmission. UpToDate, July 23. Available online: <https://www.uptodate.com/contents/measles-epidemiology-and-transmission> (accessed on 9 July 2022).
- Giesinger, Johannes. 2019. Vulnerability and Autonomy—Children and Adults. *Ethics and Social Welfare* 13: 216–29. [CrossRef]
- Hadjipanayis, Amados, Hans Jürgen Dornbusch, Zachi Grossman, Leda Theophilou, and Joe Brierley. 2020. Mandatory vaccination: A joint statement of the Ethics and Vaccination working groups of the European Academy of Paediatrics. *European Journal of Pediatrics* 179: 683–87. [CrossRef] [PubMed]
- Helm, Bennett. 2021. Friendship. In *Stanford Encyclopedia of Philosophy*. Edited by Edward N. Zalta. Stanford: The Metaphysics Research Lab. Available online: <https://plato.stanford.edu/archives/fall2021/entries/friendship/> (accessed on 3 August 2022).

- Krantz, Ingela, Lisbeth Sachs, and Tore Nilstun. 2004. Ethics and Vaccination. *Scandinavian Journal of Public Health* 32: 172–78. [CrossRef] [PubMed]
- Lee, Cecilia, and Joan Robinson. 2016. Systematic Review of the Effect of Immunization Mandates on Uptake of Routine Childhood Immunizations. *Journal of Infection* 72: 659–66. [CrossRef] [PubMed]
- Metz, Thaddeus. 2007. Toward an African Moral Theory. *Journal of Political Philosophy* 15: 321–41. [CrossRef]
- Metz, Thaddeus. 2011. Ubuntu as a Moral Theory and Human Rights in South Africa. *African Human Rights Law Journal* 11: 532–59.
- Metz, Thaddeus. 2012a. An African Theory of Moral Status: A Relational Alternative to Individualism and Holism. *Ethical Theory and Moral Practice* 15: 387–402. [CrossRef]
- Metz, Thaddeus. 2012b. Developing African Political Philosophy: Moral-Theoretic Strategies. *Philosophia Africana* 14: 61–83. [CrossRef]
- Metz, Thaddeus. 2012c. Ethics in Africa and in Aristotle: Some Points of Contrast. *Phronimon* 13: 99–117.
- Metz, Thaddeus. 2016. Recent Philosophical Approaches to Social Protection—From Capability to Ubuntu. *Global Social Policy* 16: 132–50. [CrossRef]
- Metz, Thaddeus. 2017. An Overview of African Ethics. In *Themes, Issues and Problems in African Philosophy*. Edited by Isaac Ukpokolo. Johannesburg: Palgrave-Macmillan, pp. 61–75.
- Metz, Thaddeus. 2019a. Reconciliation as the Aim of a Criminal Trial: Ubuntu's Implications for Sentencing. *Constitutional Court Review* 9: 113–34. [CrossRef]
- Metz, Thaddeus. 2019b. The African Ethic of Ubuntu. 1000-Word Philosophy: An Introductory Anthology. September 8. Available online: <https://1000wordphilosophy.com/2019/09/08/the-african-ethic-of-ubuntu/> (accessed on 25 June 2022).
- Opel, Douglas John, Douglas Diekema, and Lainie Friedman Ross. 2021. Should We Mandate a COVID-19 Vaccine for Children? *JAMA Paediatrics* 175: 125–26. [CrossRef] [PubMed]
- Petrini, Carlo. 2010. Theoretical Models and Operational Frameworks in Public Health Ethics. *International Journal of Environmental Research and Public Health* 7: 189–202. [CrossRef] [PubMed]
- Prevos, Peter. 2005. Friendship and Impartialist Ethics Friendship and Moral Intuition [Blog About Rationality]. The Horizon of Reason, January 3. Available online: <https://horizonofreason.com/culture/friendship/> (accessed on 2 August 2022).
- Qian, Mengcen, Shin Yi Chou, and Ernest Lai. 2020. Confirmatory Bias in Health Decisions: Evidence from the MMR-Autism Controversy. *Journal of Health Economics* 70: 102284. [CrossRef] [PubMed]
- Ramose, Mogobe Bernard. 1999. *African Philosophy Through Ubuntu*. Indiana: Mond Books.
- Reed, Ryan. 2018. John Locke and the Limits of Religious Liberty: Marriage License Refusal, Religious Freedom Laws, Vaccine Refusal, Contraception Mandate Exemptions, and Ultrasound Requirements. *New Political Science* 40: 497–514. [CrossRef]
- Rus, Meta, and Urh Groselj. 2021. Ethics of Vaccination in Childhood—A Framework Based on the Four Principles of Biomedical Ethics. *Vaccines* 9: 113. [CrossRef]
- Shutte, Augustine. 2001. *Ubuntu: An Ethic For A New South Africa*. Pietermaritzburg: Cluster Publications.
- Stocker, Michael. 1976. The Schizophrenia of Modern Ethical Theories. *Journal of Philosophy* 73: 453–66. [CrossRef]
- Tutu, Desmond. 1999. *No Future Without Forgiveness*. New York City: Doubleday.
- UKessays. 2018. The Ethical and Political Importance of Friendship for Aristotle. UKessays. Available online: <https://www.ukessays.com/essays/philosophy/aristotles-friendship-nicomachean-ethics-philosophy-essay.php?vref=1> (accessed on 2 August 2022).
- Vanderslott, Samantha, and Tatjana Marks. 2021. Charting Mandatory Childhood Vaccination Policies Worldwide. *Vaccine* 39: 4054–62. [CrossRef]
- Wang, Ruitong, Wenzhan Jing, Min Liu, and Jue Liu. 2022. Trends of the Global, Regional, and National Incidence of Measles, Vaccine Coverage, and Risk Factors in 204 Countries From 1990 to 2019. *Frontiers in Medicine* 8: 1–12. [CrossRef]
- World Health Organisation. 2019. Measles. December 5. Available online: https://www.who.int/news-room/fact-sheets/detail/measles?gclid=CjwKCAjwh-CVBhB8EiwAjFEPGeqGWjOCFpIl4mihAE3xtmRtVtSXBrUv2LSQvr3vhDYobF5dHnWPdRoCVkAQAvD_BwE (accessed on 24 June 2022).
- World Health Organisation. 2020a. Coronavirus Disease COVID-19: Herd Immunity, Lockdowns and COVID-19. December 31. Available online: <https://www.who.int/news-room/questions-and-answers/item/herd-immunity-lockdowns-and-covid-19> (accessed on 29 June 2022).
- World Health Organisation. 2020b. Measles and Rubella Elimination. June 24. Available online: <https://www.who.int/southeastasia/activities/measles-and-rubella-elimination> (accessed on 24 June 2022).
- World Health Organisation. 2022. COVID-19 and Mandatory Vaccination: Ethical Considerations. May 30. Available online: <https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-Policy-brief-Mandatory-vaccination-2022.1> (accessed on 29 June 2022).